AXIS Speaker Functionality for Singlewire InformaCast®

User manual

Table of Contents

About the application

Singlewire InformaCast® is a platform that allows you to send out emergency messages and other communication with the technology your organization already has in place, including Axis network speakers. InformaCast mass notification system delivers intrusive and attention-getting audio alerts throughout your facility. AXIS Speaker Functionality for Singlewire InformaCast allows you to connect your Axis devices to your Singlewire InformaCast infrastructure. The application can be used on Axis network speakers after you purchase a license and install the application through AXIS Device Manager.

Add your device in AXIS Device Manager

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 automatically searches for devices.
   2.1. To manually search, click  .
   2.2. If no devices are found, do an inspection of your network configuration.
   2.3. If the application informs you that some devices have old firmware, click the link to upgrade to the latest firmware.
   2.4. 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**.

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.

Install and license the application

1. In AXIS Device Manager, click  to create a system report.
2. Open the .csv in a program other than Microsoft® Excel®.
3. .
4. Go to license key registration to generate keys from the license code. Go to *axis.com/support/license-key-registration#/registration/batch*.
5. Upload the .csv file from AXIS Device Manager.
   The system generates license keys that you can download.
6. To download the license keys, click **Download the result as zip**.
7. Extract the .zip file.
8. Download AXIS Speaker Functionality for Singlewire InformaCast for your device from *axis.com/products/axis-speaker-functionality-for-singlewire-informacast*.
9. .
10. Go to the InformaCast portal to control that the devices were added.

Edit the .csv file

1. Remove all data except for the MAC address on the devices you want to license.
2. Enter 'code' and 'device' in the first row. The format must be `code,device`.
3. Enter the license code and the MAC address on the following rows. The format must be `license code,MAC address`.

Note

There is one MAC address on each row of the document.

Example:
row 1: code,device

row 2: ABC1D-23EFG-H4IJ5-KL6MN,ABC0123DEFA4

row 3: ABC1D-23EFG-H4IJ5-KL67M,ABC123DE4FAB

Add the application to the device

1. Select your devices.
2. Click  .
3. Click **Browse** to find and select the downloaded application.
4. Click **Next**.
5. When asked to install the application, select **Yes** and click **Next**.
6. Click **Browse** to find the license key file. Select the license key files for your selected devices. The connected MAC address is in the file name.
7. Click **Next** and **Finish**.
8. In the device web interface, go to  **Apps** to start the application.
9. Redo if you want to set up other device models.

Define behaviors for Axis devices in InformaCast®

In addition to the elements specified by Singlewire, you can add Axis-specific elements to the IP speaker configuration file (InformaCastSpeaker.cfg) to configure features specific to Axis devices or customize their behavior. The following features can be configured:

- Display settings - how the display behaves when there is no message to display.
- Actions connected to broadcasts - control flashers, sirens and text appearance.

Select target device

All Axis specific settings are enclosed inside the `AxisConfig` tag, for example `DisplaySettings` or `Actions`. The `AxisConfig` element is versioned and supports targeting both devices with specific product numbers and individual devices, and can therefore occur several times.

Note

The configuration file can contain any number of `AxisConfig` tags as long as they do not collide.

`Version`	A device only considers the version it supports. It will ignore any `AxisConfig` tag with a missing or unsupported version.
Default, product specific or device specific	The `AxisConfig` can be configured to apply to either a specific device (look for device MAC address), a specific product (look for device product number) or default (everything). Only one, the most specific `AxisConfig`, is picked by a device in the following order: 1. Try to find device specific `AxisConfig` 2. If not found, try to find product specific `AxisConfig` 3. If not found, try to find the default `AxisConfig`

Note

Use the *VAPIX Get basic device information API* to determine the product number.

Example:

```
<!- Default config -> <AxisConfig version="1"></AxisConfig> <!- Product specific config ->
<AxisConfig version="1" product-number="c1110-e"></AxisConfig> <!- Device specific config ->
<AxisConfig version="1" mac-address="accc8e000000"></AxisConfig>
```

Display settings

The display settings section defines how the display behaves when no message is displayed on the device.

`Brightness`	Set manual or automatic brightness control.
`IdleScreen`	Appearance: • Set clock and date format and text color. Idle display behavior: • Force an idle screen to always be on or off. • Turn on the idle screen (clock) when there is presence detected. Variable `timeout-minutes` is used as a timer from last detection until screen turns off. • Set a schedule for when the idle display shall be active. Supports both daily and weekly schedules. See specification below for details. An idle screen will show the clock with the configured appearance for clock settings.

Note

The data in the examples needs to be contained in an `AxisConfig` tag. See .

Example:

`DisplaySettings` where idle display is shown in accordance with a schedule:

```
<DisplaySettings> <Brightness adaptive-brightness="true" max-adaptive-level="7" min-adaptive-level="5" manual-level="6"/> <IdleScreen> <Appearance use-24-hour-clock="true" show-date="true" show-seconds="true" background-color="#d5df2a" font-color="#29d997" language="en"/> <Schedule invert="false"> <Recurrence> <Daily start-time="09:00" end-time="21:30" mon="true" tue="true" fri="true"/> </Recurrence> </Schedule> </IdleScreen> </DisplaySettings>
```

Example:

`DisplaySettings` where idle display is shown when presence is detected:

```
<DisplaySettings> <Brightness adaptive-brightness="true" max-adaptive-level="7" min-adaptive-level="5" manual-level="6"/> <IdleScreen> <Appearance use-24-hour-clock="true" show-date="true" show-seconds="true" background-color="#d5df2a" font-color="#29d997" language="en"/> <PresenceDetection timeout-minutes="10" /> </IdleScreen> </DisplaySettings>
```

Actions connected to broadcasts

You can define actions connected to broadcasts that control flashers, sirens, and text colors. Each InformaCast broadcast, except for text-only messages, has a priority level. This priority determines which action to use. For text-only messages, a special text-only action applies. If multiple broadcasts occur simultaneously, only the action for the highest-priority broadcast is used. When activating sirens and lights, text-only messages are considered low-priority. As a result, a text-only message won't interrupt the siren and light action of an ongoing broadcast. However, the text message will be displayed using the settings associated with text-only messages.

- **Text appearance**
  The colors of the text and background, and the number of rows, can be specified for any action.
- **Siren and Light**
  You can use the siren and light functionality to activate flashers and sirens on devices equipped with these features. You can either apply predefined profiles created in the device's web interface or specify which functions to activate directly. The available functions and patterns vary depending on the device. To determine what's available on each device, you can use the *Siren and Light VAPIX API*.

Note

The data in the examples needs to be contained in an `AxisConfig` tag. See .

Example:

An action that sets both text color and activates the `Blink` pattern on the `SignalingLED` function for priority 1 and 2 broadcasts:

```
<AudioAction start-prio="1" end-prio="2"> <TextAppearance text-color="#ff0000" background-color="#000000" number-of-rows="2" /> <SirenAndLight> <Functions> <Function name="SignalingLED" pattern="Blink" speed="3" intensity="5"> <Colors> <Color>blue</Color> <Color>green</Color> </Colors> </Function> </Functions> </SirenAndLight> </AudioAction>
```

Configuration example

This is an example of a complete configuration file that defines one default configuration and one that is only used by an AXIS C1710 device:

```
<InformaCastSpeakerConfiguration> <Servers registration-interval="5" capture-keepalive-seconds="2"> <InformaCast url="http://123.45.67.89:8081/InformaCast/admin?cmd=spkr" /> </Servers> <!- Default config -> <AxisConfig version="1"> <Actions> <AudioAction start-prio="1" end-prio="2"> <TextAppearance text-color="#ff0000" background-color="#000000" /> <SirenAndLight> <Functions> <Function name="SignalingLED" pattern="Alternate" speed="3" intensity="5"> <Colors> <Color>red</Color> <Color>green</Color> </Colors> </Function> </Functions> </SirenAndLight> </AudioAction> <AudioAction start-prio="3" end-prio="100"> <TextAppearance text-color="#00ff00" background-color="#ffffff" number-of-rows="3" /> </AudioAction> <TextOnlyAction> <TextAppearance text-color="#0000ff" background-color="#ffffff" /> </TextOnlyAction> </Actions> <DisplaySettings> <Brightness adaptive-brightness="true" max-adaptive-level="7" min-adaptive-level="5" manual-level="6"/> <IdleScreen> <Appearance use-24-hour-clock="true" show-date="true" show-seconds="true" background-color="#d5df2a" font-color="#29d997" language="en"/> <AlwaysOn/> </IdleScreen> </DisplaySettings> </AxisConfig> <!- Config that only applies to a C1710 device -> <AxisConfig version="1" product-number="C1710"> <Actions> <AudioAction start-prio="1" end-prio="10"> <TextAppearance text-color="#ff7800" background-color="#000000" /> <SirenAndLight> <Functions> <Function name="SignalingLED" pattern="Alternate" speed="3" intensity="5"> <Colors> <Color>red</Color> <Color>blue</Color> </Colors> </Function> </Functions> </SirenAndLight> </AudioAction> <TextOnlyAction> <TextAppearance text-color="#99c1f1" background-color="#000000" /> <SirenAndLight> <Functions> <Function name="SignalingLED" pattern="Steady" speed="1" intensity="1"> <Colors> <Color>red</Color> </Colors> </Function> </Functions> </SirenAndLight> </TextOnlyAction> </Actions> </AxisConfig> <!- Config that only applies to device with specific MAC address -> <AxisConfig version="1" mac-address="accc8e000000"> <Actions> <AudioAction start-prio="1" end-prio="10"> <SirenAndLight> <Functions> <Function name="SignalingLED" pattern="Rotate" speed="3" intensity="5"> <Colors> <Color>red</Color> <Color>blue</Color> </Colors> </Function> <Function name="siren" pattern="Alarm: Car alarm" intensity="2" /> </Functions> </SirenAndLight> </AudioAction> </Actions> </AxisConfig> </InformaCastSpeakerConfiguration>
```

Configuration specification

The Axis specific configuration is contained in an element named `AxisConfig`, that is placed inside the `InformaCastSpeakerConfiguration` element. The `AxisConfig` element is versioned and supports targeting both devices with a specific product number and individual devices, and can therefore occur several times.

`AxisConfig`

An `AxisConfig` element without `product-number` and `mac-address` is considered the default configuration. The `AxisConfig` elements are used in order of precedence, where mac-address is the highest and default is the lowest.

Attributes	
`version` (Mandatory)	A device will always use the latest version supported by the current firmware. If that fails, an error is generated. Older versions are not used in that case.
`product-number` (Optional)	• Must not be used together with `mac-address`. • Used to target a specific product type.
`mac-address` (Optional)	• Must not be used together with `product-number`.

	• Used to target a specific device.
Child elements	
`Actions` (Optional)	
`DisplaySettings` (Optional)	

`Actions`

Defines a list of actions

Child elements
`AudioAction` (Multiple)
`TextOnlyAction` (Optional)

`TextOnlyAction`

During a text-only broadcast the actions defined by the child elements will be applied for the duration of the text.

Child elements
`TextAppearance` (Optional)
`SirenAndLight` (Optional)

`AudioAction`

Attributes	
`start-prio` (Mandatory)	Integer value for start of priority range for this action.
`end-prio` (Mandatory)	Integer value for inclusive end of priority range for this action.
Child elements	
`TextAppearance` (Optional)	
`SirenAndLight` (Optional)	

Overlapping priority ranges between actions are not allowed. If the priority interval matches the priority of a broadcast the actions defined by the child elements will be applied during the duration of that broadcast.

`TextAppearance`

Defines the text and background colors for text messages. Does not affect the display if no text message is present in the broadcast.

Attributes	
`text-color` (Mandatory)	An RGB value in the format "#001122".
`background-color` (Mandatory)	An RGB value in the format "#001122".

`SirenAndLight`

Defines how the siren and light functionality should be activated during a broadcast. Can be either a predefined profile on the device or a list of functions to activate.

Child elements
`Functions` (One of)
`Profile` (One of)

`Profile`

Attributes	
`name` (Mandatory)	The name of a predefined siren and light profile on the device.

`Function`

Specifies a function to activate. For details, see *Siren and light VAPIX documentation*. Which functions and patterns that are available are device dependent.

Attributes	
`name` (Mandatory)	
`pattern` (Mandatory)	
`speed` (Optional)	
`intensity` (Optional)	
`priority` (Optional)	
Child elements	
`Colors` (Optional)	Required by some functions.

`Colors`

List of colors used by a pattern.

Child elements
`Color` (Multiple)

`Color`

Content
The name of a color supported by the pattern. Example: `<Color>red</Color>`

`DisplaySettings`

Settings for the display when no message is displayed.

Child elements
`Brightness` (Optional)
`IdleScreen` (Optional)

Brightness

Attributes	
`adaptive-brightness` (Mandatory)	• Tells if brightness should be automatically adjusted. • Boolean `true` or `false`
`max-adaptive-level` (Mandatory)	• Maximum allowed brightness when auto adjusting. • Integer. Allowed values: "1", "2", "3", "4", "5", "6", "7".
`min-adaptive-level` (Mandatory)	• Minimum allowed brightness when auto adjusting. • Integer. Allowed values: "1", "2", "3", "4", "5", "6", "7".
`manual-level` (Mandatory)	• Brightness when auto adjusting is not used. • Integer. Allowed values: "1", "2", "3", "4", "5", "6", "7".

Appearance

Controls the appearance of the display when no message is displayed.

Attributes	
`use-24-hour-clock`	Boolean `true` or `false`
`show-date`	Boolean `true` or `false`
`show-seconds`	Boolean `true` or `false`
`background-color`	An RGB value in the form "#001122"
`font-color`	An RGB value in the form "#001122"
`language`	Allowed values: "de", "en", "es", "fr", "it".

IdleScreen

Selects the mode of the display when idle.

Child elements
`Appearance` (Optional)
`AlwaysOn` (One of)
`AlwaysOff` (One of)
`Schedule` (One of)
`PresenceDetection` (One of)

AlwaysOn

The display is always on.

AlwaysOff

The display is always off.

`Schedule`

Turns the display on and off based on a schedule.

Attributes	
`invert` (Mandatory)	Boolean `true` or `false`. When set to `true`, the schedule will be inverted. Therefore, during the time-slot when the clock would normally be ON, it will be OFF instead.
Child elements	
`Recurrence` (Mandatory)	

`PresenceDetection`

Attributes	
`timeout-minutes`	The number of minutes of no presence before the display turns off.

`Recurrence`

Selects daily or weekly schedule.

Child elements
`Daily` (One of)
`Weekly` (One of)

`Daily`

Creates a schedule that is active between specific hours on selected days.

Attributes	
`start-time`	Start time in the format "09:00".
`end-time`	End time in the format "21:30".
`mon`	`true` to activate on Mondays
`tue`	`true` to activate on Tuesdays
`wed`	`true` to activate on Wednesdays
`thu`	`true` to activate on Thursdays
`fri`	`true` to activate on Fridays
`sat`	`true` to activate on Saturdays
`sun`	`true` to activate on Sundays

`Weekly`

Creates a schedule that is active from start day to end day at the specified hours.

Attributes	
`start-day`	Day of the week to start the schedule in three letter form e.g. `Tue`.
`start-time`	Start time in the format "09:00".
`end-day`	Day of the week to start the schedule in three letter form e.g. `Thu`.
`end-time`	End time in the format "21:30".

Contact support

If you need more help, go to *axis.com/support*.

T10208248

2025-04 (M5.3)