# Superior MultiTransmitter IO (4X4) Fibra

Wired module with 4 inputs and 4 outputs. Designed to integrate third-party devices into an Ajax system.

## Security and automation powered by Ajax

Superior MultiTransmitter IO (4X4) Fibra makes almost any wired security device a part of the Ajax ecosystem. Breathe new life into outdated equipment and connect devices outside the Ajax portfolio to create a smart security system for projects of any complexity. Four inputs receive alarms from connected detectors, while four outputs control third-party devices such as bolt locks, blocking elements, and sirens. It makes the module an ideal solution for setting up robust door protection on the unavoidability principle (German: Zwangsläufigkeit). Bring the unmatched Ajax experience to third-party products with in-app security control, automation scenarios, and informative notifications.

## Key features

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|---|---|---|---|
| 4 inputs<br><br>for connecting third-party devices | All connection types supported<br><br>NO, NC, EOL, 2EOL, and 3EOL | Two operating modes of inputs and outputs<br><br>for pulse and bistable devices | Time-efficient installation<br><br>thanks to automatic EOL resistance measuring |
| 4 outputs (2 logical and 2 relay outputs)<br><br>for controlling power supply to connected devices | Easy integration of door-locking systems<br><br>on the unavoidability principle | Numerous event types<br><br>for connected devices<br><br>Intrusion<br>Panic button<br>Fire | KeyArm Zone and roller shutter modes |
| Instant detection of wired connection loss<br><br>for EOL-connected devices | 12 V⎓, up to 500 mA<br><br>power supply for connected devices | Fibra wired communication<br><br>Power adjustment<br>Encryption<br>TDMA<br>Two-way communication | Automatic firmware updates |
| Up to 7.5 W<br><br>power consumption from the Fibra line | Up to 2,000 m 6,550 ft<br><br>of communication range with an Ajax hub[1] or a module that extends the Fibra line | Up to 400 m 1,300 ft<br><br>of a wired connection between devices and the integration module[2] | Informative push notifications<br><br>Ajax Home: Help Alicia, Call button in Room 2<br><br>Critical Ajax Production: gas detected, Gas detector in Workshop No. 1 |
| EN 50131 (Grade 3)<br>PD 6662:2017<br>SSF — in progress<br>Verband der Sicherheitsunternehmen Österreichs | | Installation in an Ajax casing[3]<br><br>Case A (106), Case B (175), and Case D (430) | |

In an Ajax system, you can combine devices of all product categories: Intrusion protection (both Superior and Baseline), Video surveillance, Fire and life safety, or Comfort and automation. Create the system to suit your needs and manage it in a single interface.

## Discover future-proof hardware

1. Four input zones
2. Two relay outputs
3. Two logical outputs
4. Three power supply outputs
5. Connector for an Ajax Case tamper board
6. Terminal for connecting MultiTransmitter Fibra to the hub
7. LED indicator

## Easy to mount into Case

Superior MultiTransmitter IO (4X4) Fibra is installed[2] into a compatible Case. Ajax casings have an optimal arrangement of wire channels, special holders for the module, and a tamper.

Several Case versions are available. Choose a smaller one for the integration module only or larger options to accommodate multiple devices in a single casing. The variety of Case sizes allows installers to find the perfect fit for their project.

**Case configurator**

Get options for the most optimal Case configurations that consider the Fibra devices you need.

## Turn outdated into innovative

With Ajax integration modules, there is no need to spend a fortune on replacing an old alarm setup. Superior MultiTransmitter IO (4X4) Fibra helps build a modern security and automation system based on outdated yet operative equipment.

With four inputs and four outputs, this integration module is a perfect solution for small- and medium-scale setups. Say a small store already has a few third-party detectors and a keypad. Integrate them into an Ajax system along with door locks, sirens, and strobe lights to arrange high-profile intrusion protection. A single integration module makes the existing setup work hand in hand with the latest Ajax devices, take part in automation scenarios, and send detailed notifications to Ajax apps.

- Mobile and desktop apps for PROs
- Mobile app for users

## Less hassle with automated security

Connect third-party devices to Superior MultiTransmitter IO (4X4) Fibra through its outputs to make them part of a safe and smart automation system. With two relay outputs with potential-free (dry) contacts, the module turns sirens, strobe lights, and other electrical devices on and off. Two logical outputs are designed to integrate door protection, such as bolt locks and blocking elements, which is suitable for building a secure door-locking system on the unavoidability principle.

Ajax apps offer outstanding setup and management flexibility. Installers can specify settings for each output and choose between the pulse and bistable operating modes. Connected devices can be controlled via an Ajax app or can operate by automation scenarios. To enhance security and minimize human error, installers can disable in-app control.

- Two logical and two relay outputs
- Pulse and bistable operating modes
- Automation scenarios and in-app control for connected devices

## Unfettered potential of an Ajax system

Superior MultiTransmitter IO (4X4) Fibra expands the capabilities of an Ajax system even to the most complex and niche projects. The module's inputs and outputs allow installers to integrate almost any device outside the Ajax portfolio, including infrared or microwave motion detectors, household gas sensors, thermostats, float sensors, door lockers, strobe lights, keypads with biometric authentication, and roller shutters. Connect them to an Ajax hub via the integration module, set an event type for each device, and

get notified of any threat or activity in an Ajax app. Devices with a custom event type do not trigger alarms but send an event notification and can activate non-alarm automation scenarios.

## Always in the loop with informative notifications

Third-party devices connected via Superior MultiTransmitter IO (4X4) Fibra notify security companies and users of events in the system on par with Ajax products. Specify the connected device's name and security group and assign it a virtual room. Choose from over 10 available event types, such as intrusion, fire, or auxiliary alarm. Then, once an alarm is triggered, the CMS and users receive detailed notifications indicating what occurred and where. Superior MultiTransmitter IO (4X4) Fibra also alerts users to malfunctions such as communication loss.

- Alarm and event notifications for the CMS and users
- Full situation awareness: know what happened and where
- Numerous event types for connected devices

## Maximum compatibility with third-party devices

Superior MultiTransmitter IO (4X4) Fibra does not limit the selection of wired devices that can be added to an Ajax system. The integration module supports all the most common connection types, including NC, NO, EOL, 2EOL, and 3EOL with resistance from 1 to 15 kΩ. Installers can connect both pulse and bistable devices, set the default state of each contact as normally open or normally closed, and assign one of many event types. Moreover, KeyArm and roller shutter modes are also available. The entire configuration process takes just a few taps in an Ajax app.

- NC, NO, EOL, 2EOL, and 3EOL connection types supported
- Support for pulse and bistable devices
- Dedicated modes for roller shutters and KeyArm Zone

# Unique wired technology

An Ajax system uses secure two-way communication based on the **Fibra proprietary protocol**. It features **encryption** and **device authentication** to prevent sabotage, spoofing, and data theft. Fibra lines are **versatile** and support connecting different types of devices to one line: sirens, keypads, and detectors with photo verification.

- Up to 2,000 m 6,550 ft of wired communication between Superior MultiTransmitter IO (4X4) Fibra and an Ajax hub or a module that extends the Fibra line[1]
- One line for different types of devices
- Photo delivery via the Fibra line without interference
- Protection against sabotage and spoofing

## Energy efficiency as a priority

Superior MultiTransmitter IO (4X4) Fibra is powered by the Fibra line and supplies energy to connected devices. The module provides 12 V⎓ power with a total output of up to 500 mA for integrated third-party equipment. The complete setup of the integration module and connected devices consumes up to 7.5 W from the line.

Superior MultiTransmitter IO (4X4) Fibra uses Fibra communication following the TDMA principle. The device exchanges data with the hub in a short time frame. The rest of the time, its communication module remains inactive. This significantly reduces power consumption and minimizes interference even when multiple devices communicate simultaneously.

- Up to 7.5 W of power consumption from the Fibra line
- TDMA and power-saving mode

## System supervision

Superior MultiTransmitter IO (4X4) Fibra performs automatic self-diagnosis and reports its status to the hub. Essential parameters of the integration module, such as tamper state, communication, and power supply, are continuously monitored. The Ajax Cloud server controls communication between the hub and Ajax apps, ensuring instant notifications for the CMS, security companies, and users. In the event of a malfunction or communication failure, an engineer is promptly informed to provide necessary services.

- Automatic self-diagnosis and status reporting by the integration module
- Regular polling to display the current module state in apps
- Instant maintenance notifications

# Complex sabotage protection

| Tamper alarm | Protection against Fibra line short circuits |
|---|---|
| The Superior MultiTransmitter IO (4X4) Fibra board has a connector for an Ajax Case tamper board. It detects any attempt to open the casing where the integration module is installed. In case of this sabotage attempt, security companies and users receive a tamper alarm in Ajax apps. If the system has sirens, they deter intruders and alert to the threat with a sound signal. | The Fibra protocol and a special digital algorithm provide reliable protection against undetected short-circuiting of the module or the Fibra line. If someone tries to short-circuit it, the system immediately notifies both the CMS and users of the incident. |
| **Data encryption between the hub and the module** | **Protection against module spoofing** |
| All data the system stores and transmits is protected by block encryption featuring a dynamic key. Encryption makes it extremely difficult to connect to the module with the intention of sabotage. | During each communication session, the hub authenticates Superior MultiTransmitter IO (4X4) Fibra by checking the module's unique parameters. If any parameter fails the check, the hub ignores the device commands. |
| **Regular polling of the integration module** | **Informative notifications** |
| Superior MultiTransmitter IO (4X4) Fibra regularly exchanges data with the hub. The system controls the module state and reports any malfunction and connection loss. | An Ajax system instantly delivers informative notifications of alarms and events. Security companies and users receive precise details about an incident, including time, location, and the triggered device. |
| **Sabotage protection for connected devices** | **Protection of integrated devices' wired connection** |
| Superior MultiTransmitter IO (4X4) Fibra supports all connection types from NC/NO to 3EOL and identifies all events of connected devices. Therefore, users and the CMS are immediately notified of tamper alarms, masking attempts, or any other malfunction or sabotage related to connected third-party devices. | Thanks to EOL connection support, Superior MultiTransmitter IO (4X4) Fibra instantly detects cable breakage or short circuits between the module's alarm zones and the connected device. Additionally, the integration module detects short circuits in the power supply line of third-party devices, ensuring that every sabotage attempt is immediately noticed. |

## Next-level protection of the Fibra line

Introducing **Superior LineProtect Fibra**, the module designed to protect an Ajax hub and connected wired devices from sabotage when intruders cause overvoltage or short circuits, apply 110/230 V~, or use stun guns.

# PRO is king

Installing a wired system has always been a challenge. Ajax offers an ultimate set of tools to make the process easy and flexible, from project design to client support and system maintenance. When connecting wired devices via Superior MultiTransmitter IO (4X4) Fibra, there is no need to measure each device's resistance manually. It is done automatically, which is more time-efficient and accurate. Intuitive Ajax apps help quickly make the integration module and third-party equipment a part of the system, and each device can be reconfigured remotely at any moment. No programming is required — everything is available out of the box.

## Fibra power supply calculator

Use our online calculator to ensure the Fibra system covers your facility. It helps verify the project of a wired security system and provides additional information for installers.

## Installation

Superior MultiTransmitter IO (4X4) Fibra is installed[3] into a compatible Case, which has an optimal arrangement of channels for wires, special holders for the module, and the built-in tamper module. There are several variations with different casing sizes. Installation kit with dowels and screws included. No tools are required to install the integration module into Case.

- Installation into Case[3]
- All the necessary fasteners are included in the installation kit
- Thought-out cable management

## Setup

Installers can add a module in two ways: by automatically scanning lines or scanning a QR code. When scanning lines, the installer can identify the device through a tap in the app or tamper activation. Adding third-party devices to an Ajax system takes seconds: EOL resistance is measured automatically, and the device is visible in the app.

- Pairing with a hub via automatic line scanning or QR code
- Automatic EOL resistance measuring
- Adding third-party devices to the system via Ajax apps

## Configuration

Forget about configuring wired devices via a keypad. All testing and configuration of the integration module and third-party devices[4] is done in mobile and desktop Ajax apps. Installers can work both on behalf of a company and as independent professionals.

- Configuration and testing remotely or on site
- Desktop and mobile apps
- Accounts for companies and installers

## Monitoring

With Ajax's proprietary protocols, any Ajax system can transmit alarms to the PRO Desktop monitoring app and third-party CMS. When an alarm is received, the monitoring station operator knows what happened and where the rapid response unit has to be sent. Superior MultiTransmitter IO (4X4) Fibra and connected third-party devices are addressable, so events, the device type, and its assigned name and room can be transmitted to PRO Desktop or third-party monitoring software.

- Full addressability of connected devices
- Informative notifications
- Alarm and event monitoring in PRO Desktop for monitoring companies

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[1] With U/UTP cat.5, 4 × 2 × 0.51 mm (24 AWG) cable. Other cable types may have different values. Please use our **Fibra power supply calculator** to check the wired system project before installation.

[2] When using U/UTP cat.5 4×2×0.51 mm (24 AWG) cable with copper conductor and 4×0.22 mm$^2$ signal cable with copper conductor with cable resistance of 22 Ω per 100 m, without an additional power supply.

[3] Ajax Case A (106), Case B (175), and Case D (430) are sold separately from Superior MultiTransmitter IO (4X4) Fibra.

[4] In-app configuration is available only for those parameters that do not require disassembly of third-party devices.