

Superior Hub Hybrid (4G)

Hybrid security system control panel

Capacity	Ajax devices up to 100 ◇ Wired and wireless devices in any proportion. ◇ 5 range extenders max. ◇ 10 sirens or keypads with a built-in siren max. Cameras or DVRs up to 25 ◇ RTSP support. ◇ Seamless integration with the Dahua, Hikvision, Safire, EZVIZ, Uniview IP cameras and DVRs. Users up to 50 ◇ Any number of admin users within the limit. ◇ PRO accounts for installers and monitoring companies. ◇ Access management for regular users. Automation scenarios up to 32 ◇ Alarm reactions. ◇ Scheduled actions. ◇ Security mode changing reactions. ◇ Temperature changing reactions. ◇ Humidity changing reactions. ◇ Reactions to changes in CO₂ concentration. ◇ Reactions to pressing the Button. Security groups up to 9 Rooms up to 50 Event log up to 1000 events Events are saved on the non-volatile onboard flash memory.
Wired communication	Fibra communication technology Proprietary wired communication technology. Fibra combines the reliability of wires with the freedom of radio connection. It features:

	◇ Two-way communication. ◇ Advanced anti-sabotage. ◇ Instant notifications. ◇ Remote configuration via the Ajax apps. Compatible wire 4-core cable Bus connection. Input 8 bus lines Compatible with Fibra devices only. Bus line length up to 2,000 m Bus line length up to 6,500 ft When using the U/UTP cat.5 twisted pair. Power supply of devices up to 14.4 W For all connected wired devices. Output voltage range 23–25.1 V_~ Topologies ◇ Star ◇ Ring (coming soon) In the line breakage event, the ring splits into two working segments, the devices continue to operate, and the system notifies a security company and users about the incident. Upcoming OS Malevich updates will provide the ring topology support. Devices polling interval from 12 to 300 s Adjusted by PRO or user with admin rights in the Ajax app. Encrypted communication
Wireless communication	Jeweller communication technology Proprietary wireless communication technology to transmit alarms and events. It features: ◇ Two-way communication. ◇ Advanced anti-sabotage. ◇ Block encryption featuring a dynamic key.

- ◇ Instant notifications.
- ◇ Remote configuration via the Ajax apps.

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)

up to 20 mW

Featured automatic power control to reduce power consumption and noise interference.

Radio signal modulation

GFSK

Radio signal range

up to 2,000 m

Radio signal range

up to 6,500 ft

Between the hub and connected devices (in an open space). Maximum range depends on the connected device.

Polling interval

from 12 to 300 s

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

Encrypted communication

All the data stored and transmitted are protected by block encryption with a dynamic key.

Radio frequency hopping**Wings communication technology**

Proprietary wireless communication technology to transmit photo verifications.

It features:

- ◇ Two-way communication.
- ◇ Block encryption featuring a dynamic key.
- ◇ Advanced anti-sabotage.
- ◇ Package re-uploading in case of transmission errors.
- ◇ Photo delivery check.

	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. Radio signal range up to 1,700 m Radio signal range up to 5,600 ft Between the hub and connected devices (in an open space). Maximum range depends on the connected device. Radio frequency hopping Radio communication uses frequency hopping to prevent interception and jamming.
Recommendations	100–240 V~ power supply. For indoor use only.
Communication channels	Ethernet 1 × 8P8C socket Up to 100 Mbps. Cellular 2 × micro–SIM slot Cellular bands 2G (GSM900/DCS1800 (B3/B8)) 3G (WCDMA 850/900/2100 (B1/B5/B8)) 4G/LTE (FDD B1/B3/B5/B7/B8/B20) Automatic switching between communication channels ◇ Switching between SIMs — up to 4 minutes. ◇ Switching between 4G, 3G, and 2G networks of one SIM — instantly. ◇ Switching between Ethernet and SIM — instantly. Communication channels prioritization 1. Ethernet 2. Cellular connection Communication channels work in parallel to increase system reliability. Most of the data is transmitted via Ethernet.

	Alarm Transmission System Categories SP2, SP5, DP3 Control panel operation method Pass-through Signaling security S2 Substitution security. Information security I2 Encryption algorithm AES 128
Notifications	Supported notification types ◇ Push ◇ SMS ◇ Calls Event types ◇ Alarms ◇ Malfunctions ◇ Events ◇ Security mode changing The notification types are configured individually for each user. Notifications could be customized for A–F schemes according to EN 50131 requirements.
Photo verification	Photo verification types ◇ Photo by alarm ◇ Photo by scenarios ◇ Photo on demand ◇ Photo by schedule The Photo by Schedule feature is available for hubs with firmware version OS Malevich 2.19 or higher. Photo delivery time up to 9 s by default. Photo resolution up to 640 × 480 pixels Depends on the detector. Number of photos in a series: from 1 to 5 pictures

Monitoring	Supported protocols ◇ SurGard (Contact ID) ◇ SIA (DC-09) ◇ Other proprietary protocols Event types ◇ System alarms and events ◇ Photo verifications ◇ Panic button coordinates
Power supply	Main power supply type Type A Device operating AC voltage range 100–240 V~, 50/60 Hz From the main power supply. Up to 10 W of mains power consumption. Device operating DC voltage range 10.5–15 V== From the backup battery (not included). Hub has space in the enclosure and rails for installing batteries with a capacity of 4, 7, or 9 Ah. Autonomous operation up to 60 hours Superior Hub Hybrid with a 7 Ah backup battery can power a system of 30 wired devices for 60 hours. Wireless devices operate on batteries and do not require additional power supply. The Battery Power Saver feature allows extending the backup battery life. Low battery voltage 11.7 V== Low battery recovery voltage 12.9 V== End of life battery voltage 11 V== Superior Hub Hybrid is switched off. Maximum output peak-to-peak ripple battery voltage 220 mV== Minimum backup battery energy level in the charged state 100 %
Current consumption	Maximum rated output 0.53 A Maximum at nominal voltage 200 mA Quiescent at nominal voltage 130 mA

	Average* up to 93 mA When GSM and Ethernet are enabled. up to 72 mA When Ethernet is disabled. * From the backup battery after the loss of the main power supply.
Casing	Dimensions 192 × 238 × 100 mm 7.56" × 9.37" × 3.94" Weight of the black device 765 g 26.98 oz Weight of the white device 837 g 29.52 oz Operating temperature range from –10 °C to +40 °C from 14 °F to 104 °F Operating humidity up to 75% Protection class IP30, IK06
Complete set	Superior Hub Hybrid (4G) Power cable Screw terminal block Adapter (only for INCERT compliance) Battery connection cable Ethernet cable Casing Installation kit Eight 120 Ω termination resistors Quick start guide
Warranty	24 months