

# Ajax Superior MegaHub

Hybrid control panel for the biggest projects. Works with up to 999 Fibra and Jeweller devices. Connectable via Ethernet, Wi-Fi, and two SIM cards (2G/LTE).



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



## The core of enterprise-level security

Superior MegaHub is the flagship of the Ajax ecosystem, designed for projects where conventional systems reach their limits. It combines wired and wireless technologies into one hybrid powerhouse, supporting up to 999<sup>1</sup> devices and 100 security groups to deliver true enterprise-scale protection. The hub comes fully equipped out of the box with a built-in power supply, Ethernet, Wi-Fi, cellular, and radio modules. Certified to Grade 3, it forms a solid foundation for complex security setups, integrating intrusion protection, automation, and video surveillance into a single reliable solution.

## Product versions

Ajax Superior MegaHub	Ajax Superior MegaHub (without casing)
Shipped in Ajax Case E (395)	Shipped as a board designed for installation in a compatible Ajax Case
Features a built-in tamper button	Supports external tamper board connection
Equipped with built-in LED indicators	Comes with an external LED board

## Built-in connectivity

The hub comes fully equipped with all necessary communicators — no additional equipment is required. Built-in radio modules provide seamless connectivity between the hub and system devices. Alarms and events are sent to Ajax apps and the monitoring station via Ethernet, Wi-Fi, or cellular communication channels.

### Communication with Ajax server and apps

Ethernet, Wi-Fi, and two 2G/4G (LTE) SIM cards to access the internet

- Support for simultaneous connection of up to 4 providers
- Instant automatic switch between communication channels
- Communication channel prioritization

### Wired communication with system devices

Fibra communication protocol

- Communication range<sup>2</sup> of up to 2,000 m (6,550 ft) without additional power supply or line extenders
- Range extension with Fibra accessories
- 8 lines to connect devices
- Support for different device types on a single line
- 3 Fibra line topologies: Beam (Radial wiring), Ring, and Tree<sup>3</sup>

### Wireless communication with system devices

Superior Jeweller, TurboWings, and VoRF radio protocols

- Communication range<sup>4</sup> of up to 2,000 m (6,550 ft) in open space
- Visual data transmission for alarm verification
- Firmware update transmission
- Data packet reload in case of transmission errors
- Full-duplex audio communication

## Photo verification

The hub is compatible with Ajax MotionCam detectors and supports the following types of photo verification:

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

## Sabotage resistance

- Tamper alarm
- Short circuit detection
- Instant detection of the Fibra line being broken
- Jamming detection and frequency hopping
- Device authentication to prevent spoofing
- Ring topology: if the line breaks, the ring splits into two independent beams, allowing connected devices to continue operating normally

## Automation scenarios

The hub supports up to 100 automation scenarios. A user or PRO can create a scenario of any type:

- by alarm
- by schedule
- by arming/disarming
- by pressing Ajax Button
- by pressing Ajax LightSwitch
- by temperature
- by humidity level
- by CO<sub>2</sub> concentration

## Quick installation and setup

- Adding the hub to the system via QR code
- On-site or remote configuration and testing
- Automatic line scanning to add up to 100 physically connected devices to the system within 10 minutes
- Power consumption stress test
- Automatic synchronization with a monitoring station

<p><b>Compliance with standards</b></p> <p>EN 50131 (Grade 3) PD 6662:2017</p>	<p><b>Communication with Ajax devices</b></p>		<p><b>Capacity</b></p>
<p><b>Communication channels</b></p> <p><b>Ethernet</b> 8P8C socket Up to 100 Mbps</p> <p><b>Cellular networks</b> 2 slots for micro SIM</p> <p><b>2G</b> GSM900/DCS1800 (B3/B8)</p> <p><b>4G (LTE)</b> FDD B1/B3/B5/B7/B8/B20</p> <p><b>Automatic switching between communication channels</b></p> <ul style="list-style-type: none"> <li>• up to 4 minutes between SIM cards</li> <li>• instantly between 4G (LTE), and 2G networks on one SIM card</li> <li>• instantly between Ethernet, Wi-Fi, and a SIM card</li> </ul>	<p><b>Fibra communication technology</b></p> <p><b>Wired connection</b> U/UTP cat.5 4×2×0.51 mm (24 AWG) cable with a copper conductor</p> <p>4×0.22 mm<sup>2</sup> signal cable with a copper conductor</p> <p><b>Communication range</b> up to 2,000 m up to 6,550 ft When U/UTP cat.5 4×2×0.51 mm (24 AWG) cable is used</p> <p><b>TurboWings communication technology</b></p> <p><b>Communication range</b> up to 1,700 m up to 5,550 ft In open space</p> <p><b>Frequency bands</b> 865.0–868.0 MHz 868.0–868.6 MHz 868.7–869.2 MHz 869.4–869.65 MHz The device supports all listed bands</p>	<p><b>Superior Jeweller communication technology</b></p> <p><b>Communication range</b> up to 2,000 m up to 6,550 ft In open space</p> <p><b>Frequency bands</b> 865.0–868.0 MHz 868.0–868.6 MHz 868.7–869.2 MHz 869.4–869.65 MHz The device supports all listed bands</p> <p><b>VoRF communication technology</b></p> <p><b>Communication range</b> up to 1,700 m up to 5,550 ft In open space</p> <p><b>Frequency bands</b> 863.0–865.0 MHz</p>	<p><b>Ajax devices</b> up to 999<sup>1</sup></p> <ul style="list-style-type: none"> <li>• wired and wireless devices in any combination</li> <li>• up to 10 range extenders</li> </ul> <p><b>Fibra lines</b> 8 outputs Ajax wired devices can be connected with 8 lines (1 line uses 1 output) or 4 rings (1 ring uses 2 outputs)</p> <p><b>Ajax cameras or NVRs</b> up to 36 Ajax NVRs up to 224 Ajax cameras via Ajax NVRs up to 492 standalone cameras</p> <p><b>Users</b> up to 1,000</p> <p><b>Automation scenarios</b> up to 100</p> <p><b>Security groups</b> up to 100</p> <p><b>Rooms</b> up to 500</p> <p><b>Event log</b> up to 1,000 events Alarms and events are saved in non-volatile on-board flash memory</p>

<p><b>Compatibility with hubs and range extenders</b></p> <p>For detailed information, scan the QR code or follow the link:</p>  <p><a href="https://ajax.systems/tools/devices-compatibility/">ajax.systems/tools/devices-compatibility/</a></p>	<p><b>Power supply</b></p> <p><b>Main power supply type</b> Type A</p> <p><b>Operating AC voltage</b> 100–240 V, 50/60 Hz Up to 10 W of mains power consumption</p>	<p><b>Product appearance</b></p> <p>Ajax Superior MegaHub</p> <p><b>Color</b> white, black</p> <p><b>Dimensions</b> 395 × 300 × 110 mm 15.55" × 11.81" × 4.33"</p>	<p><b>Complete set</b></p> <p>Ajax Superior MegaHub Hub board Case E (395) Power cable 12 V<sup>==</sup> battery connection cable Ethernet cable 8 terminating resistors (120 Ω) Installation kit Quick start guide</p>
<p><b>Installation</b></p> <p><b>Operating temperature</b> –25 °C to +55 °C –13 °F to 131 °F</p> <p><b>Operating humidity</b> up to 95% Non-condensing</p>	<p><b>Fibra line</b> 24 V<sup>==</sup> The hub powers connected devices</p> <p><b>Autonomous operation</b> up to 60 hours on a 12 V<sup>==</sup>, 18 Ah backup battery The backup battery is not included in the complete set</p>	<p><b>Weight</b> TBC</p> <p><b>Protection class</b> IP40, IK06</p> <p><b>Ajax Superior MegaHub (without casing)</b></p> <p><b>Color</b> black</p> <p><b>Dimensions</b> 130 × 270 × 60 mm 5.12" × 10.63" × 2.36"</p> <p><b>Weight</b> 410 g 14.5 oz</p>	<p><b>Ajax Superior MegaHub (without casing)</b> Hub board Power cable 12 V<sup>==</sup> battery connection cable Ethernet cable 8 terminating resistors (120 Ω) External LED board Cable for external LED board connection Installation kit Quick start guide</p>

<sup>1</sup> The hub supports only up to 250 Ajax devices with legacy firmware. To reach a capacity of 999 devices, use Ajax devices with 999-ready firmware. Such devices have a "999-ready" mark on the packaging.

<sup>2</sup> For wired communication, the value applies when a U/UTP cat.5 4×2×0.51 mm (24 AWG) cable is used. For wireless communication, the value applies in open space.

<sup>3</sup> The Tree topology is built using Fibra accessories: Superior LineSplit Fibra and Superior LineSupply (75 W) Fibra.

<sup>4</sup> Superior Jeweller has a communication range of up to 2,000 m (6,550 ft), while TurboWings and VoRF radio protocols provide up to 1,700 m (5,550 ft).



For detailed information, scan the QR code or follow the link:  
[ajax.systems/products/superior-megahub/manuals/](https://ajax.systems/products/superior-megahub/manuals/)

-  [support@ajax.systems](mailto:support@ajax.systems)
-  [@AjaxSystemsSupport\\_Bot](https://t.me/@AjaxSystemsSupport_Bot)
-  [ajax.systems](https://ajax.systems)