Hub 2 Plus
Security system control panel

Instant communication with users and alarm monitoring company

Communication with the outer world is critical for alarm control panels as its reliability guarantees prompt delivery of alarm signals. The new Ajax control panel makes external communication stability absolute.

Hub 2 Plus is equipped with a communicator that features 4 independent channels including LTE. This configuration allows you to connect the device to two separate Internet providers over Ethernet and Wi-Fi while having two cellular services ready for back up. Switching between channels happens seamlessly in seconds.

Alarm verification with photo in 9 seconds

Photo verification is the future of the security industry. This technology is an optimal solution for both commercial and residential premises — it is accessible and built to respect privacy. Animated series of photos from MotionCam detectors allow users and CMS operators to evaluate the situation in action. But photo cameras are activated only in response to alarms, never by request.

Hub 2 Plus can manage up to 200 MotionCam detectors and deliver photo confirmations of alarms to users and alarm monitoring companies in just 9 seconds, even when it uses SIM cards for communication. Thanks to LTE support.

1. Motion detected
2. Alarm raised
3. Situation captured

Guaranteed delivery of alarms and photo confirmations

We have developed **Jeweller** radio protocol to ensure the continuous operation of all devices within the security system. Jeweller provides two-way communication between hub and detectors at a distance of up to 2,000 meters. Yet it allows to remotely control Ajax devices and communicate alarm signals in less than 0.15 seconds. Jeweller uses time frames to synchronize communication with connected devices, authentication to eliminate forgery, and encryption to protect against data leaks. Moreover, it is a highly energy-efficient radio protocol that allows detectors to operate for years from pre-installed batteries.	**Wings** is an innovative radio protocol developed for fast transmission of visual data over vast distances. It uses a dedicated Hub 2 Plus antenna to improve channel reliability. Built-in algorithms of package checking and re-uploading allow Wings to deliver photos at a distance of up to 1,700 meters, even if the signal level is unstable. Thanks to Wings, CMS operators and users can see the first snapshot of a situation in just 9 seconds after a motion alarm.

Automated security

Hub 2 Plus supports 64 scenarios that minimize human impact on the security of a location. It can automatically arm and disarm the entire security system or certain groups by schedule. Moreover, it can instantly activate a smoke security machine in case of intrusion, cut power supply and turn on emergency lighting in case of fire, or cut water in case of leakage. Using automation devices, Hub 2 Plus can control lights, electric locks, and roller shutters. Scenarios can be activated in response to security mode changes, alarm triggerings, or Button commands.

Protection of large premises with complex internal organization

Business centers, factories, and multi-story villas with outbuildings — Hub 2 Plus is ready to secure even the most complicated properties. The new hub controls up to 200 devices. Its radio signal range can reach up to 2,000 meters while the maximum radio network coverage can reach 35 km^2. Hub 2 Plus can manage 25 security groups with a total number of 200 users. This allows security personnel to divide large premises into zones and clearly organize staff access.

- 200 users
- 200 devices in the system
- 25 security groups
- 35 km^2 maximum radio range coverage with 5 radio signal range extenders

Resistant to sabotage

Whatever happens to Hub 2 Plus, alarm monitoring company and users will get a notification about it. A tamper alarm goes off when intruders try to unmount the device. If Ajax Cloud server loses connection with a hub, it'll send a notification in just 60 seconds thanks to short ping intervals. Even during a blackout, Hub 2 Plus will continue to protect premises for up to 15 hours[1] powered by a built-in backup battery.

- Device polling period from 12 seconds
- Detection connection loss with a hub in 60 seconds
- Operation on backup battery up to 15 hours[1]

Future-proof

Hub 2 Plus runs on OS Malevich, a real-time operating system developed by Ajax Systems. OS Malevich is extremely stable, immune to viruses, and protected from cyberattacks.

Modular architecture simplifies the constant upgrading of OS Malevich. The system gets new features several times a year via over-the-air software updates. The process doesn't involve engineers or users and takes minutes to implement — only when the security system is disarmed.

Hub 2 Plus is the most efficient Ajax control panel. It has a processor that is 4.5 times faster than Hub 2 and 8 times more flash memory. This hardware configuration allows the device to work for years and remain relevant.

Controlled with apps

We refused to add buttons to our control panel and to use archaic interfaces. Apps are more comfortable and safe. They connect to a hub using a secure channel with Ajax Cloud — our server solution located at several AWS data centers. Apps allow users to control security, edit hub settings, configure connected devices, create scenarios, and monitor events. From a smartphone or PC. While on-site or away.

Installation without fuss

Hub 2 Plus is ready to work right out of the box. It comes with pre-installed communicators, a power supply unit, and a back-up battery. To begin the system set up, you'll need to plug the device into a power socket, connect it to the Internet, insert SIM cards, and scan the QR-code using the app. Thanks to SmartBracket, you won't even need to disassemble the device to mount it.

All security system settings are always available in the app. Even when you're far away from the hub, you can connect security devices or CCTV cameras, add users, test radio signal strength, create security groups and scenarios, or connect a hub to an alarm monitoring company.

Seamless security system upgrade

To simplify the process of upgrading installed hubs, we've provided the possibility of automatic data transfer. The import feature allows engineers to migrate settings, connected devices, groups, scenarios, and users from an old hub to Hub 2 Plus. In less than 15 minutes.

[1] *Up to 15 hours of Li-ion 3 A·h battery life when Ethernet and Wi-Fi connections are disabled.*