

# Hub Jeweller

Security system control panel.  
Has two independent  
communication channels:  
Ethernet and a 2G SIM card.



Find the detailed information on the device at the link:

 [ajax.systems/support/devices/hub/](https://ajax.systems/support/devices/hub/)



2  
GRADE  
EN 50131

PD 6662  
2017

## Key features



Free software updates



Informing users with push notifications, calls, and SMS



Connection to security company CMS



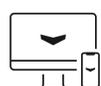
Communication with wireless Ajax devices at a distance of up to 2,000 m



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 can be connected to two Internet providers at a time via **Ethernet** and **SIM card (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 more excellent 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.

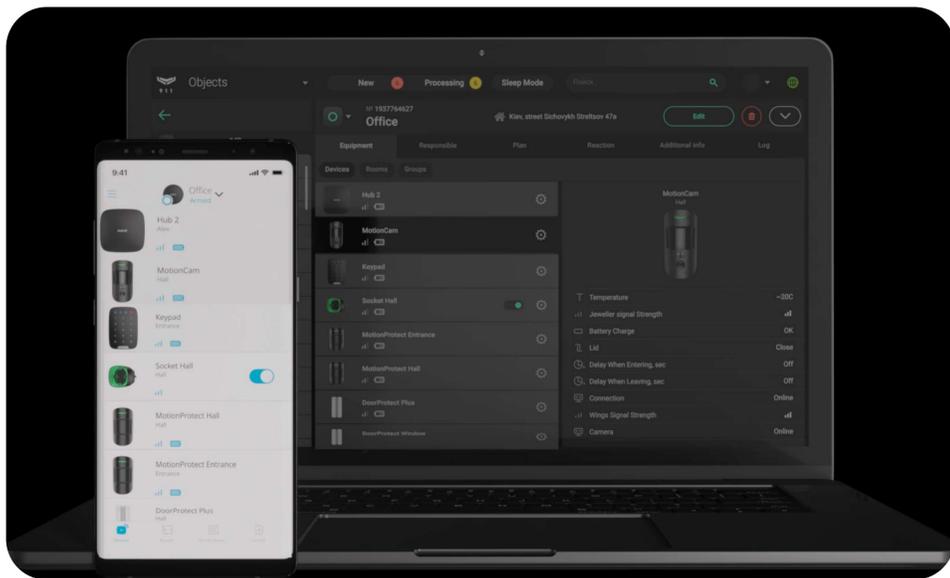
Hub reduces the security system dependence on the conditions at the facility. The control panel is equipped with a backup battery, providing **up to 16 hours of autonomous operation** in case of a blackout. The system will report a power-down and a power restoration to the CMS and all users.



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

To expand the radio coverage area, a **range extender** can be connected to Hub, increasing the range **to 1,800 m** more.

## 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.

## 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.

# Technical specifications

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 1 range extender and up to 10 sirens.	Features	50 users 10 cameras or DVRs 5 automation scenarios 9 security groups
Communication channels with Ajax devices	 <b>Jeweller communication technology</b>  <b>Frequency bands</b> 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.  <b>Maximum effective radiated power (ERP)</b> ≤25 mW  <b>Communication range</b> up to 2,000 m In an open space.	External communication channels	<b>Ethernet</b> 8P8C slot Up to 100 Mb/s.  <b>Cellular network</b> 1 slot for micro-SIM  2G (GSM900/DCS1800 (B3/B8))
Power supply	<b>Main power supply</b> 100–240 V~, 50/60 Hz  <b>Backup power supply</b> Li-Ion battery with 2 A·h capacity Up to 16 hours of autonomous operation.	Installation	<b>Operating temperature range</b> from -10°C to +40°C  <b>Operating humidity</b> up to 75%  <b>Protection class</b> IP20

<p>Enclosure</p> <p><b>Colour</b> white black</p> <p><b>Dimensions</b> 163 × 163 × 36 mm</p> <p><b>Weight</b> 350 g</p> <p><b>Tampering alarm</b></p>	<p>Complete set</p> <p>Hub Jeweller Power cable Ethernet cable SIM card Depends on the region of sale. Installation kit Quick Start Guide</p>
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# MotionProtect Jeweller

Wireless indoor IR motion detector.



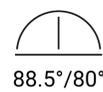
An Ajax hub is required for operation. Find the detailed information on the device by the link:

<http://ajax.systems/support/devices/motionprotect/>

## Key features



Up to 12 m detection distance



88.5°/80° viewing angles



Pet immunity



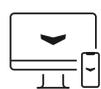
Temperature compensation



False alarms prevention algorithm



Effortless installation and replacement

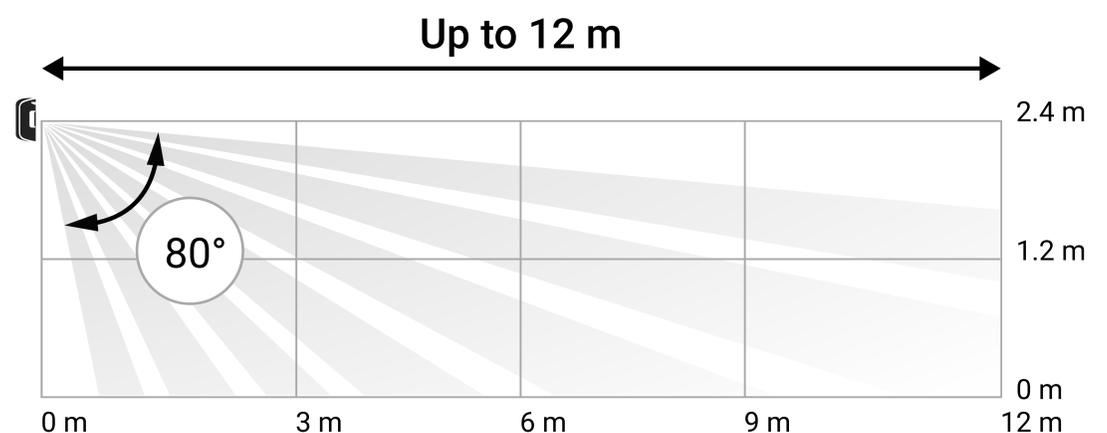
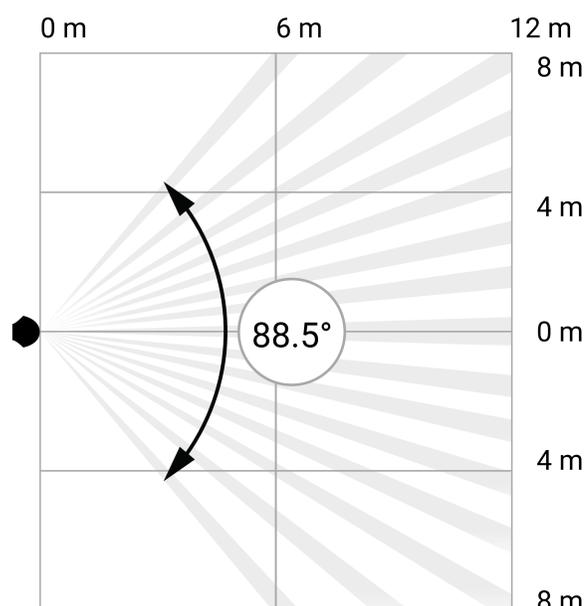


Remote control and setup via the app



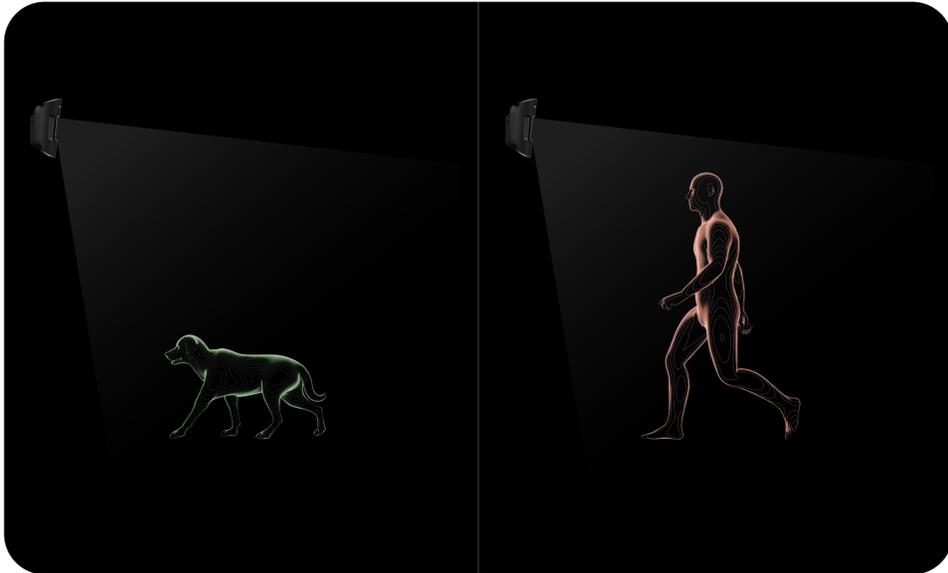
Connecting via QR code

## Angles and range



# False alarm prevention

MotionProtect Jeweller combines special optics and software to filter false alarms. When professionally installed, the detector ignores pets and doesn't react to the most common sources of false alarms.

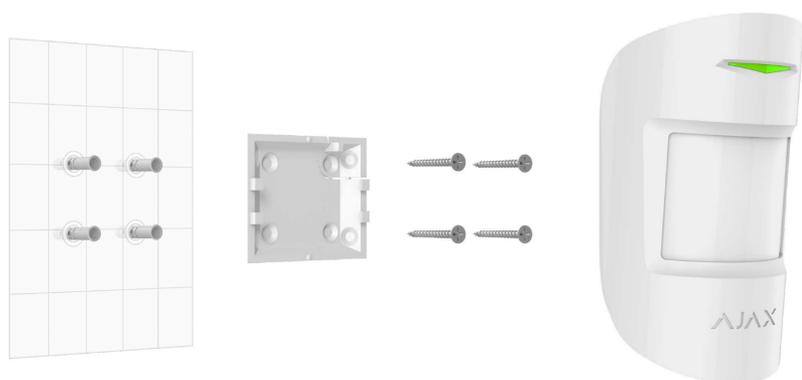
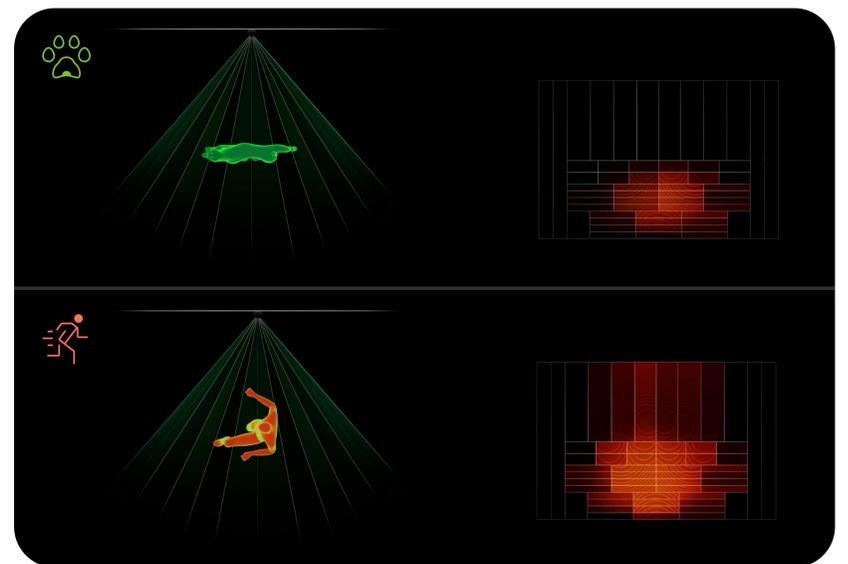


## Optics

The detector lens increases sensitivity to human motion, cutting off false alarms to 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 PIR 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. For seamless installation, it has pre-installed batteries and the SmartBracket mounting panel. So, installers don't need to disassemble the detector and won't damage the electronics during installation.



# Jeweller

## communication technology

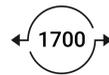


**Jeweller** is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know which device was triggered, when and where it happened.

Jeweller features **encryption** and **authentication** to prevent forgery, and **polling** to display devices' status in real time. Supporting **up to 1,700 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 pre-installed battery



Up to 1,700 m of two-way encrypted wireless communication between hub and detector

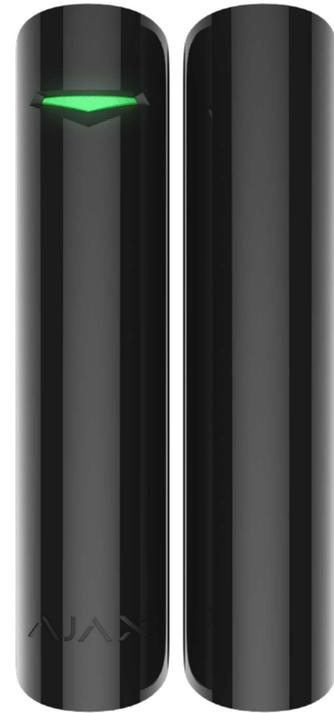
## Technical specifications

<p>Compliance with standards</p> <p><b>EN 50131 (Grade 2)</b> <b>PD 6662:2017</b></p>	<p>Compatibility</p> <p><b>Hubs</b> all Ajax hubs</p> <p><b>Range extenders</b> all Ajax radio signal range extenders</p>
<p>Communication with control panel</p> <p> <b>Jeweller communication technology</b></p> <p><b>Frequency bands</b> 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</p>	<p>Motion detection</p> <p><b>Sensitive element</b> 1 × PIR sensor</p> <p><b>Detection distance</b> up to 12 m When installed at a height of 2.4 m</p> <p><b>Detection angles</b> horizontal – 88.5° vertical – 80°</p>

<p>Communication with control panel</p> <p><b>Maximum effective radiated power (ERP)</b> ≤ 20 mW</p> <p><b>Communication range</b> up to 1,700 m In an open space</p> <p><b>Polling interval</b> 12–300 s Adjusted by PRO or user with admin rights in the Ajax app</p> <p><b>Protection against forgery</b> Device authentication</p>	<p>Motion detection</p> <p><b>Motion detection speed</b> from 0.3 to 2.0 m/s The direction of the detector lens should be perpendicular to an alleged intrusion path into the facility.</p> <p><b>Temperature compensation</b></p> <p><b>Sensitivity</b> 3 levels Adjusted by PRO or user with admin rights in the Ajax app</p> <p><b>Pet immunity</b> weight: up to 20 kg height: up to 50 cm</p>
<p>Power supply</p> <p><b>Battery</b> 1 x CR123A Pre-installed</p> <p><b>Battery life</b> up to 5 years</p>	<p>Installation</p> <p><b>Recommended installation height</b> 2.4 m</p> <p><b>Operating temperature range</b> from –10°C to +40°C</p> <p><b>Operating humidity</b> up to 75%</p> <p><b>Protection class</b> IP50</p>
<p>Enclosure</p> <p><b>Colour</b> white, black</p> <p><b>Dimensions</b> 110 × 65 × 50 mm</p> <p><b>Weight</b> 86 g</p> <p><b>Tampering alarm</b></p>	<p>Complete set</p> <p>MotionProtect Jeweller 1 x CR123A Pre-installed SmartBracket Installation kit Quick Start Guide</p>

# 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



More installation options with two magnets of different size



The reed switch with a resource of 2,000,000 openings



Protected against reed switch chattering



Additional NC input for connecting a third-party detector



Up to 7 years of operation on pre-installed battery



Up to 1,200 m of two-way encrypted wireless communication



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.

# Technical specifications

Compliance with standards	EN 50131 (Grade 2) PD 6662:2017	Compatibility	<b>Hubs</b> all Ajax hubs  <b>Range extenders</b> all Ajax radio signal range extenders
Communication with control panel and range extenders	 <b>Jeweller communication technology</b>  <b>Frequency bands</b> 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  <b>Maximum effective radiated power (ERP)</b> ≤ 20 mW  <b>Communication range</b> up to 1,200 m In an open space  <b>Polling interval</b> 12–300 sec Adjusted by PRO or user with admin rights in the Ajax app  <b>Protection against forgery</b> Device authentication	Detection	<b>Sensing element</b> 1 × reed switch  <b>Opening sensors resource</b> 2,000,000 openings  <b>Third-party detector connection</b> wired detector with the normally closed (NC) contact type

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

# 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/](https://ajax.systems/support/devices/keypad/)



2  
GRADE  
EN 50131

PD 6662  
2017

## 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



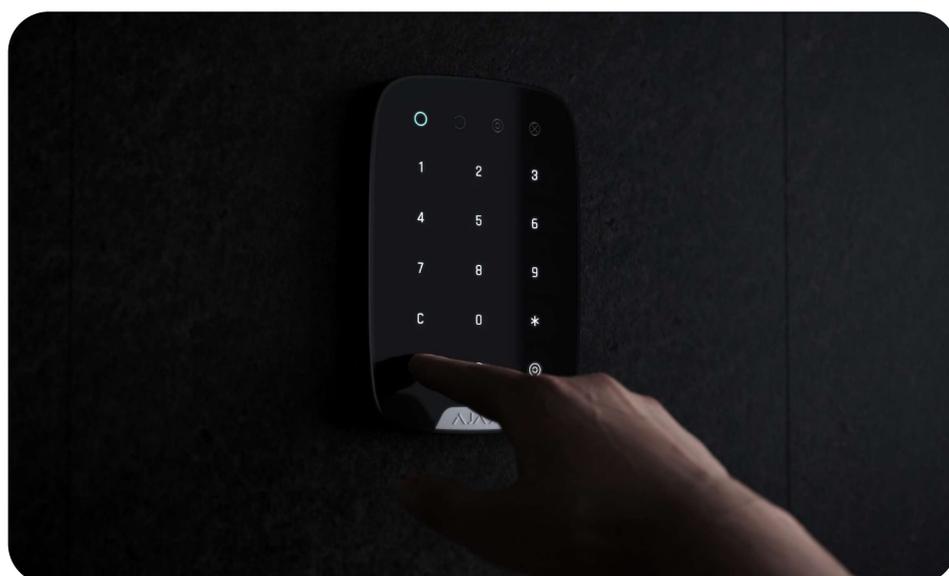
Panic button



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.

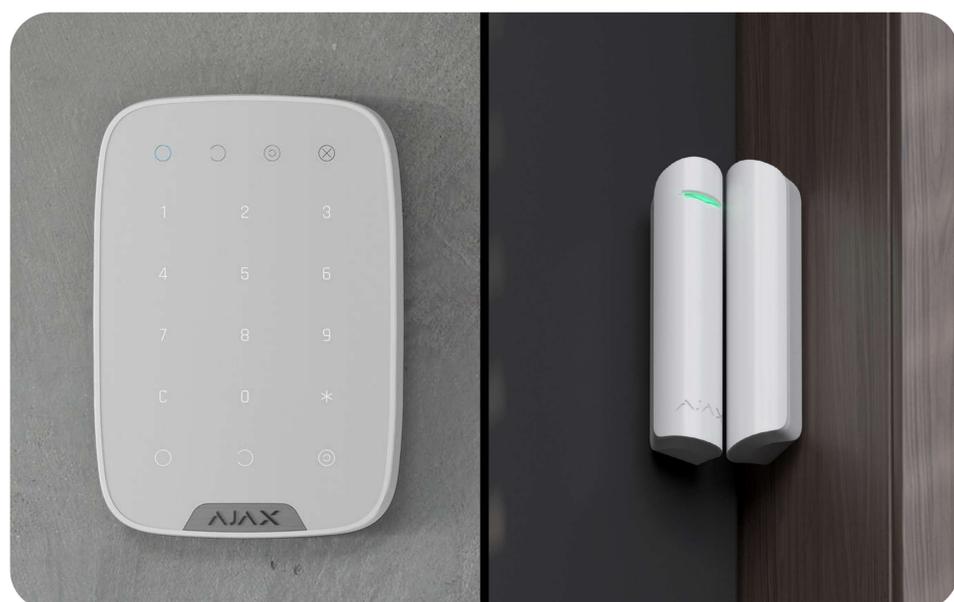
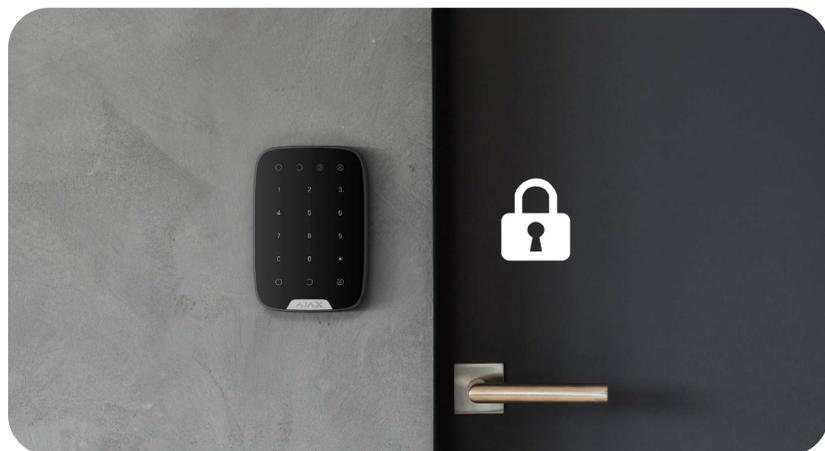


## Function button

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.



# Jeweller

## 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.

## Technical specifications

<p>Compliance with standards</p> <p>EN 50131 (Grade 2) PD 6662:2017</p>	<p>Compatibility</p> <p><b>Hubs</b> All Ajax hubs</p> <p><b>Range extenders</b> all Ajax radio signal range extenders</p>
<p>Communication with the hub or range extender</p> <p> <b>Jeweller communication technology</b></p> <p><b>Frequency bands</b> 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</p> <p><b>Maximum effective radiated power (ERP)</b> ≤ 20 mW</p>	<p>Features</p> <p><b>Security mode indication</b> The device is activated and the touch buttons light up once the user touches the keyboard, so it's easy to enter the passcode even in the dark. Pressing the buttons is accompanied by an audible signal.</p> <p><b>Passcodes</b> up to 200 personal passcodes One per user. The number of users depends on the hub model</p> <p><b>1 general passcode</b> One per the keyboard</p>

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

# StreetSiren Jeweller

Wireless siren with LED frame.



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

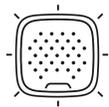
 [ajax.systems/support/devices/streetsiren/](https://ajax.systems/support/devices/streetsiren/)



## 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**

**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 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.

## Technical specifications

Compliance with standards	<b>EN 50131 (Grade 2)</b> <b>PD 6662:2017</b>	Compatibility	<b>Hubs</b> all Ajax hubs  <b>Range extenders</b> all Ajax radio signal range extenders
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<p>Communication with control panel and range extenders</p>	<p> <b>Jeweller communication technology</b></p> <p><b>Frequency bands</b>  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.</p> <p><b>Maximum effective radiated power (ERP)</b>  ≤ 20 mW</p> <p><b>Communication range</b>  up to 1,500 m  In an open space.</p> <p><b>Polling interval</b>  12 – 300 s  Adjusted by PRO or user with admin rights in the Ajax app.</p> <p><b>Protection against forgery</b>  Device authentication</p>	<p>Features</p> <p><b>Alarm type</b>  acoustic and light</p> <p><b>Alarm volume</b>  from 85 to 113 dB at a distance of 1 m  Adjusted by PRO or user with admin rights in the Ajax app.</p> <p><b>Alarm duration</b>  from 3 s to 3 min  Adjusted by PRO or user with admin rights in the Ajax app.</p> <p><b>Siren sound frequency</b>  3.5 ± 0.5 kHz</p> <p><b>Chime</b>  The siren makes a special sound to notify that the opening detectors are triggered when the system is disarmed.</p>
<p>Power supply</p>	<p><b>Main power supply</b>  4 × CR123A battery  Pre-installed</p> <p><b>Optional power supply</b>  12 V<sub>DC</sub>, 1.5 A</p> <p><b>Battery life</b>  up to 5 years</p>	<p>Installation</p> <p><b>Operating temperature range</b>  from -25°C to +60°C</p> <p><b>Operating humidity</b>  up to 95%</p> <p><b>Protection class</b>  IP54</p>

<p>Enclosure</p> <p><b>Colours</b> white, black</p> <p><b>Dimensions</b> 75 × 76 × 27 mm</p> <p><b>Weight</b> 97 g</p> <p><b>Anti-sabotage tampering alarm</b> Triggered when the device body is opened.</p> <p><b>accelerometer</b> Activated when someone's try to move or dismount the device.</p>	<p>Complete set</p> <p>StreetSiren Jeweller 4 × CR123A battery Pre-installed SmartBracket Installation kit Quick Start Guide</p>
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# 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/>



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## Key features



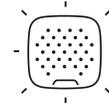
Adjustable volume: from 80 dB to 98 dB



Adjustable alarm duration: from 3 to 180 s



Delay and security mode changing indication



Door opening notifications



External LED connector



Effortless installation and replacement

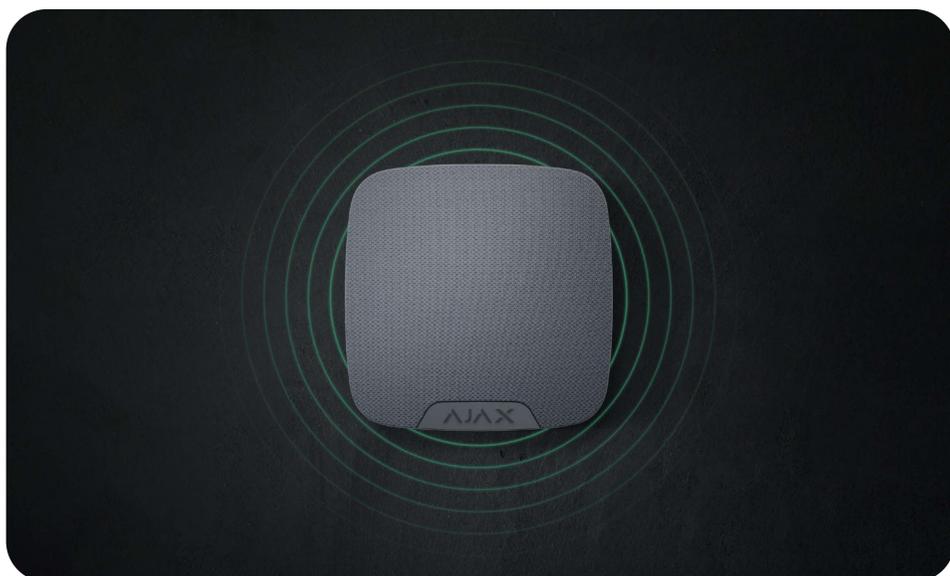


Remote control and setup via the app



Connecting via QR code

## Operating principle

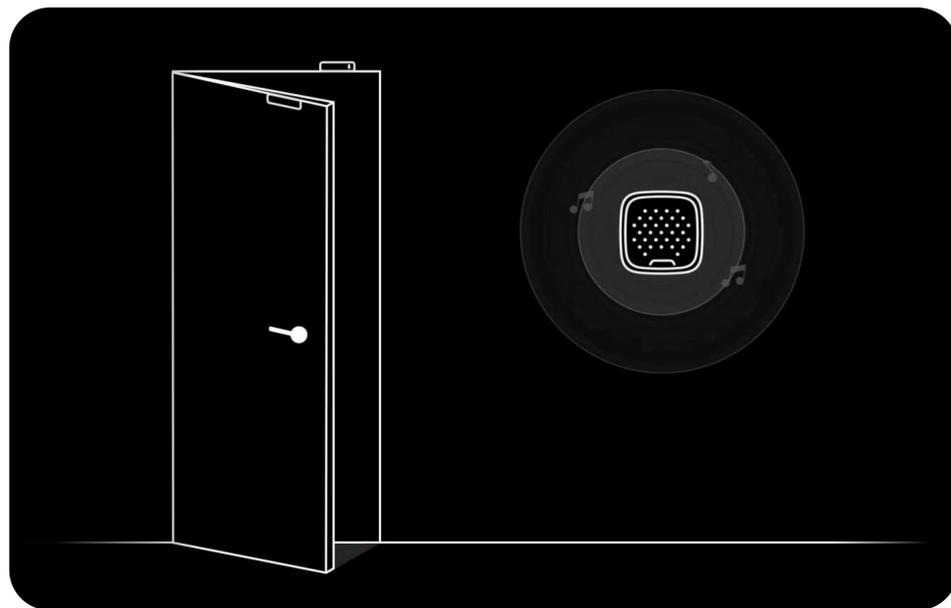


### Informs about alarms

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.

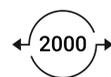


**Jeweller** is a **two-way wireless protocol** that provides fast and reliable communication between hubs and devices. The protocol delivers instant data-rich alarms: security companies and users know who and when has armed or disarmed the facility.

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 pre-installed battery



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

# Technical specifications

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

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