

Products ▾

Assemble kit

 Superior Hub Hybrid 2

More ▾

## Tech specs

SUPERIOR

# Superior Hub Hybrid 2

Hybrid control panel for medium to large setups. Works with up to 250 Fibra and Jeweller devices. Connectable via Ethernet and two SIM cards (2G/3G/LTE).



---

## Devices compatibility

**Check** >

---

## Capacity

### Ajax devices

up to 250

Specifically:

- up to 200 wired devices per one Fibra line;
- up to 5 range extenders.

**Learn more** >

### Ajax NVRs

up to 36

**Learn more** >

### Ajax cameras

up to 224 via Ajax NVRs and up to 492 standalone

**Learn more** >

### Third-party IP cameras

up to 100 when using RTSP via SDK

up to 224 when using ONVIF via Ajax NVRs

**Learn more** >

## Users

up to 200

- Any number of admin users within the hub limit.
- PRO accounts for installers.
- PRO accounts for installation and monitoring companies.

## Automation scenarios

up to 64

- By alarm.
- By schedule.
- By arming/disarming.
- By temperature, humidity, CO<sub>2</sub> concentration.
- By pressing Button.
- By touching LightSwitch.

**Learn more** >

## Security groups

up to 25

**Learn more** >

## Rooms

up to 50

## Event log

up to 1,000 events

Events are saved in the non-volatile onboard flash memory.

---

## Wired communication

### Fibra communication technology

Proprietary wired communication technology to transmit commands, alarms, and events.

Key features:

- Two-way communication.
- Advanced sabotage protection.
- Instant notifications.
- Remote control and configuration in Ajax apps.

**Learn more** >

## Line connection

4-core cable

## Input

8 Fibra lines

Compatible with Fibra devices only.

## Fibra line length

up to 6,500 ft

When the U/UTP cat.5 twisted pair cable is used.

**Calculate the line length at the facility** >

## **Power supply of devices**

up to 14.4 W

For all connected wired devices.

**Calculate the power supply of devices** >

## **Output voltage range**

23–25.1 V<sub>DC</sub>

## **Maximum rated output**

0.53 A

## **Maximum output peak-to-peak ripple voltage**

220 mV<sub>DC</sub>

## **Topologies**

- Beam (Radial wiring)
- Ring
- Tree

If the line breaks, the ring splits into two working segments, the devices continue to operate, and the system notifies a monitoring company and users of the incident.

**Learn more** >

## Polling interval

from 12 s to 300 s

Adjusted by a PRO or user with admin rights in Ajax apps.

## Encrypted communication

All stored and transmitted data is protected by block encryption featuring a dynamic key.

---

## Wireless communication

### **Superior Jeweller communication technology**

Proprietary wireless technology for transmitting commands, alarms, and events. Superior Jeweller is an upgraded version of the Jeweller radio protocol for Superior devices, ensuring compliance with EN 50131 (Grade 3).

Key features:

- Two-way communication.
- Advanced sabotage protection.
- Enhanced block encryption featuring a dynamic key.
- Instant notifications.
- Remote control and configuration in Ajax apps.

**Learn more** >

## Frequency bands

865.0–868.0 MHz

868.0–868.6 MHz

868.7–869.2 MHz

869.4–869.65 MHz

## Maximum effective radiated power (ERP)

up to 25 mW

Automatic power control to reduce power consumption and radio interference.

## Radio signal modulation

GFSK

## Radio communication range

up to 11,450 ft

Between the hub and the devices added to it in open space. The maximum range depends on the added device.

[Learn more](#) >

## Polling interval

from 12 s to 300 s

Adjusted by a PRO or user with admin rights in Ajax apps.

## Encrypted communication

All stored and transmitted data is protected with advanced encryption, ensuring both confidentiality and integrity.

## Frequency hopping

To prevent radio interference and jamming.

[Learn more](#) >

## Wings communication technology

Proprietary wireless communication technology to transmit large data packets.

Key features:

- Two-way communication.
- Advanced sabotage protection.
- Enhanced block encryption featuring a dynamic key.
- Data packet reload if a transmission error occurs.
- Photo delivery check.

## Frequency bands

865.0–868.0 MHz

868.0–868.6 MHz

868.7–869.2 MHz

869.4–869.65 MHz

## Maximum effective radiated power (ERP)

up to 25 mW

Automatic power control to reduce power consumption and radio interference.

## Radio communication range

up to 9,800 ft

Between the hub and the devices added to it in open space. The maximum range depends on the added device.

**Learn more** >

## Encrypted communication

All stored and transmitted data is protected with advanced encryption, ensuring both confidentiality and integrity.

## Frequency hopping

To prevent radio interference and jamming.

**Learn more** >

## Recommendations

The device is powered by 100–240 V~ mains and designed for indoor use only.

---

## Communication channels

## Ethernet

1 × 8P8C socket

Up to 100 Mbps.

## Cellular

2 × micro SIM slot

## Cellular bands

2G

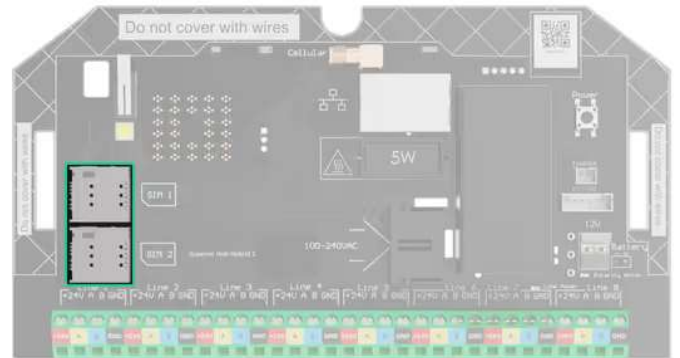
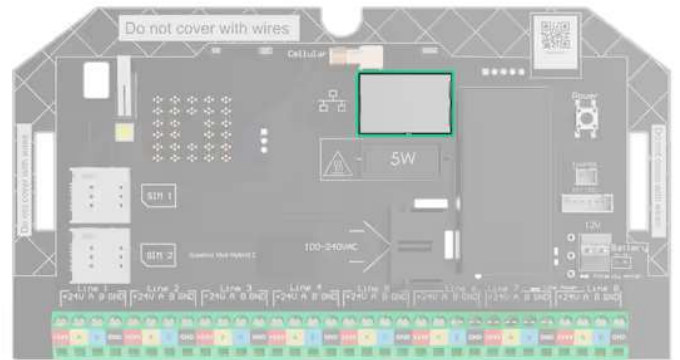
GSM900/DCS1800 (B3/B8)

3G

WCDMA 850/900/2100 (B1/B5/B8)

4G (LTE)

FDD B1/B3/B5/B7/B8/B20



## Automatic switching between communication channels

- Switching between SIM cards — up to 4 minutes.
- Switching between 4G, 3G, and 2G networks on one SIM card — instantly.
- Switching between Ethernet and SIM card — instantly.

## Communication channel priority

1. Ethernet

## 2. Cellular connection

Communication channels work in parallel to increase system reliability. Most data is transmitted via Ethernet.

### External antenna connector

#### 4G (LTE)

The system will notify users if the antenna is damaged. ExternalAntenna is sold separately.

### Alarm transmission system categories

SP2, SP5, DP3

### Control panel operation method

pass-through

### Signaling security

S2

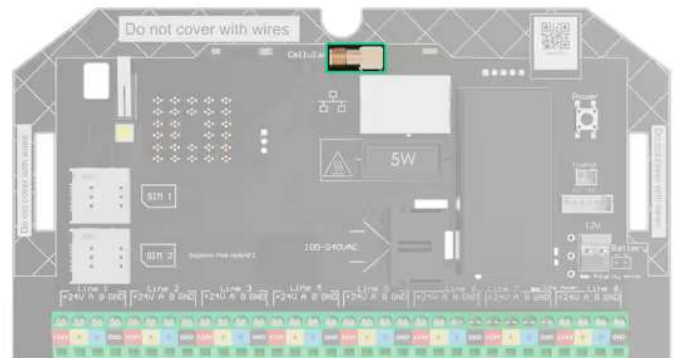
Substitution security.

### Information security

I2

### Encryption algorithm

AES 128



---

## Notifications

### Notification types

- Push notifications
- SMS
- Calls

[Learn more](#) >

### Event types

- Alarms
- Video detections
- Malfunctions
- Armed modes
- System events
- Non-security alerts
- Automation devices
- Smart lock events
- Doorbell ringing

Notification types are configured individually for each user. Notifications can be customized for A–F schemes according to EN 50131 requirements.



## Photo verification

### Photo verification types

- Photo by alarm
- Photo by scenario
- Photo on demand
- Photo by schedule
- Photo by arming/disarming
- Photo by anti-masking
- Photo by tamper alarm
- Photo by magnetometer

### Photo delivery time

up to 9 s

By default.

[Learn more](#) >

### Photo resolution

up to 960 × 720 pixels

Depends on the detector.

### Number of photos in a series

from 1 to 5

## Monitoring

### Supported protocols

- SIA DC-09 (SIA-DCS)
- SurGard (Contact ID)
- ADEMCO 685
- Other proprietary protocols

[Learn more](#) >

### Event types

- System alarms and events
- Panic button coordinates
- Photo verification

[Learn more](#) >

---

## Sabotage protection

### Tamper alarm

The system sends notifications of attempts to open the hub casing lid or detach the casing from the surface.

[Learn more](#) >

## Protection against spoofing

device authentication

## Frequency hopping

The hub sends notifications of jamming or connection loss with the devices to all users and the monitoring company.

[Learn more](#) >

## Jamming alert

Superior Hub Hybrid 2 analyzes the noise level in the channel and the communication quality with the added devices and sends a notification in 30 seconds.

---

## 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<sub>DC</sub>

## Autonomous operation

up to 60 hours

Superior Hub Hybrid 2 with a 7 Ah backup battery can power a system of 15 wired devices for 60 hours. Wireless devices operate on batteries and do not require an additional power supply.

[Learn more](#) >

**Battery power saver mode** allows extending the backup battery life.

[Learn more](#) >

## Low battery voltage

11.7 V $\equiv$

## Low battery recovery voltage

12.9 V $\equiv$

## End-of-life battery voltage

11 V $\equiv$

Superior Hub Hybrid 2 switches off.

## Minimum backup battery energy level in the charged state

100%

## Current consumption

### Maximum at nominal voltage

240 mA

### Quiescent at nominal voltage\*

up to 102 mA

When GSM and Ethernet are enabled.

up to 61 mA

When Ethernet is disabled.

\* From the backup battery after loss of the main power supply.

---

## Casing

### Dimensions

7.76" × 9.45" × 3.94"

### Weight of the device in a white casing

1.85 lb

### Weight of the device in a black casing

1.69 lb



## Operating temperature range

from 14 °F to 104 °F

## Operating humidity

up to 75%

## Protection class

IP30, IK06

---

## Colors

Black



White



## Complete set

Superior Hub Hybrid 2

Power cable

Screw terminal block adapter (for INCERT compliance only)

Battery connection cable

Ethernet cable

Casing

Installation kit

Eight 120  $\Omega$  terminating resistors

Quick start guide

## Certification and compliance with standards



Superior Hub Hybrid 2



## Additional information

**Compliance with standards**

**User manual**

[Learn more >](#)

[Learn more >](#)

## Warranty

24 months

[Learn more >](#)

## Subscribe

Subscribe to our emails about secure life. No spam.

[Subscribe](#)

## Request extra help

+18334294824

support@ajax.systems

@AjaxSystemsSupport\_Bot

Send a request



Rating 4.8

4,000,000

people worldwide under Ajax protection

[? Suggest a feature](#)



## Products

Intrusion protection

Video surveillance

Fire and life safety

Comfort and automation

All products

Services

System integrations

Ajax Ready products

Fibra wired protocol

Ajax radio protocols

## Solutions

Customer stories

Solutions by facility type

Commercial fire detection and alarm system

Wireless Grade 3 solution

Upgrades and retrofits

How it works

## Company

Blog

## Software

For users

Ajax PRO: Tool for Engineers

Ajax Desktop

Ajax PRO Desktop

Ajax Translator PRO

Ajax Cloud Signaling

Scenarios



Available on  
**App Store**



Available on  
**Google Play**

## Support

Manuals and articles

Maintenance and repair

Compliance with standards

## Tools

Ajax device compatibility

Video storage calculator

Video device calculator

Battery life calculator

Radio communication range calculator

Switches and outlets configurator

Fibra power supply calculator

All web tools

## Monitoring solutions and integrations

Intrusion alarm monitoring

Video monitoring and visual alarm verification

Audio alarm verification

## For partners

For partners

[About us](#)

[Ajax Academy](#)

[Press page](#)

[Partner Portal](#)

[Events](#)

[Career](#)

[Ajax Next](#)

[Students at CES 2026](#)

[Reviews and feedback](#)



[United States](#)

[Privacy policy](#)

[Report a vulnerability](#)

[GDPR White Paper](#)

[NDAA Statement](#)

[Do Not Sell My Personal Information](#)

[Anti-Spam Policy](#)

[End user agreement](#)

[Warranty](#)

© 2026 AJAX SYSTEMS CH. All rights reserved