# IndoorCam user manual

Updated April 18, 2025

**IndoorCam** is a Wi-Fi security camera with built-in AI, PIR sensor, and control via Ajax apps. It features smart infrared (IR) backlight, movement detection, and object recognition. The camera allows users to view archived videos and watch live streams. It is designed for indoor use only.

IndoorCam is connected to the system via Wi-Fi and can be paired with a hub as a backup communication channel. The recorded videos can be stored on an **Ajax NVR** added to the same network or on the **Ajax Cloud Storage** archive according to subscription.

**Buy IndoorCam**

Camera versions with other enclosures are also available. All Ajax cameras are available here.

# Functional elements


**1.** LED indicator.

**2.** Camera lens.

**3.** Microphone.

**4.** Motion sensor lens.

**5.** Ambient light sensor.

**6.** Speaker.

**7.** Power supply connector.

**8.** Pairing button.

9. Hinge.
10. Hole to fix the device on the mounting panel with a holding screw.
11. Swivel mount.
12. The mounting panel of the swivel mount.
13. Holes to attach the mounting panel of the swivel mount to the surface.
14. QR code with the device ID. Used to add the camera to a space.

## Operating principle

IndoorCam features a camera with IR illumination, an LED indicator, as well as a microphone and a speaker. The device is used to monitor the situation on the premises and record videos.

IndoorCam is an IP camera that uses artificial intelligence (AI) for object recognition. Its algorithms can identify moving objects and distinguish people, animals, or vehicles.

The device features smart IR illumination, ensuring the capture of high-quality images even in low-light conditions. IndoorCam automatically adjusts the illumination intensity in real time to prevent overexposure, enabling clear visibility of objects that are either far away or too close to the camera in low-light conditions.

To save the recorded videos, you need to add IndoorCam to an Ajax NVR or activate the **cloud archive**.

IndoorCam enables you to:

- Watch the video in real time with the ability to zoom in for a closer look.
- Access archived videos, navigating through them based on recording chronology and the calendar (this feature is available if the device is connected to an Ajax NVR or the cloud archive is activated).
- Configure movement detection zones and adjust the sensitivity level.
- View the **Video wall**, which combines images from all connected cameras.
- Quickly access **automation devices** control from the cameras' video player menu.
- **Create video scenarios** that send a short video from the selected camera to an Ajax app when the security detector is triggered.
- Download the required segments of video recordings from the archive to smartphones or PCs (this feature is available if the device is connected to an Ajax NVR or the cloud archive is activated).

The video recording segments downloaded from IndoorCam with **firmware 2.279** and later have the **Ajax digital signature** that verifies the integrity of the exported video. To

verify the authenticity of the downloaded video recordings, use the **Ajax media player** software.

Learn more about Ajax media player

## How to download videos from the archive in Ajax apps

## How to configure temporary camera video access

- Configure connection via ONVIF to integrate the device with video management systems (VMS) such as Milestone, Genetec, Axxon, and Digifort.

ONVIF authorization is supported by IndoorCam with a firmware version 2.377 or later.

An admin or PRO with rights to configure the system can set up a connection via ONVIF in:

- Ajax PRO Desktop with the app version 4.20 or later.
- Ajax Desktop with the app version 4.21 or later.

## How to configure ONVIF authorization

## Video scenarios

An Ajax system allows the use of IP cameras for alarm verification. Video scenarios enable the substantiation of alarm triggers with the corresponding video from cameras installed at the facility.

Cameras can be configured to respond to alarms from a single device, multiple devices, or all connected devices. Combined detectors can register various types of alarms, allowing you to configure responses to a wide range of alarm types, whether it's just one, several, or all of them.

**Learn more**

## Video wall

The user can manage videos on the **Video wall** tab, which is accessible once at least one camera has been added. This feature ensures quick access to all connected cameras, which are displayed in accordance with privacy settings.

**In mobile Ajax apps, you can:**

1. Switch between cameras.
2. Search for the desired camera by name.

3. Manage a PTZ camera.

**In Ajax PRO Desktop, you can:**

1. Switch between cameras.
2. Search for the desired camera by name.
3. Organize cameras by room, NVR, or group.
4. Manage a PTZ camera.
5. Save customized layouts for displaying video from cameras.
6. Change the order in which the camera video is displayed.
7. **Create templates for displaying videos in a slideshow**.

> **How to use the video wall widget in Ajax PRO Desktop**
>
> **What keyboard shortcuts are available in Ajax PRO Desktop**

## Privacy zones

The system allows hiding parts of the frame. For instance, if a sensitive area or object is in view, activity around it can be recorded without revealing its contents by

setting up the right zone. No motion or object will be detected and recorded in the privacy zone.

To do this, in Ajax apps:

1. Go to the **Devices** tab.
2. Select the device from the list. If it is connected to the network video recorder, find **NVR** and tap on **Cameras**.
3. Go to **Settings** by tapping on the gear icon twice.
4. Select the **Privacy zones** menu.
5. Go to the **Configure privacy zones** menu. Select the required area.

6. Tap on the ✓ icon. Return to the camera settings.

The user can create up to four private zones.

### Firmware update

If a new firmware version for IndoorCam is available, the icon appears in **Ajax apps** in the **Devices** tab. An admin or a PRO with access to the system settings can launch an update via device **states** or **settings**. The on-screen instructions help to update the firmware successfully.

## Operating with an Ajax hub

The system allows configuring a backup communication channel for the device so that the device continues to transmit events and alarms if the Wi-Fi network is down or lost.

The backup communication channel involves adding the device to the hub, which allows it to communicate via Jeweller and Wings radio protocols. The device can transmit alarms, events, and photo verifications using these protocols to keep you informed. However, live streams and archived recordings for the period when the Wi-Fi connection was lost will be unavailable.

When IndoorCam is added to the hub, it occupies one slot among hub devices.

How to pair the device with the hub

## Compatible hubs and range extenders

An Ajax hub with **OS Malevich 2.28** and later versions is required for the device to operate.

Check device compatibility

## Jeweller and Wings data transfer protocol

Jeweller and Wings are wireless data transfer protocols that provide fast and reliable two-way communication between the hub and devices. The device uses **Jeweller** and **Wings** as a backup communication channel to transmit events and photos.

Learn more

# Selecting the installation site

When choosing where to place IndoorCam, consider the parameters that affect its operation:

- Wi-Fi signal strength.
- Jeweller and Wings signal strength. This is applicable if the device is paired with the hub.
- The presence of objects or structures that may obstruct the device's view.

How to install an Ajax camera for better AI recognition

Consider the placement recommendations when developing a project for the system of the facility. Only specialists must design and install an Ajax system. A list of recommended partners is **available here**.

## Signal strength

The signal strength is determined by the number of undelivered or corrupted data packages over a certain period of time. In Ajax apps in the **Devices** tab, the icon indicates the Wi-Fi signal strength, while the icon indicates the signal strength with the hub:

- **three bars** — excellent signal strength;
- **two bars** — good signal strength;
- **one bar** — low signal strength; stable operation is not guaranteed;
- **greyed-out icon** — no signal.

## Do not install the device

1. In places with temperature and humidity outside the **permissible limits**. This could damage the device.
2. In places where objects or structures may obstruct the device's view.
3. In places with low or unstable Wi-Fi signal strength.
4. In places with low or unstable Jeweller or Wings signal strength. This is applicable if the device is paired with a hub.

It is not recommended to install the device in direct sunlight. This may cause overheating and damage to the device's electrical components.

# Installation

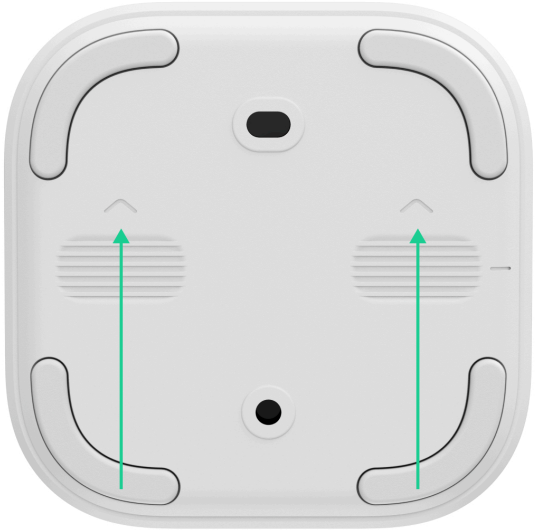
Before installing IndoorCam, ensure that you have chosen the optimal location that complies with the requirements of this manual.

When connecting an external power supply and using IndoorCam, follow the general electrical safety regulations for using electrical appliances, as well as the requirements of regulatory legal acts on electrical safety.

The IndoorCam enclosure features a power supply connector to connect a 12 V⎓ power supply unit (included in the camera complete set).

**To install the device:**

1. Remove the mounting panel of the swivel mount from the device. To do this, slide the panel in the direction marked on it.



2. Secure the mounting panel using temporary fasteners (e.g., double-sided adhesive tape).

> Double-sided adhesive tape can only be used for temporary installation. The device attached by the tape may come unstuck from the surface at any time.

3. Connect the power supply unit (included in the camera complete set) to the corresponding connector.
4. Switch on the external power.
5. **Add IndoorCam to the system**.
6. Place the device on the mounting panel.
7. Test the device operation and check the camera view angles. Adjust the camera tilt and pan position.
8. If the camera view angles are correct and the device works as expected, remove the device from the mounting panel.
9. Fix the mounting panel on the surface with bundled screws. Use all fixing points.

> When using other fasteners, ensure they do not damage or deform the mounting panel.

10. Place the device on the mounting panel.
11. Secure the holding screw on the side of the device enclosure. The screw is needed for more reliable fastening and protection of the device from quick dismantling.

# Adding to the system

## Before adding the device

1. Install an **Ajax app**.
2. Log in to your **account** or create a new one.
3. Select a **space** or create a new one.
4. Add at least one **virtual room**.

**5.** Ensure the space is disarmed.

Only a PRO or a space admin with the rights to configure the system can add the device to the space.

Types of accounts and their rights

## Adding to the space

Before adding to the system, make sure you have checked the following:

- A Wi-Fi signal covers the IndoorCam installation site.
- The IndoorCam external power supply is switched on.
- You are near IndoorCam with your smartphone with an Ajax app installed.
- You have the password to your Wi-Fi network at your fingertips.

Note that IndoorCam operates only with 2.4 GHz Wi-Fi networks.

**Adding as a standalone device:** **Adding to NVR:**

1. Open the **Ajax app**. Select a **space** to which you want to add the device.
2. Go to the **Devices** tab and tap **Add device**.
3. Scan the QR code or enter the device ID manually. A QR code with an ID is placed on the device enclosure. Also, it is duplicated on the device packaging.
4. Assign a name to the device.
5. Select a virtual room and a security group (if **Group mode** is enabled). Tap **Add device** to proceed.
6. Press the pairing button to add the device. Wait for IndoorCam to enter setup mode. When the LED is flashing blue, tap **Next** to proceed:
    1. If IndoorCam has not been previously connected to your Wi-Fi network before, the device will activate the Access Point (AP) mode. Then your smartphone will request to connect to the AP. Tap **Connect** to allow the connection.
    2. If IndoorCam was previously connected to your Wi-Fi network, the device will connect to Wi-Fi, and you will see the live image from the device. Go to **step 9** below.
7. Select the required Wi-Fi network from the list.

8. Enter the password to the selected network to connect the device to the Wi-Fi. Wait for IndoorCam to establish the connection. Once connected, you will see the live image from the device.
9. Tap **Finish** to add the device.

The connected device will now appear in the list of devices in an Ajax app.

Note that IndoorCam is compatible with only one space. To connect the device to the new space, remove it from the device list of the old one. This removal process needs to be done manually in an Ajax app.

## Pairing with an Ajax NVR

If IndoorCam is already added to the space as a standalone device, you can easily pair it with an Ajax NVR. If not, refer to the **Adding to the space** section to know how to add IndoorCam to the NVR or as a standalone device.

To pair IndoorCam with the NVR, in an Ajax app:

1. Go to the **Devices** tab.
2. Select **NVR** from the list and tap **Cameras**.
3. Tap **Add camera** and wait until the network scan is complete and the available devices connected to the local network are displayed.

Note that IndoorCam must be connected to the same local network as the NVR.

4. Select the device.
5. Assign a name to the device, select a virtual room and a group, then tap **Finish**.
6. Wait for the system to add the device, then tap **Close**.

The device will now appear in the list of NVR cameras in an Ajax app.

## Pairing with an Ajax hub

If the hub is added to your system, you can set up the backup communication channel between IndoorCam and the hub. Before adding, **check if your hub is compatible** with IndoorCam.

When IndoorCam is added to the hub, it occupies one slot among hub devices.

To pair IndoorCam with the hub, in the Ajax app:

1. Go to the **Devices** tab.

2. Select **IndoorCam** from the device list. If it is connected to the network video recorder, select **NVR** and tap on **Cameras**.
3. Go to **Settings** by tapping on the gear icon ⚙ two times.
4. Go to **Connection**.
5. Select the **Backup radio channel** option.
6. Tap **Set up**. The hub added to the space will be shown.
7. Tap **Connect** to pair IndoorCam with the hub.

Once IndoorCam is paired with the hub, it is recommended to run Jeweller and Wings signal strength tests.

**What is Jeweller signal strength test**

**What is Wings signal strength test**

## Configuring Wi-Fi network

In an Ajax app, you can configure the Wi-Fi network connection for your IndoorCam. You can change the current Wi-Fi network settings or connect the device to another available Wi-Fi network.

Note that IndoorCam operates only with 2.4 GHz Wi-Fi networks.

To configure the Wi-Fi connection, in an Ajax app:

1. Go to the **Devices** tab.
2. Select **IndoorCam** from the device list. If it is connected to the network video recorder, select **NVR** and tap on **Cameras**.
3. Go to **Settings** by tapping on the gear icon two times.
4. Go to **Connection**.
5. Select the **Wi-Fi** option.
6. In the next menu, you can:
    1. Change the settings of the current Wi-Fi network: select the current network and configure the required settings.
    2. Connect to another Wi-Fi network: select the required Wi-Fi network from the list of available and enter the password to connect.
    3. Reset the Wi-Fi connection if the device is offline: tap **Reset Wi-Fi network** and proceed with the steps described in the app.

# Resetting to the default settings

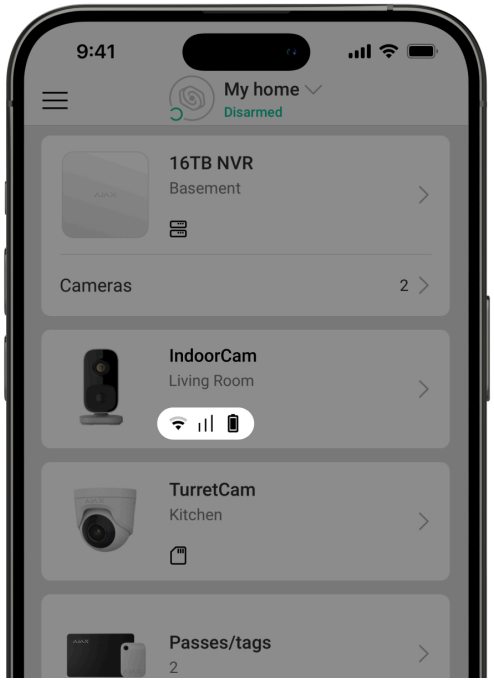
To reset the camera to the default settings:

1. Press and hold the pairing button.
2. Power the camera while the pairing button is pressed, and wait until the LED indicator lights up violet. This will take about 50 seconds.

> The button's LED indicator lights up blue for 20 seconds after powering the camera with a pressed pairing button. Then it turns off for 30 seconds and lights up violet. This means that the camera has been restored to the default settings.

3. Release the button.

# Icons




Icons in an Ajax app display some of IndoorCam's states. You can check icons in the **Devices** tab.

| Icon | Meaning |
| --- | --- |
| ☆ | The extra services are activated according to the subscription.<br><br>Learn more |
| Wi-Fi | Wi-Fi signal strength. It displays the signal strength through the Wi-Fi communication channel. The recommended values are 2–3 bars. |

| | |
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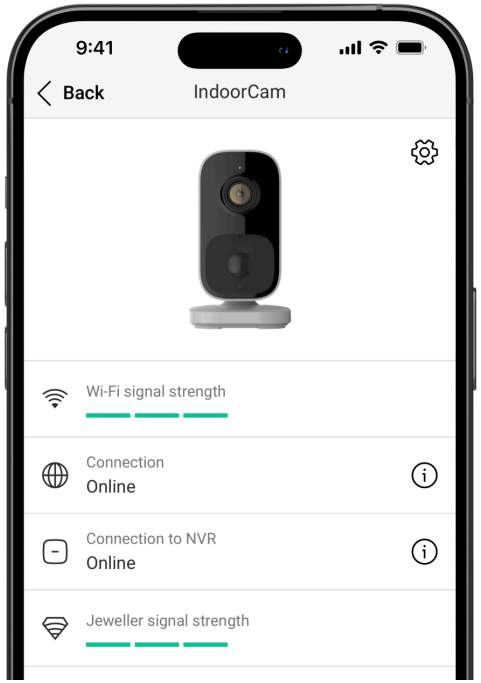
|  | Backup channel signal strength. It displays the signal strength between the hub and the device. The recommended values are 2–3 bars.<br><br>**Learn more** |
|  | The device operates in **Night mode**.<br><br>**Learn more** |
|  | There is no access to view the device's video. |
|  | Other users have access to view the device's video.<br><br>**Learn more** |
|  | The device operates through the **radio signal range extender**. |
|  | A firmware update is available. Go to the device states or settings to find the description and launch an update. |
|  | New firmware installation has failed. |
|  | The device has lost connection with the Ajax Cloud server. |
|  | The device connection via ONVIF is enabled.<br><br>**Learn more** |

# States




The states include information about the device and its operating parameters. You can find IndoorCam states in Ajax apps:

1. Go to the **Devices** tab.
2. Select **IndoorCam** in the list.

| Parameter | Meaning |
| --- | --- |
| Extra services | The field is available in **Ajax PRO apps**, and displayed when extra services are available or activated for the device according to the subscription.<br><br>Tapping on the field shows the information about assigned services and contacts of the company providing these services.<br><br>**Learn more** |
| Malfunction | Tapping on ⓘ opens the list of device malfunctions.<br><br>The field is displayed only if a malfunction is detected. |
| Firmware update | The field is displayed when the firmware update is available:<br><br>• **New firmware version available** — the new firmware is available for download and installation.<br><br>• **Downloading…** — firmware downloading is in progress. It is displayed as a percentage.<br><br>• **Installing…** — the firmware is being installed. |

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| | • **Failed to update firmware** — the new firmware could not be installed.<br><br>Tapping on ⓘ opens more information about the device's firmware update. |
| Wi-Fi signal strength | Wi-Fi signal strength via Wi-Fi communication channel. The recommended value is 2–3 bars. |
| Connection | The device connection status to the internet via Wi-Fi:<br><br>• **Online** — the device is connected to the network. Normal state.<br><br>• **Offline** — the device is not connected to the network. Please check your wireless internet connection.<br><br>Tapping on ⓘ displays the network parameters. |
| Connection to NVR | Displayed when the device is connected to NVR.<br><br>The device connection status to NVR:<br><br>• **Online** — the device is connected to the network via NVR. Normal state.<br><br>• **Offline** — the device is not connected to the network via NVR. Please check your wireless internet connection. |

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|---|---|
| | Tapping on ⓘ displays the network parameters. |
| Jeweller signal strength | Jeweller signal strength between the device and the hub (or the radio signal range extender). The recommended value is 2–3 bars.<br><br>Jeweller is a protocol for transmitting events.<br><br>The field is displayed when the device is added to the hub. |
| Connection via Jeweller | Connection status on the Jeweller channel between the device and the hub (or the range extender):<br><br>• **Online** — the device is connected to the hub (or the range extender). Normal state.<br><br>• **Offline** — the device is not connected to the hub (or the range extender). Check the device connection.<br><br>The field is displayed when the device is added to the hub. |
| Wings signal strength | Wings signal strength between the device and the hub (or the range extender). The recommended value is 2–3 bars.<br><br>Wings is a protocol for transmitting photo verifications. |

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| | The field is displayed when the device is added to the hub. |
| Connection via Wings | Connection status on the Wings channel between the device and the hub (or the range extender):<br><br>• **Online** — the device is connected to the hub (or the range extender). Normal state.<br><br>• **Offline** — the device is not connected to the hub (or the range extender). Check the device connection.<br><br>The field is displayed when the device is added to the hub. |
| <Range extender name> | Status of device connection to the **radio signal range extender**:<br><br>• **Online** — the device is connected to the range extender.<br><br>• **Offline** — the device is not connected to the range extender.<br><br>The field is displayed if the device operates via the radio signal range extender. |
| Storage location | Displays the list of storage devices connected to IndoorCam: |

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|---|---|
| | • **Cloud**;<br>• **NVR hard drive** — data is recorded on the NVR hard disk.<br>Tapping on ⓘ displays the recording mode and storage settings. |
| Cloud archive | Displays the status of Ajax Cloud Storage:<br>• **Not activated**<br>• **Activated** |
| Resolution | The current camera resolution. |
| Frame rate | The current camera frame rate. |
| Bit rate | The current camera bit rate. |
| Video codec | The current video codec:<br>• **H.264** |

| | |
|---|---|
| Motion detection by frame analysis | The **Motion detection** feature status:<br>• **On**<br>• **Off**<br>• **Malfunction in camera detector** |
| Object detection | The **Object detection** feature settings:<br>• **Human**<br>• **Pet**<br>• **Vehicle**<br>• **Off** |
| Motion detection with PIR | The **Motion detection with PIR** feature status:<br>• **On**<br>• **Off** |

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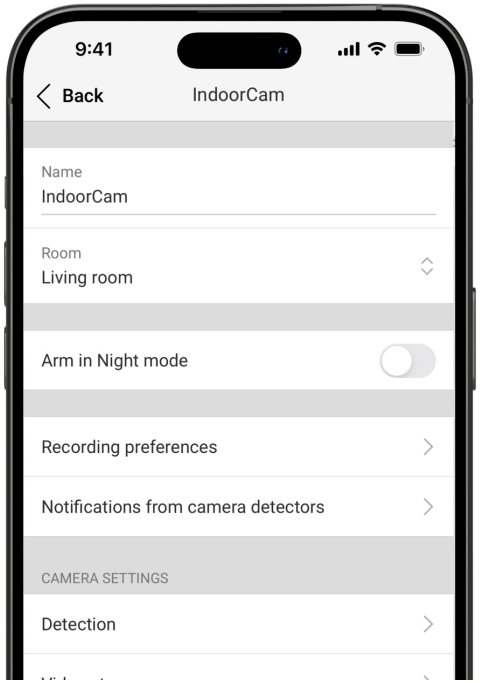
|---|---|
| Permissions to view | Displays the number of users who have access to view video from the device.<br><br>Tapping on ⓘ displays the list of users, installers, and companies with access under certain conditions. |
| Uptime | The device's operating time since the last reboot. |
| Firmware | Device firmware version. |
| Device ID | Device ID. It is also available on the QR code on the device enclosure and its package box. |
| Device No. | Device number. This number is transmitted to the CMS in case of an alarm or event. |

# Settings




To change camera settings, in an Ajax app:

1. Go to the **Devices** tab.
2. Select **IndoorCam** from the list. If IndoorCam is connected to the video recorder, select **NVR** and click **Cameras**.
3. Go to **Settings** by clicking on the gear icon.
4. Set the required parameters.
5. Tap **Back** to save the new settings.

| Settings | Value |
| --- | --- |
| Name | Device name. It is displayed in the list of hub devices, text of SMS and notifications in the events feed.<br><br>To change the device name, tap on the text field.<br><br>The name can contain up to 24 Latin characters or up to 12 Cyrillic characters. |
| Room | Selecting the virtual room to which IndoorCam is assigned.<br><br>The room name is displayed in the text of SMS and notifications in the events feed. |
| Arm in Night mode | When enabled, the device will switch to the armed mode whenever the system is set to **Night mode**.<br><br>Learn more |
| Recording preferences | Selection of the **Recording mode** for each storage:<br><br>• **On detection or scenario**<br><br>• **Continuous** |

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|---|---|
| | • **Never**<br><br>Selection of the armed mode when the camera records video:<br><br>• **When armed**<br><br>• **Always** |
| Notifications from camera detectors | Opens a menu with **Notifications from camera detectors** settings.<br><br>Learn more |
| Detection | Opens a menu with **Detection** settings.<br><br>Learn more |
| Video stream | Opens a menu with **Video stream** settings.<br><br>Learn more |
| Image | Opens a menu with **Image** settings.<br><br>Learn more |
| Audio | Settings for audio capture and playback. |

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| | • **Audio capture and playback** — turn on to watch and record videos with audio.<br>• **Audio codec**.<br>• **Bit rate**.<br>• **Sample rate**.<br>• **Microphone gain** — configure the microphone sensitivity level based on the installation location.<br>• **Speaker volume** — adjust the speaker volume for two-way voice communication. |
| Privacy zones | Allows the user to select zones that are not displayed on the camera video. Instead, the user sees a black rectangle.<br>Learn more |
| Firmware update | Switches the device to the firmware updating mode if a new version is available.<br>Learn more |
| Connection | Opens a menu with **Connection** settings:<br>• **Wi-Fi** — configuring the W-Fi communication channel between the device and the network. |

| | |
|---|---|
| | • **Backup radio channel** — configuring the backup communication channel between the device and the hub. The communication is established via Jeweller and Wings radio protocols.<br><br>**Configuring Wi-Fi network**<br><br>**Pairing with an Ajax hub** |
| Archive | Selection of the maximum archive depth. It can be set in the range of 1 to 360 days or can be unlimited.<br><br>Allows the user to format the cloud archive. |
| Service | Opens a menu with **Service** settings.<br><br>**Learn more** |
| Jeweller signal strength test | Switches the device to the Jeweller signal strength test mode.<br><br>The test allows you to check the signal strength between the hub (or the radio signal range extender) and the device via the wireless Jeweller data transfer protocol to select the optimal installation site.<br><br>**Learn more** |

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|---|---|
| | Available if the device is paired with the hub. |
| Wings signal strength test | Switches the device to the Wings signal strength test mode.<br><br>The test allows you to check the signal strength between the hub (or the radio signal range extender) and the device via the wireless Wings data transfer protocol to select the optimal installation site.<br><br>**Learn more**<br><br>Available if the device is paired with the hub. |
| Report a problem | Allows the user to describe a problem and send a report. |
| Monitoring | This setting is available only in Ajax Pro apps.<br><br>Allows to a PRO with rights to configure the system to set up:<br><br>• **Zone number for CMS events** — unique identifier of the device in events it reports to CMS; |

| | |
|---|---|
| | • **Send events on detections to CMS** — whether the device will send notifications on motion or object detection to CMS. |
| User guide | Opens the IndoorCam user manual in an Ajax app. |
| Unpair from NVR | Unpairs the device from the NVR to which it was paired.<br><br>The option is available if the device is paired with NVR. |
| Delete device | Erases all device settings and deletes the device from the space. Also, it unpairs the device from the NVR and the hub if such connections are set up. |

## Notifications from camera detectors

| Settings | Meaning |
|---|---|
| Notify if detected | The user can select the type of object or motion, and when it’s recognized, a notification is received: |

| | |
|---|---|
| | • **Human**<br>• **Pet**<br>• **Vehicle**<br>• **Any motion (by frame analysis)**<br>• **Any motion (with PIR)**<br><br>Note that the corresponding types of object or motion should be enabled in the **Detection** settings. |
| Duration of object detection for notification | Selecting how long an object should remain in the camera's field of view so the system sends a notification about the detected object. The available values are **Notify instantly** or **2**, **3**, **4**, or **5 seconds**.<br><br>The default time is **2 seconds**. |
| Confirm detections with PIR sensor | When this option is selected, the user receives notifications only when detections are captured by the object/motion recognition and the PIR sensor. If the motion is detected only by one sensor, the system does not send notifications.<br><br>Available for the **Human**, **Pet**, and **Any motion (by frame analysis)** options. |

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| Interval in reporting similar events | Selecting the time interval in reporting similar events: from **30 seconds** to **8 hours**.<br><br>The default interval is **3 minutes**.<br><br>Selected time applies for each detection type separately and helps to avoid repeated informing of the same triggering reason. |
| Notification terms | Selection of the mode when the camera sends notifications:<br><br>• **When armed**<br><br>• **Always** |

## Detection settings

| Settings | Meaning |
|---|---|
| Motion detection with PIR | When the option is enabled, the device uses the built-in PIR sensor for motion detection. |

| | |
|---|---|
| PIR sensor sensitivity | The sensitivity level of the PIR motion sensor. It allows adapting the device to the conditions at the site to filter out false triggerings:<br><br>• **Low** — there are likely sources of false triggerings in the device's field of view.<br><br>• **Normal** (by default) — recommended value, suitable for most facilities. Do not change it if the device operates correctly.<br><br>• **High** — there are no obstacles in the device's field of view; the device detects any motion.<br><br>The option is available when **Motion detection with PIR** is enabled. |
| Motion detection by frame analysis | When the option is enabled, the camera detects motion using its built-in software. |
| Analyze image | The software algorithm of image analysis that is used for motion detection.<br><br>The option is available when **Motion detection by frame analysis** is enabled. |
| Motion detection settings | Opens a menu with motion detection settings:<br><br>• **Adjust activity zone** — defines the specific area within the field of view where the camera should detect motion. |

| | |
|---|---|
| | • **Sensitivity threshold** — defines the device's sensitivity to the motion in the activity zone.<br><br>• **Area occupied by detectable objects** — specifies the size of the area in the camera's field of view that a moving object should occupy for the device to be triggered.<br><br>The option is available when **Motion detection by frame analysis** is enabled. |
| Object detection | When the option is enabled, the camera identifies the type of moving objects using a built-in algorithm. In the video, people, pets, and vehicles are highlighted with colored rectangles. |
| Object detection settings | Opens the menu with object detection settings:<br><br>• **Adjust object detection zone** — defines the specific area within the field of view where the camera should identify the type of moving objects.<br><br>• **Human detection** — enables detection of people in the video.<br><br>• **Pet detection** — enables detection of pets in the video.<br><br>• **Vehicle detection** — enables detection of vehicles in the video. |

| | |
|---|---|
| | • **Sensitivity threshold** — defines the accuracy of the object recognition. The setting is available for each object type.<br><br>The option is available when **Object detection** is enabled. |

## Video stream settings

Settings for mainstream and substream parameters.

| Settings | Meaning |
|---|---|
| **Mainstream** | |
| Video codec | Selecting the video compression standard:<br><br>• H.264 |
| Resolution | Selecting the mainstream resolution:<br><br>• 1024 × 576 |

| | |
|---|---|
| | • 1920 × 1080<br>• 2304 × 1296<br>• 2560 × 1440<br>• 2688 × 1520 |
| Frame rate | Selecting the frame rate: from 3 to 25 with an increment of 1 frame/s. |
| Bit rate type | Selecting the bit rate type:<br>• **Variable (VBR)**<br>• **Constant (CBR)** |
| Bit rate | Setting the bit rate in kbit/s. |
| GOP length | Selecting the GOP length: from 1 to 250 with an increment of 1 frame. |
| VBR quality / CBR quality | Selecting the compression quality: from 0 to 100 with an increment of 1. |
| **Substream** | |
| Video codec | Selecting the video compression standard:<br>• H.264 |
| Resolution | Selecting the substream resolution: |

| | |
|---|---|
| | • 720 × 480<br>• 720 × 576<br>• 1024 × 576 |
| Frame rate | Selecting the frame rate: from 3 to 25 with an increment of 1 frame/s. |
| Bit rate type | Selecting the bit rate type:<br>• **Variable (VBR)**<br>• **Constant (CBR)** |
| Bit rate | Setting the bit rate in kbit/s. |
| GOP length | Selecting the GOP length: from 1 to 250 with an increment of 1 frame. |
| VBR quality / CBR quality | Selecting the compression quality: from 0 to 100 with an increment of 1. |

## Image settings

Settings for camera image quality.

| Settings | Meaning |
| --- | --- |
| Brightness | Adjusting the image brightness. |
| Color saturation | Adjusting the image color saturation. |
| Sharpness | Adjusting the image sharpness. |
| Contrast | Adjusting the image contrast. |
| Wide dynamic range (WDR) | Enabling or disabling the WDR.<br><br>When WDR is enabled, it helps to enhance the camera images, with too dark or bright areas. |
| Day/Night mode (IR-cut filter) | Selecting the camera vision mode depending on the light conditions:<br><br>• **Day** — IR backlight is always off.<br><br>• **Night** — IR backlight is always on.<br><br>• **Auto** — IR backlight automatically switches according to the **Lighting threshold for mode switching** settings. |
| Lighting threshold for mode switching | Selecting the lighting threshold for switching between the day and night mode:<br><br>• **Early morning, late night.** |

| | |
|---|---|
| | • **Medium.**<br>• **Late morning, early night.**<br><br>This setting is available if **Day/Night mode (IR-cut filter)** is set to **Auto**. |
| Infrared illumination (IR) | Adjusting the intensity of the IR backlight:<br><br>• **Auto**<br>• **Custom**<br>• **Off**<br><br>The setting is used for capturing clear images at night or in low light and ensures visibility using IR LEDs when conventional lighting is ineffective. |
| IR intensity | Adjusting the IR backlight intensity.<br><br>This setting is available if **Infrared illumination (IR)** is set to **Custom**. |

## Service settings

| Settings | Meaning |
| --- | --- |
| Time zone | Time zone selection.<br><br>It is configured by a user and is displayed when a user views video from the camera. |
| LED indication on motion detection | When the option is enabled, the device LED flashes if motion is detected by the PIR sensor.<br><br>The **Motion detection with PIR** option should be enabled in the **Detection** settings. |
| Connection via ONVIF | Configuring the device's connection via ONVIF to third-party VMSs.<br><br>Learn more |
| **Server connection** | |
| Delay of cloud connection loss alarm, sec | The delay helps to reduce the risk of a false event of the server connection loss.<br><br>The delay can be set in the range of 30 to 600 seconds. |
| Cloud polling interval, sec | The frequency of polling the Ajax Cloud server is set in the range of 30 to 300 seconds. |

| | |
|---|---|
| | The shorter the interval, the faster the cloud connection loss will be detected. |
| Get notified of server connection loss without alarm | When the toggle is enabled, the system notifies users about server connection loss using a standard notification sound instead of a siren alert. |

# Indication

Depending on the device status, the IndoorCam LED indicator may light many colors with different patterns.

| Event | Indication | Note |
|---|---|---|
| Turning on the device. | The LED lights up green for about 2.5 s. | |
| The device is starting up. | The LED flashes orange. | The indication lasts until the device is started up. |
| The device is in Access Point (AP) mode. | The LED flashes blue continuously. | The indication lasts until the device is connected to Wi-Fi. |

| | | |
|---|---|---|
| Connection to Ajax Cloud is successful. | The LED lights up green for about 3.5 s. | Indication is only available when the device is being set up. |
| Connection to Ajax Cloud has failed. | The LED lights up red for about 1 s. | Indication is only available when the device is being set up. |
| Downloading a new firmware version of the device. | The LED lights up green twice and goes out every 3 s. | |
| The device firmware is being updated. | The LED lights up green constantly. | The indication lasts until the firmware update is finished. |
| The device is being restored to the factory settings. | The LED flashes violet every 1.5 s. | |
| Motion is detected by a PIR sensor. | The LED lights up white for about 2.5 s with 50% of the brightness. | |
| Two-way voice communication is in progress. | The LED lights up white constantly with 50% of the brightness. | |

# Malfunctions

When the device detects a malfunction, a malfunction counter is displayed in the Ajax app in the upper left corner of the device icon. All malfunctions can be seen in the device **states**. Fields with malfunctions will be highlighted in red.

**Malfunction is displayed if:**

- The device has lost connection with the server.
- The device temperature is outside **acceptable limits**.
- No connection with the hub or radio signal range extender via Jeweller. This malfunction is possible if the device is paired with the hub.
- No connection with the hub or radio signal range extender via Wings. This malfunction is possible if the device is paired with the hub.

# Maintenance

Regularly check the functioning of the device. If you notice any image degradation, loss of clarity, or darkening, check the camera for dirt. Clean the device enclosure from dust, cobwebs, and other contaminants as they emerge. Use soft, dry wipes suitable for equipment maintenance.

Do not use substances that contain alcohol, acetone, petrol, and other active solvents to clean the device. Wipe the lens carefully, as scratches can result in poor-quality images and camera failure.

# Technical specifications

All technical specifications

Compliance with standards

# Warranty

The warranty for the products of the “Ajax Systems Manufacturing” Limited Liability Company is valid for 2 years after purchase.

If the device does not operate properly, we recommend contacting support service first, as most technical issues can be resolved remotely.

Warranty Obligations

User Agreement

**Contact Technical Support:**

- email
- Telegram

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