Superior Hub Hybrid

Hybrid control panel supporting photo verification.
Works with Fibra and Jeweller devices.
Connectable via Ethernet and two SIM cards.



This is a device of the Superior product line. Only accredited Ajax Systems partners can sell, install, and administer Superior products.

Product versions

Superior Hub Hybrid (2G)	Superior Hub Hybrid (4G)	Superior Hub Hybrid (4G) (without casing)
Shipped with a standard casing	Shipped with a standard casing	Shipped as a board without casing for installation in Case D (430)
2G support	2G, 3G, and 4G/LTE support	2G, 3G, and 4G/LTE support
Built-in internal antennas for radio and cellular communication	Built-in internal antennas for radio and cellular communication	Built-in internal antennas for radio and cellular communication, supports ExternalAntenna for installation in challenging environments
Built-in internal tamper	Built-in internal tamper	Built-in internal tamper with support for external tamper connection
Built-in internal LED	Built-in internal LED	Comes with an external LED board

Synergy of communication technologies

Ajax systems use secure two-way communication based on proprietary protocols. Ajax devices have **up to 2,000 m (6,550 ft) of wired or wireless communication**[1] without requiring radio signal boosters or line extenders. All Ajax communication protocols use polling to display current device statuses and transmit alarms, events, and all the readings into the Ajax apps. Additionally, it supports block cipher encryption and device authentication on every session with the hub to prevent sabotage, spoofing, and data theft.

FIBRA

Wired protocol

The protocol transmits alarms, events, and photo verifications. Fibra lines are multifunctional and allow different types of devices to be connected to a single line.

JEWELLER

Wireless protocol

The protocol transmits alarms and events. It features automatic power adjustment for energy efficiency and uses low-noise frequencies for more stability. Radio hopping protects against signal interception, with the hub automatically switching frequencies and notifying of any jamming attempts.

WINGS

Wireless protocol

The protocol transmits photos and large data packages. In case of connection loss, Wings sends data backups from the detector to the hub once the connection is restored.

Sabotage resistance

- Tamper alarm
- Short circuit detection
- Instant detection of line breakage
- Device authentication to prevent spoofing
- Ring topology: if the ring breaks, the connection splits into two lines that continue to operate as usual

Quick installation and setup

- Pairing with the system via QR code
- On-site or remote configuration and testing
- Automatic line scanning adds up to 100 physically connected devices in 10 minutes
- Power consumption stress test
- Automatic synchronization with CMS

Compliance with standards

EN 50131 (Grade 3)
PD 6662:2017
INCERT
SSF
NFA2P
NIST (AES-128)
VSÖ

Communication with Ajax devices

Fibra communication technology

Wired connection
4×2×0.51 U/UTP cat.5 cable with a copper conductor

4×0.22 signal cable with a copper conductor

Communication range
up to 2,000 m
up to 6,550 ft
With 4×2×0.51 U/UTP cat.5 cable

Jeweller and Wings communication technologies

Communication range
up to 2,000 m
up to 6,550 ft
In an open space

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 sales region

Maximum effective radiated power (ERP)
≤ 25 mW

Communication channels

Ethernet
8P8C socket
Up to 100 Mb/s

Cellular networks
2 slots for micro-SIM

For Superior Hub Hybrid (2G)
2G
GSM900/DCS1800 (B3/B8)

For Superior Hub Hybrid (4G)
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

- up to 4 minutes between SIMs
- instantly between 4G, 3G, and 2G networks of one SIM
- instantly between Ethernet and SIM

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

Fibra lines
8 outputs
Ajax wired devices can be connected with 8 lines (1 line uses 1 output) or 4 rings (1 ring uses 2 outputs)

Cameras or DVRs

- up to 36 Ajax NVRs
- up to 224 Ajax cameras via Ajax NVRs
- up to 492 standalone cameras

Users
up to 50

Automation scenarios
up to 32

Security groups
up to 9

Rooms
up to 50

Event log
up to 1000 events
Alarms and events are saved on the non-volatile onboard flash memory

Power supply

Main power supply type
Type A

Operating AC voltage
100–240 V~, 50/60 Hz
Up to 10 W of mains power consumption

Fibra line
24 V⎓
The hub powers connected devices

Operating DC voltage
10.5–15 V⎓
From the backup battery with a capacity of 4, 7, or 9 A·h (not included in the complete set)

Autonomous operation
up to 60 hours
7 A·h backup battery can power a system of 30 wired devices for 60 hours, while wireless devices already operate on batteries

Hub with a standard casing

Color
white, black

Dimensions
197 × 240 × 100 mm
7.75" × 9.44" × 3.94"

Weight of the black device
765 g
26.98 oz

Weight of the white device
837 g
29.52 oz

Protection class
IP30, IK06

Hub without casing

Color
black

Dimensions
185 × 99 × 43 mm
7.28" × 3.89" × 1.69"

Weight
184 g
6.49 oz

Installation

Operating temperature
–10 °C to +40 °C
14 °F to 104 °F

Operating humidity
up to 75%

⚠ Note that the hub version without casing installed inside Case D (430)

Complete set

Superior Hub Hybrid (4G), Superior Hub Hybrid (2G)

- Hub board
- Casing
- Power cable
- Screw terminal block adapter[2]
- 12 V⎓ battery connection cable
- Ethernet cable
- 8 terminating resistors (120 Ω)
- Installation kit
- Quick start guide

Superior Hub Hybrid (4G) (without casing)

- Hub board
- Power cable
- Screw terminal block adapter[2]
- 12 V⎓ battery connection cable
- Ethernet cable
- 8 terminating resistors (120 Ω)
- External LED board
- Cable for external LED board
- Installation kit
- Quick start guide

[1] For wired communication, the value applies when using a 4×2×0.51 U/UTP cat.5 cable. For wireless communication, the value applies in open space conditions.

[2] Only for INCERT compliance.

For detailed information, scan the QR code or follow the link:

ajax.systems/products/superior-hub-hybrid/manuals/

support@ajax.systems
@AjaxSystemsSupport_Bot
ajax.systems