



Hub 2 (2G) Jeweller

Security system control panel supporting photo verification feature. Has three independent communication channels: Ethernet and two 2G SIM cards.



Find the detailed information on the device at the link:



ajax.systems/support/devices/hub-2/



Key features



Photo verification support



Video surveillance support



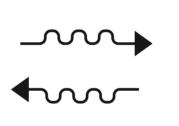
Free software updates



Informing users with push notifications, calls, and SMS



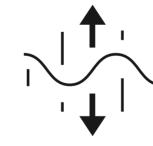
Connection to security company CMS



Communication with wireless Ajax devices at a distance of up to 2,000 m



Tampering alarm



Frequency hopping



Remote control and setup via the app



Connecting to Ajax apps via QR code

Always online

To guarantee prompt alarm transmission to the monitoring station and users, Hub 2 (2G) can be connected to three Internet providers simultaneously via **Ethernet** and two **SIM cards (2G)**. Channels work in parallel, and automatic switching between them takes seconds.

Hub is connected to the apps, security companies and users through the Ajax Cloud server with an availability of 99.995% in 2021. For reliability, the servers are located in several data centres. We use the proprietary binary protocol and automatic load balancing for the uninterrupted processing of millions of data packets and the stable operation of security systems.

Hub reduces the security system's dependence on the conditions at the facility. The control panel is equipped with a backup battery, providing **up to 16 hours of autonomous operation** in case of a blackout. The system will report a power-down and a power restoration to the CMS and all users.

Guaranteed delivery of alarms and photo confirmations

Jeweller

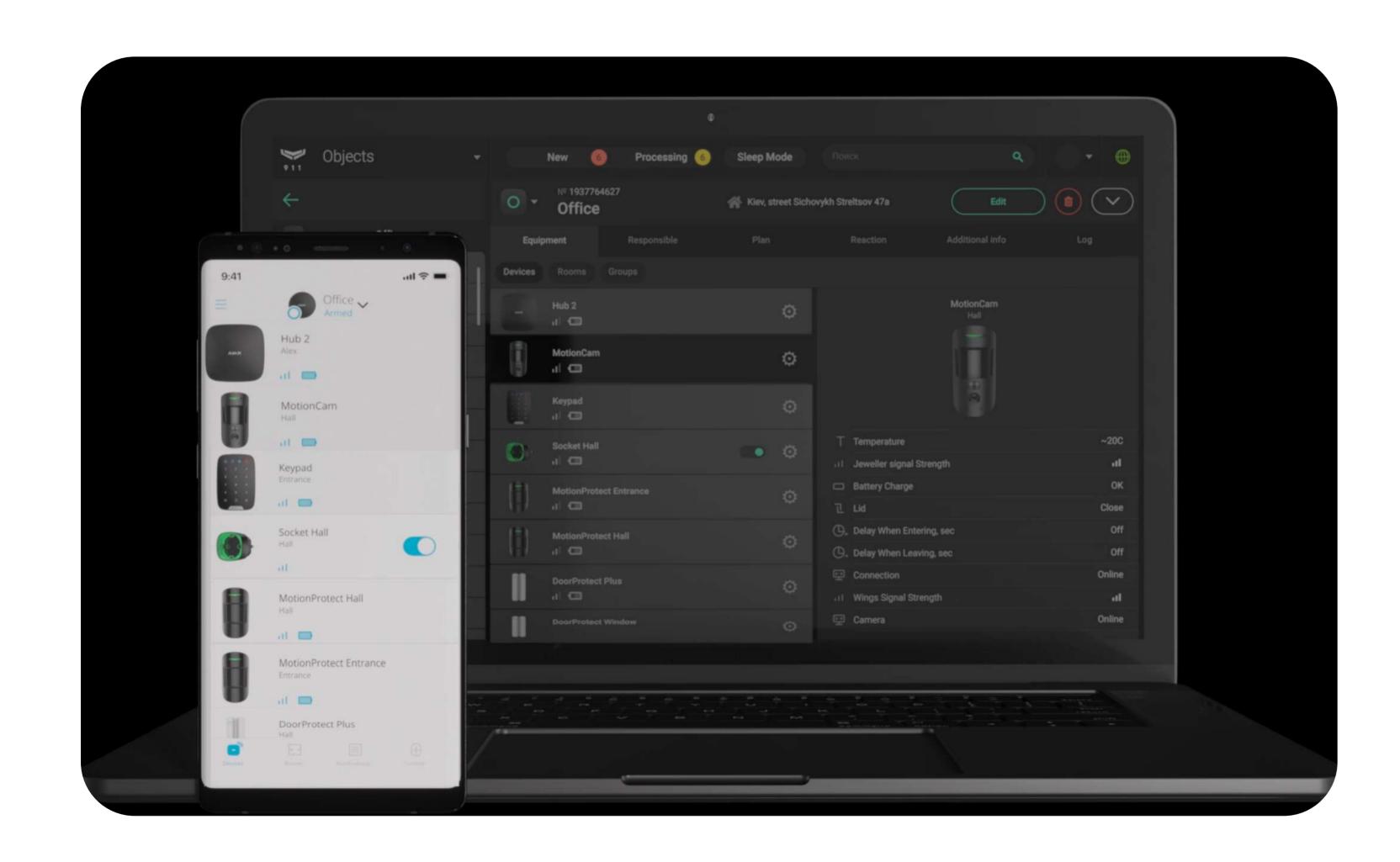


Jeweller provides two-way communication between a hub and connected devices at a distance of up to 2,000 meters. Jeweller uses time frames to synchronize communication with connected devices, authentication to eliminate forgery, and encryption to protect against data theft.



Wings is a radio protocol developed for the fast transmission of visual data. Hub 2 (2G) uses dedicated antennas to improve channel reliability. Built-in package checking and uploading algorithms allow Wings to deliver photos at a distance of up to 1,700 meters, even if the signal level is unstable.

Controlled with apps



We've developed two types of applications: for users and PRO. Users' apps are designed for monitoring alarms and managing security via smartphone. Apps for PRO are designed to manage system settings via PC or smartphone.

All types of Ajax apps connect to a hub using a secure channel with Ajax Cloud — our server solution located at several AWS data centres. All security system settings are always available in the app.

The keyboard also allows you to create passcodes for those who are not added to the hub users or use the system from time to time. In this case, the users and the monitoring company operator also know exactly who and when changed the security mode. It is convenient, for example, to create a passcode for a cleaning company.

More options with these two hub versions

To meet the requirements of the professionals and today's security market, we manufacture and sell two **Hub 2** models simultaneously. They have the same body and specifications, but only with one difference: a type of built-in cellular modem.

We will ship Hub 2 in two versions: with a 2G and a 4G modem. The hubs are marked as **Hub 2 (2G)** and **Hub 2 (4G)** — and have different packaging to avoid confusion. Choose and install the equipment that precisely matches the client's needs. We will keep producing and selling all the preceding hub models to offer more choices.



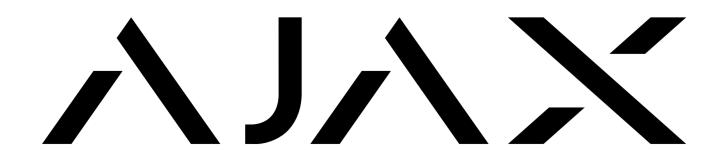
Hubs with 2G cellular modems will gradually cease to be supplied in regions where 2G/3G frequencies are planned to be disabled in the near future.

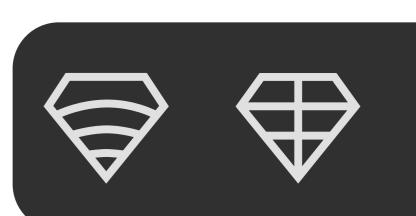
Fast connection and installation

Hub is ready to work right out of the box. It comes with pre-installed communication modules, a power supply unit, and a backup battery. To begin the system setup, an installer needs to plug the device into a power socket, connect it to the Internet, insert a SIM card, and scan the app's QR code. Thanks to SmartBracket, installers don't need to disassemble the enclosure to mount the hub.

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Connection to CMS	SurGard (Contact ID) SIA (DC-09) ADEMCO 685 Other proprietary protocols
Connected devices	up to 100 wireless devices Including up to 5 range extenders and up to 10 sirens.	Features	50 users 25 cameras or DVRs 32 automation scenarios 9 security groups photo verification support

Communication channels with Ajax devices	Frequency bands 866.0-866.5 MHz 868.0-868.6 MHz 868.7-869.2 MHz 905.0-926.5 MHz 915.85-926.5 MHz 921.0-922.0 MHz Depends on the sales region. Maximum effective radiated power (ERP) ≤25 mW	External communication channels	Ethernet 8P8C slot Up to 100 Mb/s. Cellular network 1 slot for micro-SIM 2G (GSM900/DCS1800 (B3/B8))
	Communication range up to 2,000 m In an open space.		
Power supply	Main power supply 100-240 V~, 50/60 Hz Backup power supply Li-lon battery with 2 A·h capacity Up to 16 hours of autonomous operation.	Installation	Operating temperature range from -10°C to +40°C Operating humidity up to 75% Protection class IP20
Enclosure	Colour white black Dimensions 163 × 163 × 36 mm Weight 362 g Tampering alarm	Complete set	Hub 2 (2G) Jeweller Power cable Ethernet cable SIM card Depends on the region o sale. Installation kit Quick Start Guide





MotionCam Jeweller

Wireless indoor IR motion detector supporting photo verification of alarms.



An Ajax hub is required for operation. Find the detailed information on the device by the link:



http://ajax.systems/support/devices/motioncam/

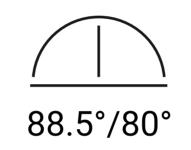






Key features

12 m Up to 12 m detection distance



88.5°/80° viewing angles



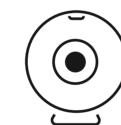
Pet immunity



Temperature compensation



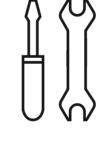
False alarms prevention algorithm



A built-in camera for photo verification



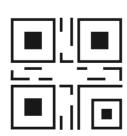
Up to 4 years of operation on pre-installed batteries



Effortless installation and replacement

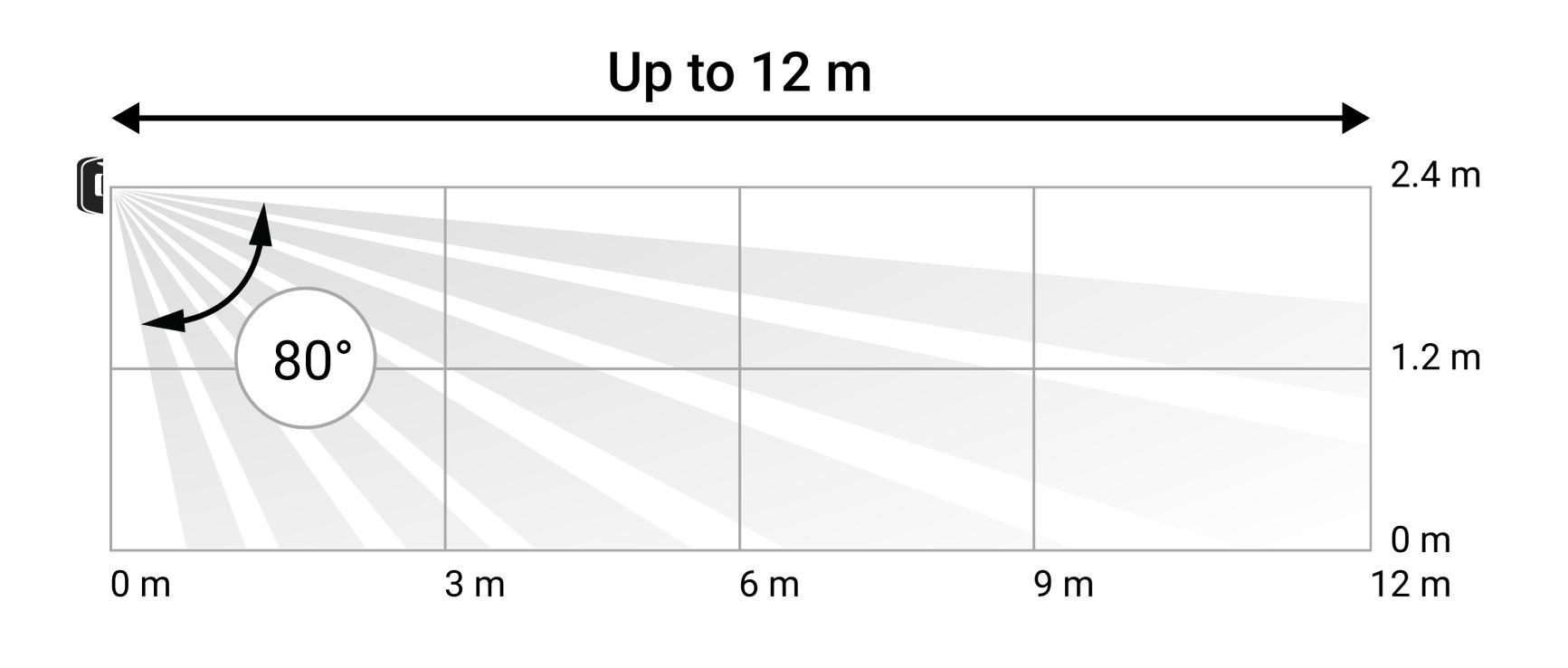


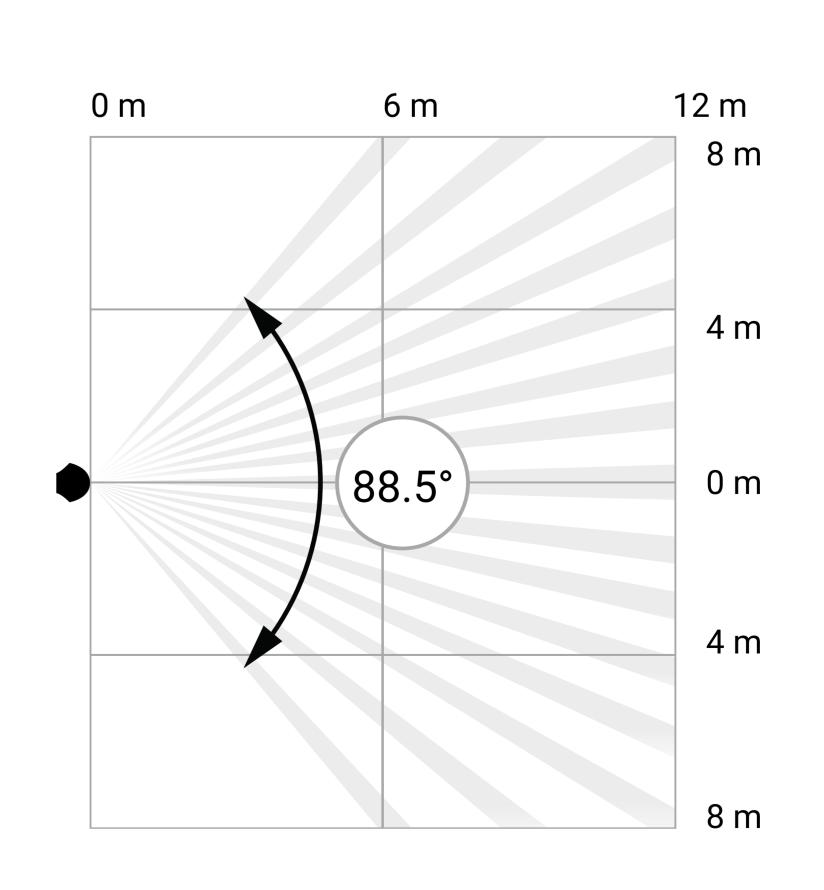
Remote control and setup via the app



Connecting via QR code

Angles and detection range





False alarms prevention

Optics

The detector lens increases sensitivity to human motion, cutting off false alarms caused by other sources of IR radiation. It is designed so that potential IR radiation from pets and other interferences affect only the small lens sections. Large sections, on the contrary, are aimed at the most likely places of burglar motion.

Software

For additional protection against false alarms, the detector uses the SmartDetect algorithm. The armed detector constantly analyses the thermal diagram from the IR sensor: the intensity of IR radiation, the size of the thermal spots, the speed of movement and other parameters.

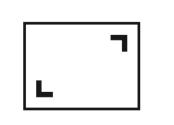
Installation

When properly installed and configured, the detector does not react to common sources of false alarms and pets under 50 cm tall and 20 kg in weight. The detector has pre-installed batteries and the SmartBracket mounting panel. So, installers don't need to disassemble the device and won't damage the electronics during installation.

Photo verification



MotionCam equipped with a built-in camera to show the real situation at the facility. A built-in camera is activated if the detector is armed and motion is detected. Only users with access to the hub event feed and security company employees can view the photos. The detector software architecture does not support taking a photo on demand.



Up to 640 × 480 pixels photo resolution



Up to 5 photos in a series



IR backlight for low light conditions

Privacy on demand

MotionCam is designed to control security, not privacy. Graphic data is securely protected by encryption at each step of transmission and storage. Only hub users can access its virtual storage on Ajax Cloud and view photos taken by MotionCam detectors. Photos are stored for up to 6 months in the hub event log in Ajax apps. The Ajax Cloud is located on geographically distributed servers in compliance with the General Data Protection Regulation (GDPR) requirements.

Monitoring software supporting the Ajax photo verification











Horus Manitou

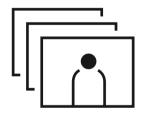
See the full list by the link: ajax.systems/connecting-to-cms/

Two-way encrypted communication

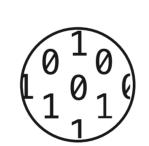


Jeweller and **Wings** are two-way **wireless data transfer protocols** that provide fast and reliable communication between hubs and connected devices. **Jeweller** delivers instant data-rich alarms: security companies and users know which device was triggered, when and where it happened. **Wings** delivers photos taken by a detector built-in camera.

Both protocols feature **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status. Supporting **up to 1,700 m** of wireless connectivity between MotionCam detectors and hub (or range extender), Jeweller and Wings are ready to protect facilities and deliver **the best user experience** for both end users and installers.



The first photo delivery in 9 s¹



Alarm delivery within 0.3 s

Compliance with	EN 50131 (Grade 2)	CMS connectivity	Hubs
standards	PD 6662:2017		Hub 2
			Hub 2 Plus
			Hub Hybrid (2G)
			Hub Hybrid (4G)
			Range extenders
			ReX 2
Communication	Jeweller	Motion detection	Sensitive element
channels with Ajax devices	communication technology		PIR sensor
	Wings		Detection distance
	communication technology		up to 12 m
			When installed at a height
	Frequency bands		of 2.4 m.
	866.0 - 866.5 MHz		
	868.0 - 868.6 MHz		Detection angles
	868.7 - 869.2 MHz		horizontal — 88.5°
	905.0 - 926.5 MHz		vertical — 80°
	915.85 - 926.5 MHz		
	921.0 - 922.0 MHz		Motion detection speed
	Depends on the region of		from 0.3 to 2.0 m/s
	sales.		The direction of the
			detector lens should be
	Maximum effective		perpendicular to an allege
	radiated power (ERP)		intrusion path into the
	≤ 20 mW		facility.
	Communication range		Temperature
	up to 1,700 m		compensation
	In an open space.		
			Sensitivity
	Polling interval		3 levels
	12-300 s		Adjusted by PRO or user
	Adjusted by PRO or user		with admin rights in the
	with admin rights in the Ajax app.		Ajax app.
			Pet immunity
	Protection against forgery		weight: up to 20 kg
	Device authentication		height: up to 50 cm

Photo verification	Photo resolution in pixels 640 × 480 320 × 240 (default) 160 × 120 Adjusted by PRO or user with admin rights in the Ajax app	Installation	Recommended installation height 2.4 m Operating temperature range from -10°C to +40°C
	Photos in a series from 1 to 5 pics Adjusted by PRO or user with admin rights in the Ajax app IR backlight		Operating humidity up to 75% Protection class IP50
Power supply	Battery 2 x CR123A Pre-installed. Battery life up to 4 years	Enclosure	Colour white, black Dimensions 110 × 65 × 50 mm Weight 86 g Tampering alarm
Complete set	MotionCam Jeweller 2 × CR123A battery Pre-installed SmartBracket mounting panel Installation kit Quick Start Guide		





DoorProtect Jeweller

Wireless indoor opening detector



An Ajax hub is required for operation. Find the detailed information on the device at the link:



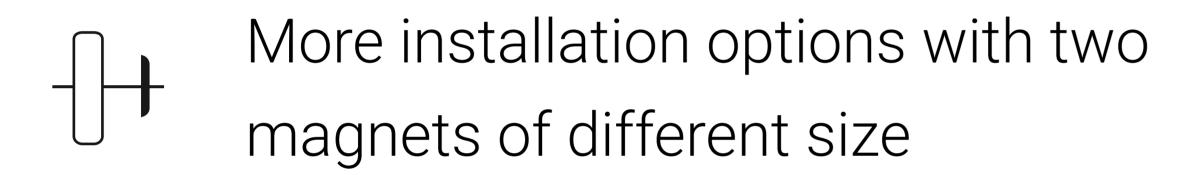
https://ajax.systems/support/devices/doorprotect/

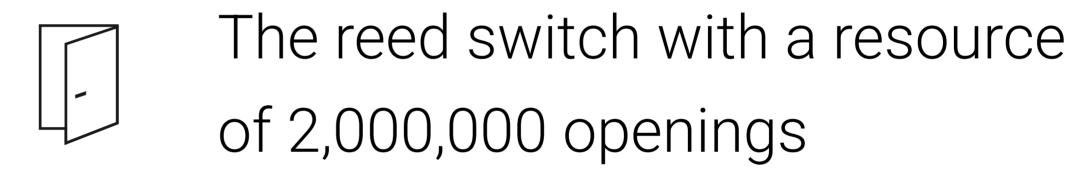


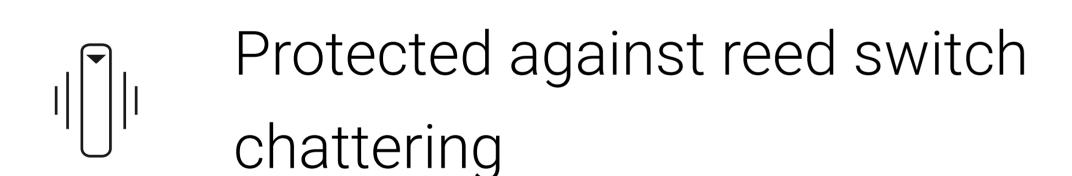


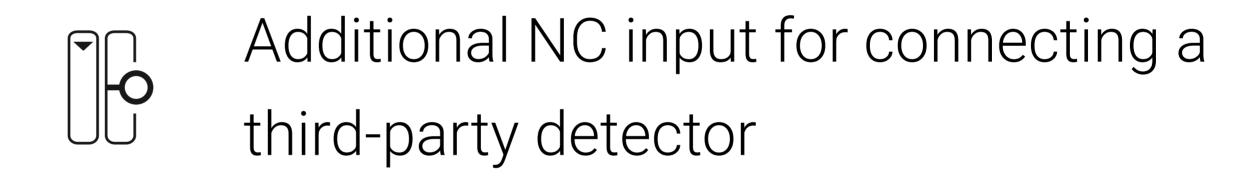


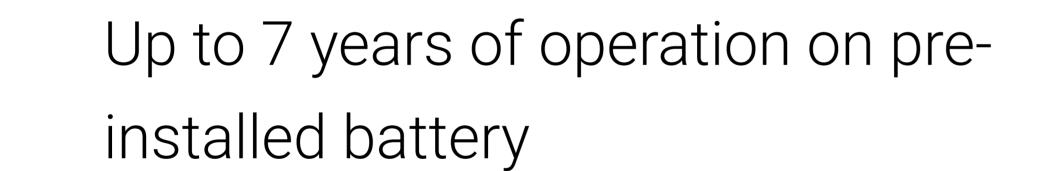
Key features















Remote control and setup via the app



Pairing via QR code

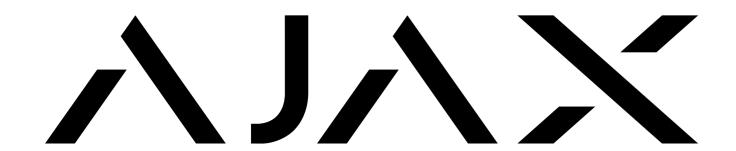
Jeweller communication technology

Jeweller is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know which device was triggered, when and where it happened.

Jeweller features **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status in real time. Supporting **up to 1,200 m** of wireless connectivity, Jeweller is ready to protect facilities and deliver **the best user experience** for both end users and installers.

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs all Ajax hubs Range extenders all Ajax radio signal range extenders
Communication with control panel and range extenders	Frequency bands 866.0 − 866.5 MHz 868.0 − 868.6 MHz 868.7 − 869.2 MHz 905.0 − 926.5 MHz 915.85 − 926.5 MHz 921.0 − 922.0 MHz Depends on the region of sales Maximum effective radiated power (ERP) ≤ 20 mW Communication range up to 1,200 m In an open space Polling interval 12−300 sec Adjusted by PRO or user with admin rights in the Ajax app Protection against forgery Device authentication	Detection	Sensing element 1 × reed switch Opening sensors resource 2,000,000 openings Third-party detector connection wired detector with the normally closed (NC) contact type

Power supply	1 × CR123A, 3 V	Installation	Operating temperature
	Pre-installed		range
			from -10°C to +40°C
	up to 7 years of		
	battery life		Operating humidity
			up to 75%
			Ingress protection
			IP50
Enclosure	Colours	Complete set	DoorProtect Jeweller
	white, black		2 magnets
			(small and large)
	Dimensions		1 × CR123A (pre-installed)
	Ø 20 × 90 mm		SmartBracket
	© 20 · · JO IIIII		Installation kit
	Weight		External contact for NC
	29 g		detector
			Quick Start Guide
	Tampering alarm		





KeyPad Jeweller

Wireless touch keypad.



An Ajax hub is required for operation. Find the detailed information on the device at the link:



ajax.systems/support/devices/keypad/







Key features



Up to 200 personal passcodes



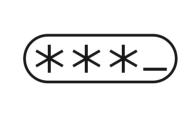
Duress code



Up to 2 years of the pre-installed batteries life



Remote control and setup via the app



Protection against the passcode guessing



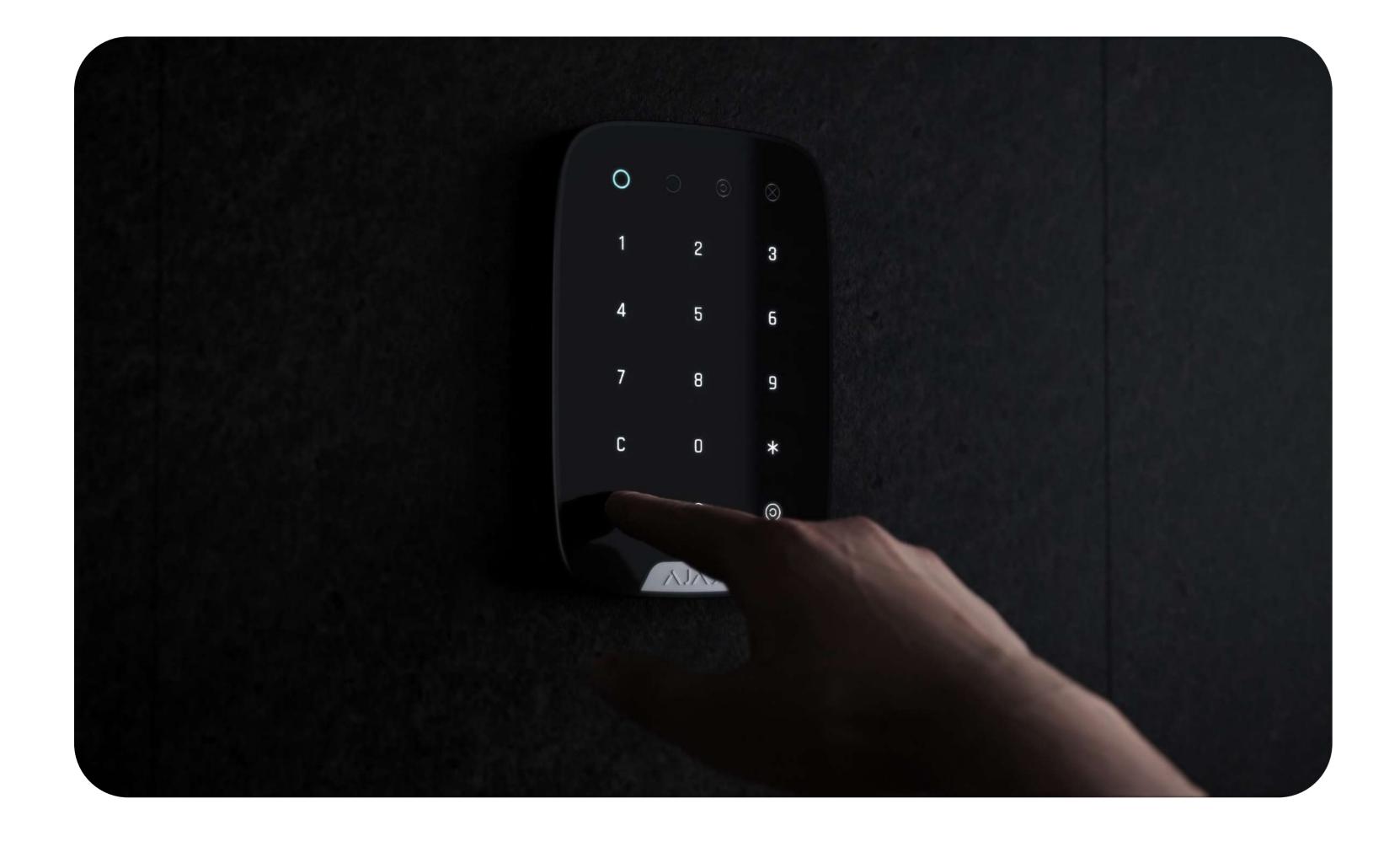
Panic button



SmartBracket mounting panel for the ease of installation



Pairing with the system via QR code



Security system management

KeyPad supports the general passcode, the personal passcodes, and the security activation without entering a passcode. The personal passcodes provide detailed information: the app log and notifications show the security mode changing event and the name of the user who did it.

The keyboard also allows you to create passcodes for those who are not added to the hub users or use the system from time to time. In this case, the users and the monitoring company operator also know exactly who and when changed the security mode. It is convenient, for example, to create a passcode for a cleaning company.

Duress code

Duress code allows users to simulate disarming via KeyPad.

The sirens, the app, and the keypad indication will not give away the user, but the alarm signal is instantly transmitted to a central monitoring station. The security system users also receive notifications on this event.



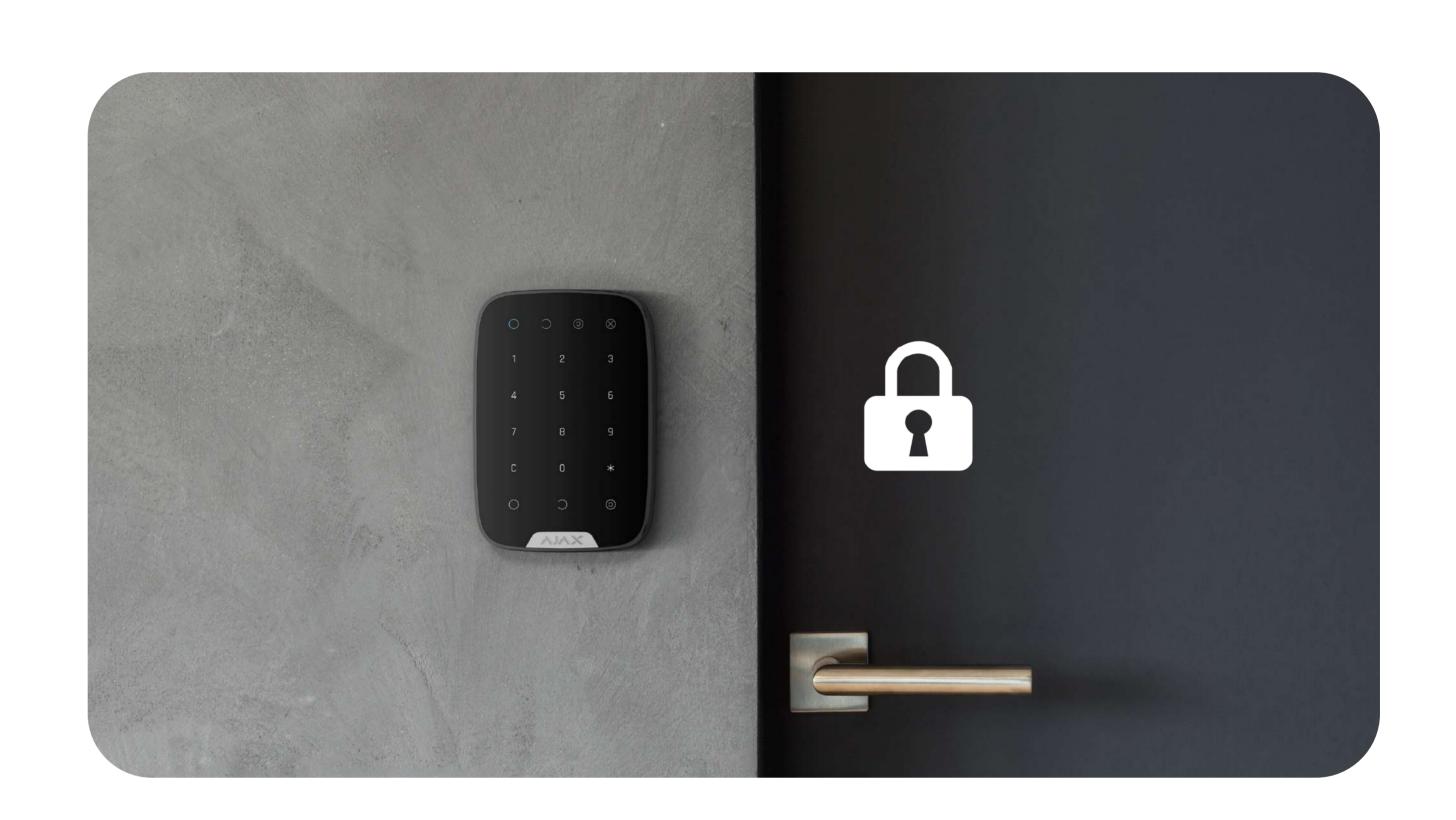


Function button

KeyPad featured the **Function button**, which can be used as a panic button. Or, you can set it to mute the **Interconnected Fire Detectors Alarms**: press the keyboard button to mute the sirens of the Ajax fire detectors.

Unauthorized access auto-lock

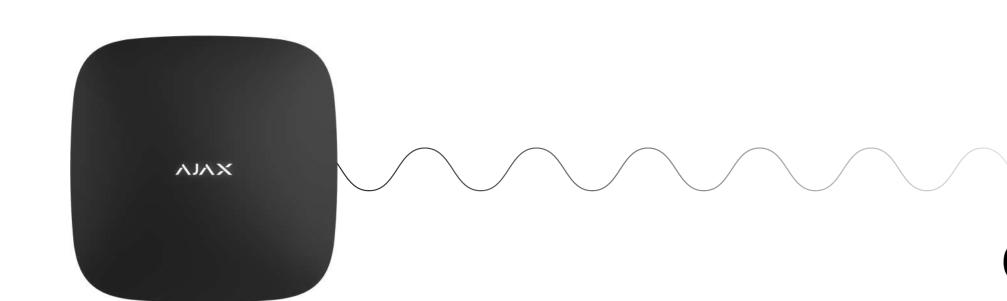
Three wrong passcodes entered a row blocks the keypad for the time adjusted in the settings. The hub will inform the users and the security company about the incident, and all the passcodes will be ignored during the auto-lock time.





Two-stage arming

The feature splits the arming process into two stages: initiation and finishing. Users can initiate arming via KeyPad. In this case, the system will be armed when a Second-Stage Device is triggered. For instance, when closing the door on which the DoorProtect detector is installed.







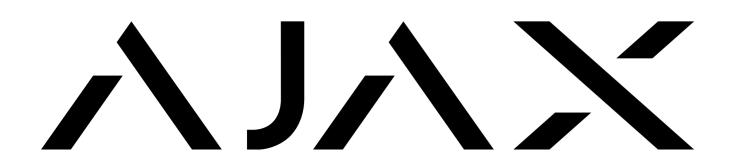
communication technology

The **Jeweller** radio protocol provides **fast and reliable two-way communication** between the hub and the system devices. The protocol delivers instant data-rich alarms and events: the security companies and the users know who and when has changed a security mode or press a panic button.

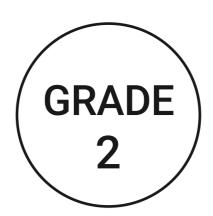
Jeweller features **encryption** and **authentication** to prevent spoofing, and **polling** to display the devices' statuses. Supporting **up to 1,700 m** of wireless connectivity, Jeweller is ready to protect facilities and deliver **the best user experience** for both system owners and installers.

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs All Ajax hubs
		Egaturas	Range extenders all Ajax radio signal range extenders
Communication with the hub or range extender	Jeweller communication technology	Features	Security mode indication The device is activated and the touch buttons light up once the user touches the
	Frequency bands 866.0 - 866.5 MHz		keyboard, so it's easy to enter the passcode even in
	868.0 - 868.6 MHz 868.7 - 869.2 MHz 905.0 - 926.5 MHz		the dark. Pressing the buttons is accompanied by an audible signal.
	915.85 – 926.5 MHz 921.0 – 922.0 MHz		Passcodes
	Depends on the sales region		up to 200 personal passcodes One per user. The number
	Maximum effective		of users depends on the
	radiated power (ERP) ≤ 20 mW		hub model
			1 general passcode One per the keyboard

Communication with	Communication range	Features	Duress code
the hub or range	up to 1,700 m	i CatalC3	up to 200 personal
extender	In an open space		passcodes
CATCHACI	in an open space		One per user. The number
	Polling interval		of users depends on the
	12 – 300 s		hub model
	Adjusted by PRO or user		Hub Houci
	with admin rights in the		One general passcode
	Ajax app		for the keyboard
	Protection against		Function button
	spoofing		Panic button
	Device authentication		To activate an alarm
			Mute fire alarms
			Button mutes the
			Interconnected Fire
			Detectors Alarms
			Code guessing protection
			Keyboard locks for 3-180
			minutes if an incorrect
			code is entered 3 times in a
			row within 1 minute. The
			auto-lock time is adjusted
			by PRO or user with admin
			rights in the Ajax app.
Power supply	Battery	Installation	Operating temperature
	4 × AAA battery		range
	Pre-installed		from -10°C to +40°C
	Battery life		Operating humidity
	up to 2 years		up to 75%
Enclosure	Colours	Complete set	KeyPad Jeweller
	white, black		4 × AAA battery
			Pre-installed
	Dimensions		SmartBracket mounting
	150 × 103 × 14 mm		panel Installation kit
	Weight		Quick Start Guide
	197 g		











StreetSiren Jeweller

Wireless siren with LED frame.



An Ajax hub is required for operation. Find the detailed information on the device at the link:



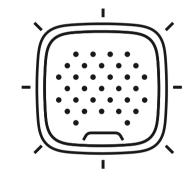
ajax.systems/support/devices/streetsiren/



Key features



Adjustable volume: from 85 dB to 113 dB



Delay and security mode changing indication



IP54 protection class



Remote control and setup via the app



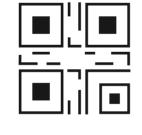
Adjustable alarm duration: from 3 s to 3 min



Door opening notifications



Effortless installation and replacement



Connecting via QR code

Operating principle



Informs about alarms

The siren responds to tamper and security system alarms in less than a second. It is loud enough to scare away intruders and attract the attention of neighbours.

Serves as a security status indicator

The siren LED notifies that the facility is armed, and a sound signal indicates **Delay When Entering / Leaving**. These are helpful features for the users who control the security system with a keypad or key fob.





Informs about alarms

The siren responds to tamper and security system alarms in less than a second. It is loud enough to scare away intruders and attract the attention of neighbours.



Jeweller is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know who and when has armed or disarmed the facility.

Jeweller features **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status in real-time. Supporting **up to 1,500 m** of wireless connectivity between StreetSiren and hub (or range extender), Jeweller is ready to protect facilities and deliver **the best user experience** for both end-users and installers.

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs all Ajax hubs
			Range extenders all Ajax radio signal range extenders

Communication with
control panel and
range extenders

Jeweller communication technology

Frequency bands

866.0 - 866.5 MHz

868.0 - 868.6 MHz

868.7 - 869.2 MHz

905.0 - 926.5 MHz

915.85 – 926.5 MHz

921.0 - 922.0 MHz

Depends on the region of sales.

Maximum effective radiated power (ERP)

≤ 20 mW

Communication range

up to 1,500 m

In an open space.

Polling interval

12 - 300 s

Adjusted by PRO or user with admin rights in the Ajax app.

Protection against forgery

Device authentication

Features

Alarm type

acoustic and light

Alarm volume

from 85 to 113 dB at a distance of 1 m

Adjusted by PRO or user with admin rights in the Ajax app.

Alarm duration

from 3 s to 3 min

Adjusted by PRO or user with admin rights in the Ajax app.

Siren sound frequency

 $3.5 \pm 0.5 \, \text{kHz}$

Chime

The siren makes a special sound to notify that the opening detectors are triggered when the system is disarmed.

Power supply

Main power supply

4 × CR123A battery

Pre-installed

Optional power supply

12 V≕, 1.5 A

Battery life

up to 5 years

Installation

Operating temperature

range

from -25°C to +60°C

Operating humidity

up to 95%

Protection class

IP54

Enclosure

Colours

white, black

Dimensions

 $75 \times 76 \times 27 \text{ mm}$

Weight

97 g

Anti-sabotage

tampering alarm

Triggered when the device

body is opened.

accelerometer

Activated when someone's try to move or dismount

the device.

Complete set

StreetSiren Jeweller

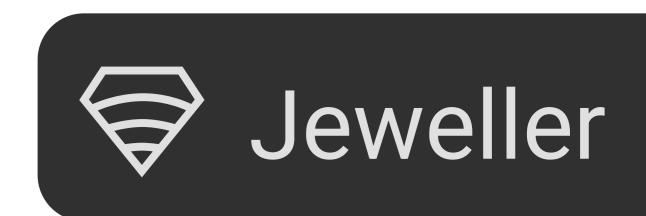
4 × CR123A battery

Pre-installed

SmartBracket Installation kit

Quick Start Guide





HomeSiren Jeweller

Wireless siren with external LED connector.



An Ajax hub is required for operation. Find the detailed information on the device at the link:



https://ajax.systems/support/devices/homesiren/



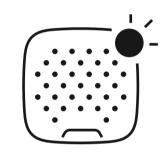




Key features



Adjustable volume: from 80 dB to 98 dB



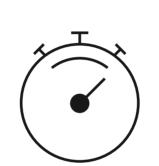
Delay and security mode changing indication



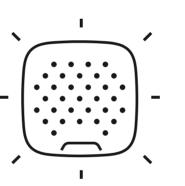
External LED connector



Remote control and setup via the app



Adjustable alarm duration: from 3 to 180 s



Door opening notifications



Effortless installation and replacement



Connecting via QR code

Operating principle



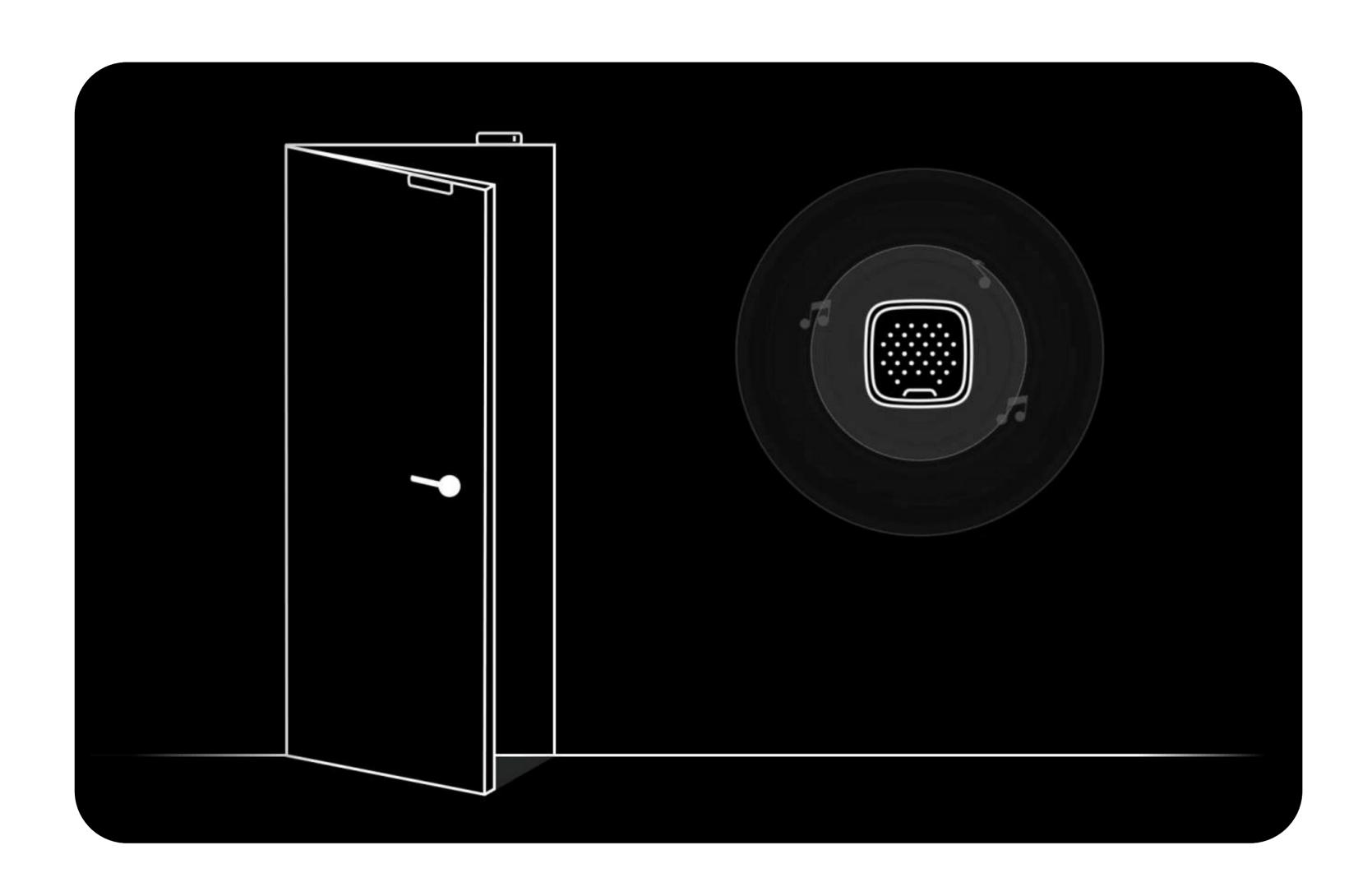
Informs about alarms

The siren responds to tamper and security system alarms in less than a second. It is loud enough to scare away intruders and attract the attention of neighbours.

Serves as a security status indicator

The siren LED notifies that the facility is armed, and a sound signal indicates **Delay When Entering / Leaving**. These are helpful features for the users who control the security system with a keypad or key fob.





Notifies on door opening

When the **Chime** feature is enabled, the siren makes a special sound to indicate that the opening detectors are triggered when the system is disarmed. The feature is used, for example, in stores to notify employees that someone has entered the building.

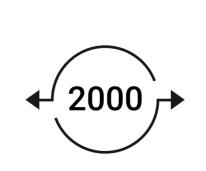


Jeweller is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know who and when has armed or disarmed the facility.

Jeweller features **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status in real-time. Supporting up **to 2,000 m** of wireless connectivity, Jeweller is ready to protect facilities and deliver **the best user experience** for both end-users and installers.



Up to 5 years of operation on preinstalled battery



Up to 2,000 m of two-way encrypted wireless communication between hub and siren

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	Hubs all Ajax hubs
			Range extenders all Ajax radio signal range extenders
Communication with control panel and range extenders	Jeweller communication technology	Features	Types of notifications Acoustic LED
	Frequency bands 866.0 - 866.5 MHz 868.0 - 868.6 MHz 868.7 - 869.2 MHz 905.0 - 926.5 MHz 915.85 - 926.5 MHz 921.0 - 922.0 MHz		Alarm volume from 80 to 98 dB at a distance of 1 m Adjusted by PRO or user with admin rights in the Ajax app
	Depends on the region of sales Maximum effective radiated power (ERP)		Alarm duration from 3 to 180 s Adjusted by PRO or user with admin rights in the Ajax app
	≤ 20 mW Communication range up to 2,000 m		Siren sound frequency 3.4 ± 0.5 kHz
	In an open space Polling interval		Additional LED connection 3 V An external LED works in
	12 – 300 s Adjusted by PRO or user with admin rights in the Ajax app		parallel with the siren built- in LED and fully replicates its indication
	Protection against forgery Device authentication		Chime The siren makes a special sound to notify that the opening detectors are triggered when the system

Power supply	Battery	Installation	Operating temperature
	2 × CR123A		range
	Pre-installed		from -10°C to +40°C
	Battery life		Operating humidity
	up to 5 years		up to 75%
Enclosure	Colours	Complete set	HomeSiren Jeweller
	white, black		2 × CR123A battery
			Pre-installed
	Dimensions		SmartBracket
	$75 \times 76 \times 27 \text{ mm}$		Connector for LED
			indicator
	Weight		Installation kit
	97 g		Quick Start Guide
	Tampering alarm		