MotionCam Outdoor (PhOD) Jeweller

Wireless outdoor motion detector that takes photos by alarm and on demand

MotionCam Outdoor PhOD requires Hub 2, Hub 2 Plus or Hub Hybrid for operation.

Intelligent false alarm filter

MotionCam Outdoor is equipped with two independent PIR sensors, the signals of which are analyzed by a two-step LISA algorithm. When both sensors detect motion, LISA performs correlation and spectral analysis of the signals, which help to instantly distinguish real threats from interferences.

Correlation analysis

Whenever MotionCamOutdoor detects motion, LISA analyses and compares signal forms from two sensors in real time. If forms are similar, the alarm is activated.

Spectral analysis

When both sensors detect motion, but the correlational analysis doesn’t identify enough similarities, LISA compares frequency components in the signals of both sensors.

Outdoor surveillance and alarm confirmation

MotionCam Outdoor is equipped with a camera to quickly assess the situation at the protected facility. The detector takes an automatic series of photos as soon as it detects an intrusion into the territory. A series of photos combines into an animation showing the situation development in the dynamics. MotionCam Outdoor PhOD can take a series of photos by request of the user from the Ajax mobile app, regardless of the security mode.

- Photo by alarm
- Photo on demand

Don't miss a thing

Combining the best optics, fast processor and advanced software algorithms, MotionCam Outdoor takes informative pictures in any weather, day or night.

- HDR camera
- IR backlight
- Series of 2-5 photos

Camera designed to guard

An outdoor camera often has to shoot in difficult lighting conditions. Direct sunlight, reflective surfaces, or street lights can blind the camera, depriving the image of critical details. This is unacceptable for a security device. We were challenged to get a clear and sharp image that would confirm intrusion in seconds and allow security companies to react in time.

Quality is in the details

We have rejected plastic optics to make a waterproof lens out of glass and metal. The wide-angle lens covers the entire protected area, giving a complete picture of what is happening. In bright light, an infrared filter is automatically applied to ensure distortion-free color reproduction, and two bright IR LEDs help to see the intruder even in total darkness.

To take one photo, MotionCam Outdoor takes two consecutive shots at long and short exposures. The processor instantly combines the shots, equalizing the balance between light and dark areas of the image, and then compresses it for the fastest transmission.

Thanks to the HDR, the detector uses less IR backlight at night and saves battery.

Advantages of photo verification

Territory under surveillance

In case of any doubts, system users can check what is happening at the facility. No need to wait for an alarm. Just open the app, select the detector, and you'll see the situation in the yard in a few seconds.

Less reasons to worry

Outdoor motion detectors operate in a complex environment full of natural sources of false alarms. MotionCam Outdoor allows system users and monitoring station operators to see in seconds whether the alarm is real, so they can respond accordingly.

More security

Both system users and the rapid response unit must have a clear understanding of what is happening at the facility where the security alarm was triggered. The detector will show how many criminals are still on the approaches to the premises and whether they are armed. This will help a security patrol to prepare and users can avoid danger.

Evidence in a smartphone

A series of animated photos in the app allows conveying the peculiar features of burglars to law enforcement without wasting time. Thanks to the infrared backlight, the detector spots them even in complete darkness. The chances of catching criminals on the spot increase.

Privacy first

MotionCam Outdoor (PhOD) Jeweller is designed to control security without compromising privacy. Photos are protected from prying eyes at the detector, system, and app level.

Strict permission distribution

A separate Ajax menu allows precise configuring of the users' access to visual data: who and when can send a request for a photo, as well as view the received photos and streams from integrated surveillance cameras.

Encryption and GDPR

Graphic data is securely protected by encryption at each stage of transmission and subsequent storage. Only hub users can access its virtual storage on Ajax Cloud and view photos taken by detectors. Ajax Cloud is located on geographically dispersed servers that meet the requirements of the General Data Protection Regulation (GDPR).

Detailed event log

The event log records all actions within the system. Users are notified that the photo was taken and who made the request. The photos themselves are visible only to those who have access to the system's visual data.

Unique wireless technologies

Detector uses two radio protocols at a time: Jeweller for alarm notification and Wings for photo transmission. Jeweller provides instant alarm delivery, and Wings will deliver the first photo from the scene in 9 seconds. Even with communication interruptions and a weak signal. Thanks to the range of communication with an Ajax hub of up to 1,700 meters, the detector is easy to install where it will be most effective.

- Two-way encrypted communication
- Installation range up to 1,700 m
- Photo delivery in less than 9 seconds

Effective security in any weather

MotionCam Outdoor resists the heat up to +60°C and withstand the cold down to −25°C. And to protect the sensors of the anti-masking system from rain and snow, we included a special hood.

- Efficiency in heat and cold
- IP55 enclosure protection
- Bundled hood to protect from rain and snow

A solution for really big facilities

With the help of the ReX 2 range extender, the radio communication range can be doubled up to 3400 meters; or, photo confirmations can be transmitted via Ethernet cable. Due to the automatic adjustment of signal strength and frame synchronization, any number of system devices can be connected to ReX 2 – the communication reliability will not be affected.

Up to 5 range extenders with a total coverage of up to 35 km can be connected to one Ajax system[2].

Complex anti-sabotage system

### Sensors to detect masking MotionCam Outdoor can not be unnoticeably disabled even if the system is disarmed. The detector is equipped with masking sensors reacting to hindering, covering and painting the lens.	### Notification of dismounting The detector body is equipped with a **tamper** that detects an attempt to remove the device from the SmartBracket mounting panel or tear it off the surface.
### Detection of communication loss in 36 seconds The device polling frequency is set by the installation engineer or user with administrator rights in the hub settings in the Ajax app. With a minimum interval of 12 seconds, the system needs 36 seconds to detect a lost connection and notify a monitoring station and system users.	### Authentication against device forgery Unique markers are used to authenticate the device; an Ajax hub verifies them during each communication session. If any parameter is not verified, the hub ignores device commands.
### Jamming detection in 30 seconds An Ajax hub analyzes the quality of communication with system devices. If part of the data packages is lost, the hub will change the transmission frequencies and notify a monitoring station of interference in the air.	### Data protection with encryption and hopping All data stored and transmitted by the system is protected by block encryption with a dynamic key. Frequency hopping is used in radio transmission, complicating interception and jamming.
### Event notification in 0.15 seconds A monitoring station receives notifications of detector alarms and events in 0.15 seconds. Due to the addressability, the notification includes time, device model and name, event type, and room.	

Intuitive installation and connection

The detector connects to the Ajax security system in a few clicks. Open the Ajax app, scan the QR code and add the detector to the room. No need to disassemble the detector enclosure. The SmartBracket mounting panel allows you to securely mount the detector both on a flat surface and in a corner.

- Pairing with the security system via QR code

- SmartBracket panel for installation without disassembling the enclosure
- Configuring and testing in mobile and desktop apps

[1] When installed indoors

[2] With the Hub — Detector polling period of 12 seconds

[3] Photo delivery time depends on image resolution selected in device settings