Superior Hub Hybrid (4G) (without casing)

Hybrid control panel designed for installation in Case D. Works with Fibra and Jeweller devices. Connectable via Ethernet and two SIM cards (2G/3G/LTE).

Capacity	**Ajax devices** up to 100 Specifically, up to 10 sirens or keypads with a built-in siren and up to 5 range extenders. **Ajax NVRs** up to 36 **Ajax cameras** up to 224 via Ajax NVRs and up to 492 standalone **Third-party IP cameras** up to 10 when using RTSP via SDK up to 224 when using ONVIF via Ajax NVRs **Users** up to 50 ● Any number of admin users within the hub limit. ● PRO accounts for installers. ● PRO accounts for installation and monitoring companies. ● Access management for users. **Automation scenarios** up to 32 ● By alarm. ● By schedule. ● By arming/disarming. ● By temperature, humidity, CO_2 concentration. ● By pressing Button. ● By touching LightSwitch. **Security groups** up to 9 **Rooms** up to 50 **Event log** up to 1,000 events Events are saved on 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 via Ajax apps. **Line connection** 4-core cable **Input** 8 Fibra lines Compatible with Fibra devices only. **Fibra line length** up to 2,000 m up to 6,550 ft When the U/UTP cat.5 twisted pair cable is used. **Power supply of devices** up to 14.4 W For all connected wired devices. **Output voltage range** 23–25.1 V⎓ **Maximum rated output** 0.53 A **Topologies** ● Beam (Radial wiring) ● Ring ● Tree 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. **Devices polling interval** from 12 to 300 s Adjusted by PRO or user with admin rights in the Ajax apps. **Encrypted communication** All stored and transmitted data are protected by block encryption featuring a dynamic key.
Wireless communication	**Jeweller communication technology** Proprietary wireless communication technology to transmit commands, alarms, and events. Key features: ● Two-way communication.

	● Advanced anti-sabotage. ● Block encryption featuring a dynamic key. ● Instant notifications. ● Remote control and configuration in 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 sales region. **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 2,000 m up to 6,550 ft Between a hub and connected devices (in an open space). The maximum range depends on the connected device. **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 are protected by block encryption featuring a dynamic key. **Frequency hopping** To prevent radio interference and jamming. **Wings communication technology** Proprietary wireless communication technology to transmit large data packets. Key features: ● Two-way communication. ● Advanced anti-sabotage. ● Block encryption featuring a dynamic key. ● Data packages reload 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 sales region. **Maximum effective radiated power (ERP)** up to 25 mW Automatic power control to reduce power consumption and radio interference. **Radio communication range** up to 1,700 m up to 5,600 ft Between a hub and connected devices (in an open space). The maximum range depends on the connected device. **Encrypted communication** All stored and transmitted data are protected by block encryption featuring a dynamic key. **Frequency hopping** To prevent radio interference and jamming.
Recommendations	The device is powered by 100–240 V~ mains and designed for indoor use only. It could be installed in **Case D**, which is sold separately.
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. **External antenna connector** 4G (LTE) The system will notify of the damaged antenna. **Ajax 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 **Event types** ● Alarms ● Video alerts ● Malfunctions ● Security state change ● 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 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** ● SIA DC-09 (SIA-DCS) ● SurGard (Contact ID) ● ADEMCO 685 ● Other proprietary protocols **Event types** ● System alarms and events ● Panic button coordinates ● Photo verification
Sabotage protection	**Tamper alarm** The board has a connector for attaching the tamper board. It detects the opening of Case lid and notifies of attempts to detach Case with the hub installed from the surface. **Protection against spoofing** device authentication **Frequency hopping** The hub sends notifications to all users and the security company of jamming or losing connection with the devices. **Jamming alert** Superior Hub Hybrid analyzes the channel's noise level and the quality of communication with added devices and sends an alert 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⎓ **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 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 the loss of the main power supply.*
Board	**Dimensions** 185 × 99 × 43 mm 7.28" × 3.90" × 1.69" **Weight** 184 g 6.49 oz **Operating temperature range** from −10 °C to +40 °C from 14 °F to 104 °F **Operating humidity** up to 75%

Complete set	Superior Hub Hybrid (4G) (without casing) Power cable Screw terminal block adapter (for INCERT compliance only) Battery connection cable LED board LED board connection cable Ethernet cable Eight 120 Ω termination resistors Quick start guide
Warranty	24 months