DoorBell user manual

Updated December 3, 2024



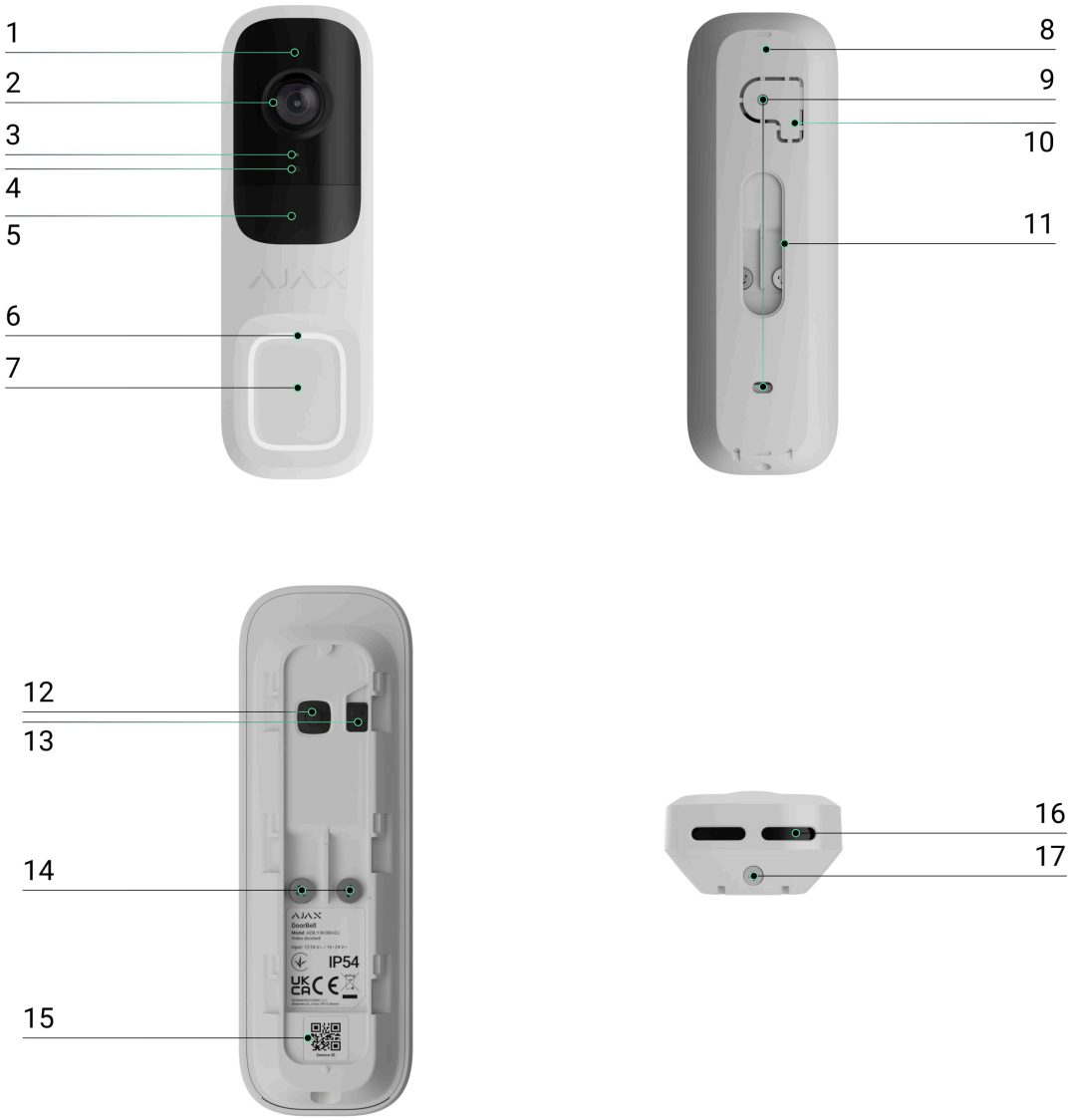
DoorBell is a video doorbell with built-in AI, PIR sensor, and control via apps. It features two-way voice communication, movement detection, and object recognition. With the doorbell, users can view archived videos, watch live streams, and talk with visitors near the device.

DoorBell 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 (Ajax Cloud Storage will be available in future releases).

Buy DoorBell

Functional elements

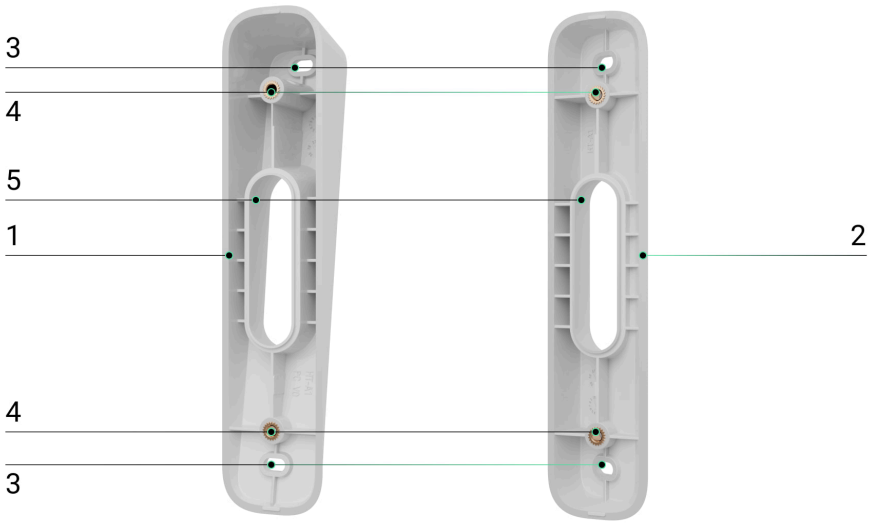
DoorBell



1. Infrared (IR) illumination. It is used to record videos in dark and low-light conditions.
2. Camera.
3. Microphone.
4. Ambient light sensor.
5. Motion sensor lens.
6. Circular LED indicator around the button.

7. Button to ring DoorBell.
8. SmartBracket mounting panel. To remove the panel, slide it down.
9. Holes to attach SmartBracket to the surface or the wedge bracket.
10. Perforated part of the mounting panel. It is used to trigger a tamper in case of any attempt to detach the device from the surface. Do not break it off.
11. Hole for routing an external power supply cable.
12. Power button.
13. **Tamper button**.
14. Terminals for connecting an external power supply.
15. QR code with the device ID. It is used to add the device to the space.
16. Speaker for two-way voice communication.
17. Holding screw. It is used to fix the device on the SmartBracket mounting panel.

Wedge brackets



1. Wedge bracket to tilt DoorBell 10° down or up.
2. Wedge bracket to swivel DoorBell 25° right or left.
3. Holes to attach the wedge brackets to the surface.
4. Fixing points to attach SmartBracket to the wedge brackets with screws.
5. Holes for routing an external power supply cable.

Operating principle

DoorBell features a large mechanical button, a camera with IR illumination, an LED indicator, as well as a microphone and a speaker for two-way communication. The device is used to see and communicate with a visitor who has rung the doorbell, as well as to monitor the situation at the entrance.

DoorBell has a 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. The device 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 device in low-light conditions.

To save the recorded videos, you need to add DoorBell to an Ajax NVR or activate the cloud archive. Ajax Cloud Storage will be available in future releases.

DoorBell enables you to:

- Communicate with visitors who have pressed the DoorBell button.
- 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 (coming soon)).
- Configure movement detection zones and adjust the sensitivity level.
- View the **Video wall**, which combines images from all connected cameras.
- **Create video scenarios** that send a short video from the selected camera to an Ajax app when the security detector is triggered.

How to export video in PRO Desktop

How to configure temporary camera video access

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 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 PRO Desktop

What keyboard shortcuts are available in PRO Desktop

Privacy zones

This feature will be available in future releases.

Firmware update

If a new firmware version for DoorBell 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 DoorBell 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 2.27** 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

DoorBell is best placed outside the entrance to the premises or to the protected territory. This allows visitors to ring DoorBell and users to see and communicate with visitors, as well as to monitor the situation near the entrance.

The device is designed to be installed at a height of 1.2–1.5 m above the floor. Mount the device on a flat, vertical surface. This ensures DoorBell is securely attached to the surface and helps avoid false tamper alarms.

Depending on the installation place and height, you can use the wedge brackets to adjust the device position angles. This is necessary to ensure that the device's motion sensor and camera have the correct fields of view.

How to install an Ajax camera for better AI recognition

When choosing where to place DoorBell, 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.

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

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

DoorBell is equipped with terminals for connecting a 12–24 V⎓ or 16–24 V~, 50/60 Hz power supply.

The complete device set includes BellKit, which allows DoorBell to be connected to the wired mechanical or digital chime on the premises. For more information, refer to the **Connecting to a wired chime** section.

Consider installing the corresponding wedge bracket to adjust the device's camera view. The complete set includes two wedge brackets: the first one tilts DoorBell 10° down or up, and the second one swivels DoorBell 25° right or left.

To install the device:

1. De-energize the external power supply cable.
2. Remove the SmartBracket mounting panel from the device. Unscrew the holding screw first and slide the panel down.
3. If necessary, attach the corresponding wedge bracket to the SmartBracket mounting panel and secure it with bundled screws. Use all fixing points.
4. Run the power supply cable through the SmartBracket panel.
5. Temporarily secure the SmartBracket panel using double-sided adhesive tape or other temporary fasteners.

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. As long as the device is taped, the tamper will not be triggered when the device is detached from the surface.

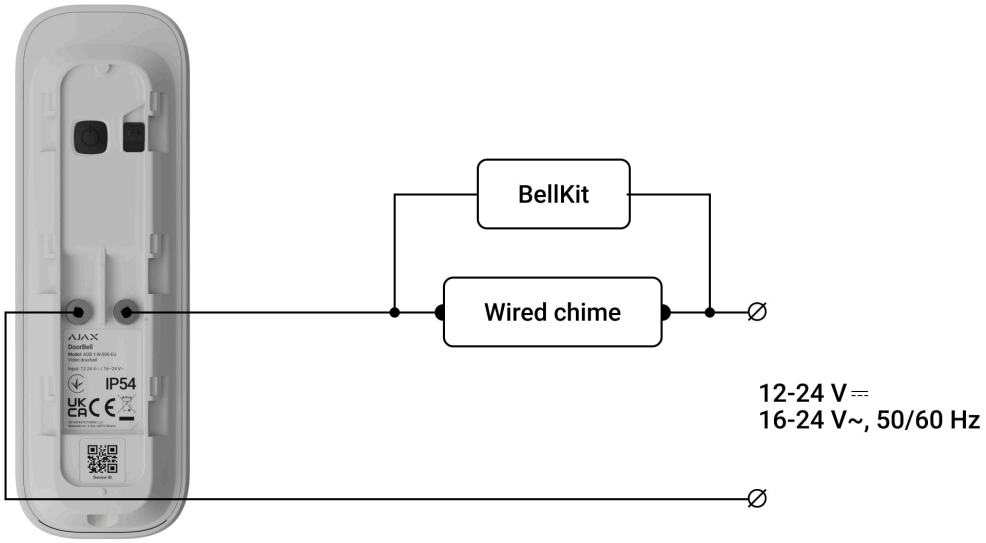
6. Connect and firmly secure the wires to the terminals. For a reliable connection, use bundled wires with a U-type terminal.
7. Switch on the external power.
8. **Add DoorBell to the system**.
9. Place the device on the SmartBracket mounting panel.
10. Test the device operation and check the camera view angles.
11. If the camera view angles are correct and the device works as expected, remove the device from SmartBracket.
12. Fix the SmartBracket panel or the wedge bracket on the surface with bundled screws. Use all fixing points.

When using other fasteners, ensure they do not damage or deform the panel or the wedge bracket.

13. Place the device on the SmartBracket mounting panel.
14. Tighten the holding screw on the bottom of the device enclosure. The screw is needed for more reliable fastening and protection of the device from quick dismantling.

Connecting to a wired chime

To connect DoorBell to a wired chime, it is required to install BellKit according to the wiring scheme below.



Once DoorBell and BellKit are connected to a wired chime, you need to configure the chime connection in an Ajax app. Before configuring, ensure that DoorBell is **added to the system**.

To configure the wired chime connection, in an Ajax app:

1. Go to the **Devices** tab.
2. Select **DoorBell** 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 **Chime settings**.
5. Open the **Chime type** parameter and select the **Mechanical chime** or **Digital chime** option according to the type of chime DoorBell is connected to.
6. If necessary, adjust the **Alert duration** time.
7. Tap **Save** to apply the settings.

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

Note that DoorBell 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 power button to switch on the device. Wait for DoorBell to enter setup mode. When the LED is flashing blue, tap **Next** to proceed:
    1. If DoorBell 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 DoorBell 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 DoorBell 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 DoorBell 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 DoorBell 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 DoorBell to the NVR or as a standalone device.

To pair DoorBell 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 DoorBell 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 DoorBell and the hub. Before adding, **check if your hub is compatible** with DoorBell.

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

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

1. Go to the **Devices** tab.
2. Select **DoorBell** 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 DoorBell with the hub.

Once DoorBell 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 DoorBell. You can change the current Wi-Fi network settings or connect the device to another available Wi-Fi network.

Note that DoorBell 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 **DoorBell** 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 DoorBell to the default settings:

1. Turn off the device by pressing the power button for 3 seconds. Wait for DoorBell to shut down.

> The LED lights up red for about 3 seconds, then lights up red circle-wise until the device is shut down, and then flashes red three times rapidly.

2. Press and hold the power button for 30 seconds. The LED should light up violet circle-wise, then flash violet every 1.5 seconds. The violet

indication lasts until DoorBell resetting is finished. The resetting can take up to 2 minutes.

3. Once the resetting is finished, DoorBell automatically enters **setup mode**.

Icons

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

Icon	Meaning
	The extra services are activated according to the subscription.
	Wi-Fi signal strength. It displays the signal strength through the Wi-Fi communication channel. The recommended values are 2–3 bars.
	Backup channel signal strength. It displays the signal strength between the hub and the device. The recommended values are 2–3 bars. Learn more
	The battery charge level of the device. Learn more
	The device operates in **Night mode**. Learn more
	There is no access to view the device's video.
	Other users have access to view the device's video. 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.

States

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

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

Parameter	Meaning
Malfunction	Tapping on ⓘ opens the list of device malfunctions. The field is displayed only if a malfunction is detected.
Firmware update	The field is displayed when the firmware update is available: • **New firmware version available** — the new firmware is available for download and installation. • **Downloading…** — firmware downloading is in progress. It is displayed as a percentage. • **Installing…** — the firmware is being installed. • **Failed to update firmware** — the new firmware could not be installed.

	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: • **Online** — the device is connected to the network. Normal state. • **Offline** — the device is not connected to the network. Please check your wireless internet connection. Tapping on ⓘ displays the network parameters.
Connection to NVR	Displayed when the device is connected to NVR. The device connection status to NVR: • **Online** — the device is connected to the network via NVR. Normal state. • **Offline** — the device is not connected to the network via NVR. Please check your wireless internet connection. 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. Jeweller is a protocol for transmitting events. 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): • **Online** — the device is connected to the hub (or the range extender). Normal state. • **Offline** — the device is not connected to the hub (or the range extender). Check the device connection. 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. Wings is a protocol for transmitting photo verifications. 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): • **Online** — the device is connected to the hub (or the range extender). Normal state. • **Offline** — the device is not connected to the hub (or the range extender). Check the

	device connection. 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**: • **Online** — the device is connected to the range extender. • **Offline** — the device is not connected to the range extender. The field is displayed if the device operates via the radio signal range extender.
Storage location	Displays the list of storage devices connected to DoorBell: • **Cloud** (coming soon); • **NVR hard drive** — data is recorded on the NVR hard disk. Tapping on ⓘ displays the recording mode and storage settings.
Cloud storage (coming soon)	Displays the status of Ajax Cloud Storage: • **No subscription.** • **Activated.** • **Suspended.** • **Formatting….**
External power	External power status:

	• **Connected** — the external power is connected to the device. • **Disconnected** — the external power is disconnected or not connected.
Battery charge	The battery charge level of the device: • **OK.** • **Low.** • **Error.** • **Temperature out of range.**
Lid	The status of the device tamper that responds to detachment or opening of the device enclosure: • **Open** — the device is removed from the SmartBracket mounting panel, or its integrity is compromised. Check the mounting of the device. • **Closed** — the device is installed on the SmartBracket mounting panel. The integrity of the device enclosure and the mounting panel is not compromised. Normal state. Learn more
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: • **H.264**

Motion detection	The **Motion detection** feature status: • **On** • **Off**
Object detection	The **Object detection** feature status: • **On** • **Off**
PIR sensor for motion detection	The **PIR sensor for motion detection** feature status: • **On** • **Off**
Permissions to view	Displays the number of users who have access to view video from the device. 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 DoorBell settings, in an Ajax app:

1. Go to the **Devices** tab.
2. Select **DoorBell** in the list.
3. Go to **Settings**.
4. Set the required settings.
5. Tap **Back** to save the new settings.

Settings	Meaning
Name	Device name. It is displayed in the list of hub devices, text of SMS and notifications in the events feed. To change the device name, tap on the text field. The name can contain up to 24 Latin characters or up to 12 Cyrillic characters.
Room	Selecting the virtual room to which DoorBell is assigned. 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**. Learn more
Recording preferences	Selection of the **Recording mode** for each storage: • **On detection or scenario**

	• **Continuous** • **Never** Selection of the armed mode when the camera records video: • **When armed** • **Always**
Notifications from camera detectors	The user can select the type of object, and when it's recognized, a notification with video footage is received: • **Human** • **Pet** • **Vehicle** • **Any motion (pixel position change)** • **Any motion (PIR sensor)** You can also configure **Interval in reporting similar events** and select the armed mode that triggers the notifications: • **When camera armed** • **Always**
Detection	Opens a menu with **Detection** settings. Learn more
Video stream	Opens a menu with **Video stream** settings. Learn more

Image	Opens a menu with **Image** settings. Learn more
Audio	Settings for audio capture and playback. • **Audio capture and playback** — turn on to watch and record videos with audio. • **Audio codec**. • **Bit rate**. • **Sample rate**. • **Microphone gain** — configure the microphone sensitivity level based on the installation location. • **Speaker volume** — adjust the speaker volume for two-way voice communication.
Firmware update	Switches the device to the firmware updating mode if a new version is available.
Connection	Opens a menu with **Connection** settings: • **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. Configuring Wi-Fi network Pairing with an Ajax hub

Chime settings	Allows the user to configure chime settings. The menu has two options: • **Chime type** — if the device is **Not connected** or connected to the **Mechanical** or **Digital** chime. • **Chime via hub siren** — if the device is paired with a hub with sirens added to the system.
Archive	Selection of the maximum archive depth. It can be set in the range of 1 to 360 days or can be unlimited. Allows the user to format the cloud archive.
Service	Opens a menu with **Service** settings. Learn more
Jeweller signal strength test	Switches the device to the Jeweller signal strength test mode. 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. Learn more Available if the device is paired with the hub.
Wings signal strength test	Switches the device to the Wings signal strength test mode. 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.

	Learn more Available if the device is paired with the hub.
Report a problem	Allows the user to describe a problem and send a report.
User guide	Opens the DoorBell user manual in an Ajax app.
Unpair from NVR	Unpairs the device from the NVR to which it was paired. 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.

Detection settings

Settings	Meaning
PIR sensor for motion detection	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: • **Low** — there are likely sources of false triggerings in the device's field of view. • **Normal** (by default) — recommended value, suitable for most facilities. Do not change it if the device operates correctly.

	• **High** — there are no obstacles in the device's field of view; the device detects any motion. The option is available when **PIR sensor for motion detection** is enabled.
Motion detection	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. The option is available when **Motion detection** is enabled.
Motion detection settings	Opens a menu with motion detection settings: • **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. • **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. The option is available when **Motion detection** 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:

	• **Adjust object detection zone** — defines the specific area within the field of view where the camera should identify the type of moving objects. • **Human detection** — enables detection of people in the video. • **Pet detection** — enables detection of pets in the video. • **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. 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: • H.264
Resolution	Selecting the mainstream resolution: • 1024 × 576 • 1920 × 1080

	• 2304 × 1296 • 2560 × 1440 • 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: • **Variable (VBR)** • **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: • H.264
Resolution	Selecting the substream resolution: • 720 × 480 • 720 × 576 • 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: • **Variable (VBR)**

	• **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. 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: • **Day** — IR backlight is always off. • **Night** — IR backlight is always on. • **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: • **Early** • **Medium** • **Late** 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: • **Auto** • **Custom** • **Off** 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. This setting is available if **Infrared illumination (IR)** is set to **Custom**.

Service settings

Settings	Meaning
Time zone	Time zone selection. 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. The **PIR sensor for motion detection** option should be enabled in the **Detection** settings.
Sound on button press	When the option is enabled, pressing the device button is accompanied by a sound.
Cloud connection	
Delay of cloud connection loss alarm, sec	The delay helps to reduce the risk of a false event of the server connection loss. 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.

Indication

Depending on the device status, the DoorBell 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 lights up orange circle-wise.	The indication lasts until the device is started up.
The device is in Access Point (AP) mode.	The LED lights up white circle-wise until the AP is activated, then 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.	
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.
Turning off the device.	The LED lights up red for about 3 s, then lights up red circle-wise until the device is shut down, and then flashes red three times rapidly.	
Pressing the doorbell button.	The LED lights up white circle-wise for 30 s or until the user responds through the app.	
Two-way voice communication is in progress.	The LED lights up white constantly with 50% of the brightness.	
Motion is detected by a PIR sensor.	The LED lights up white for about 2.5 s with 50% of the brightness.	
Tamper alarm/restoration when the system is disarmed.	The LED lights up green for about 1.5 s.	
Tamper alarm when the system is armed.	The LED flashes red continuously.	The indication lasts until the user disarms the system.

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.	

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.
- The device lid is open (tamper is triggered).
- 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.
- The device battery is low.

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, gasoline, 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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