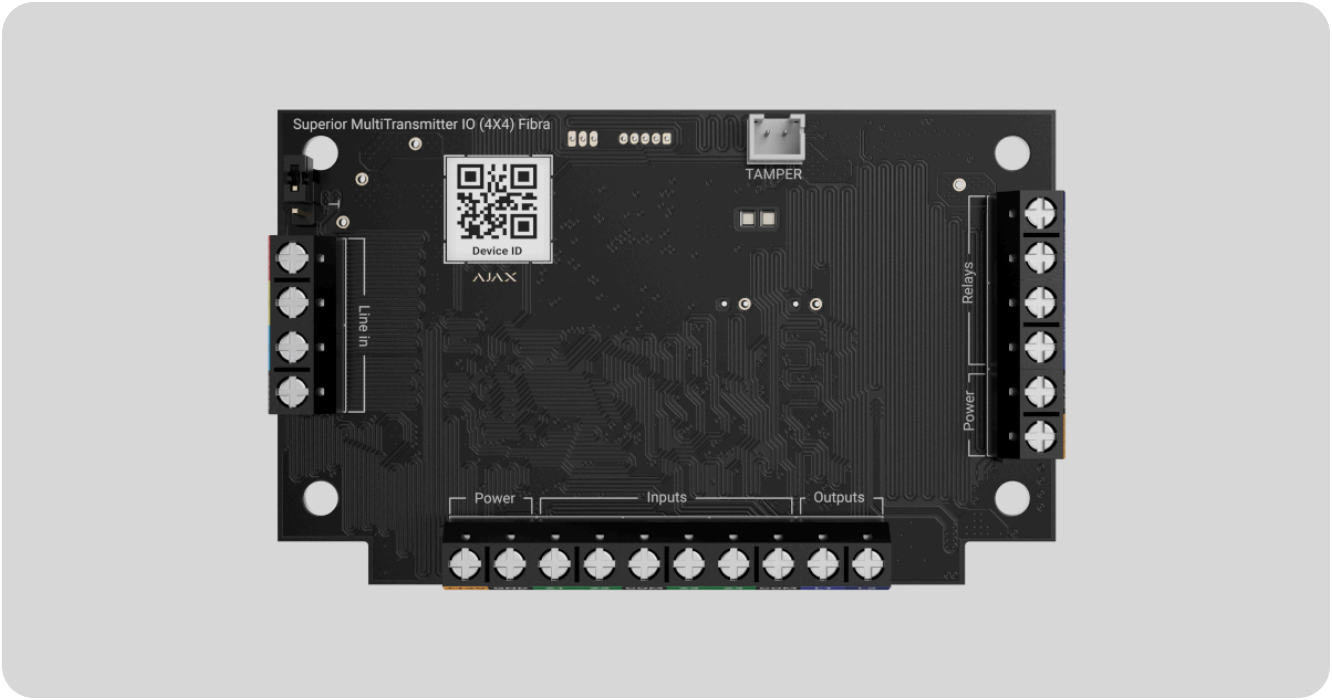
Superior MultiTransmitter IO (4X4) Fibra user manual

Updated November 20, 2024



Superior MultiTransmitter IO (4X4) Fibra is a wired integration module with 4 inputs and 4 outputs designed to integrate third-party devices into an Ajax system. Its inputs can be used to receive signals from roller shutters, panic or auxiliary buttons, indoor or outdoor motion detectors, as well as from opening, vibration, glass break, gas, and leak detectors or other wired devices. The module's outputs can be used to control the blocking elements, electronic locks, and other appliances that can be controlled with relay and logical outputs.

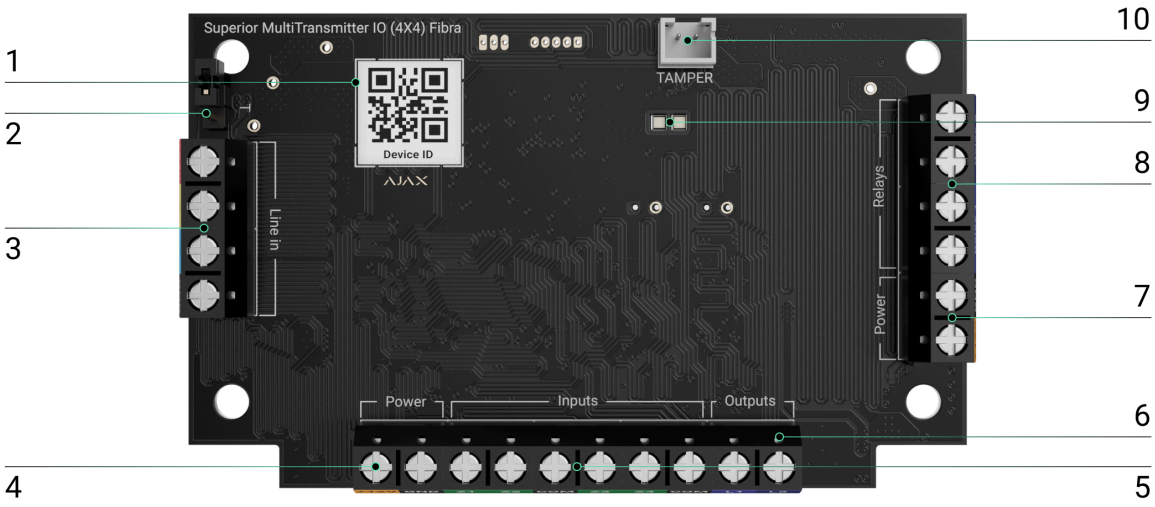
The integration module supports **NC, NO, EOL, 2EOL, 3EOL**, or roller shutter input connection types and can supply the connected device with 11.6–12.4 V⎓, up to 500 mA of power.

The integration module exchanges data with the hub using the secure Fibra wired communication protocol. Wired communication can be up to 6,550 ft long when the device is connected using the U/UTP cat.5 twisted pair cable.

Superior MultiTransmitter IO (4X4) Fibra is the device of the Superior product line. Only accredited Ajax Systems partners can sell, install, and administer Superior products.

Buy Superior MultiTransmitter IO (4X4) Fibra

Functional elements



1. QR code with the device ID for adding the module to an Ajax system.
2. Jumper for terminating resistor. If the integration module is the last device in the Fibra line, pins should be shorted.
3. Input terminals for connecting the Fibra line to Superior MultiTransmitter IO (4X4) Fibra.
4. Terminals for powering third-party devices. They are used to power devices that are connected to the input terminals of the integration module.
5. Input terminals for connecting third-party devices.
6. Logical output terminals for connecting third-party devices.
7. Terminals for powering third-party devices. They are used to power devices that are connected to the output terminals of the integration module.

8. Relay output terminals for connecting third-party devices to the relays of the integration module.
9. LED indicators of the module. They indicate the status of the integration module.
10. Connector for the **tamper** board. The tamper board is included in the complete set of compatible **Case**.

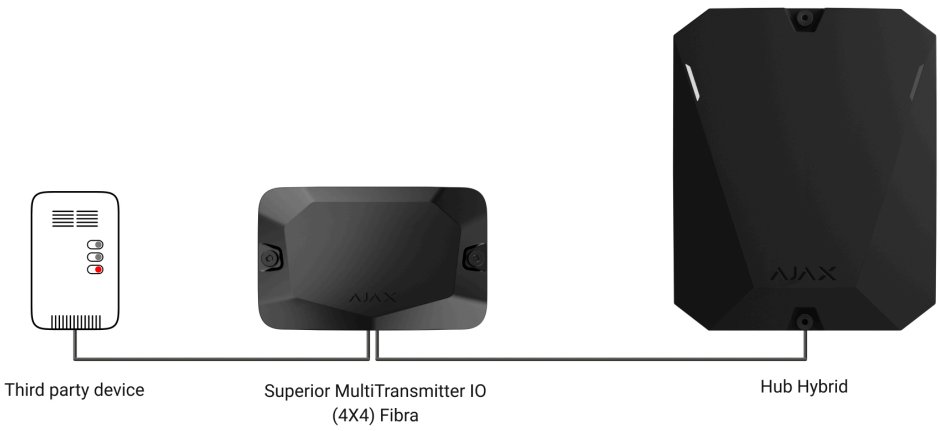
Compatible hubs and range extenders

The Superior MultiTransmitter IO (4X4) Fibra requires a compatible Ajax hub with **OS Malevich 2.28** and later to operate.

Check device compatibility

Operating principle

Superior MultiTransmitter IO (4X4) Fibra is designed to integrate up to 8 third-party wired devices into an Ajax system. The integration module can receive information from input devices and control the output devices with two relays with potential-free dry contacts and two logical outputs. If necessary, it is possible to power third-party devices from the integration module itself.



The maximum total current consumption by third-party devices at a voltage of 12 V⎓ on the integration module's power outputs must not exceed 500 mA.

Input device connection

With Superior MultiTransmitter IO (4X4) Fibra, it is possible to integrate input devices such as alarm and auxiliary request alert buttons, indoor and outdoor motion detectors, and detectors that detect opening, vibration, glass breaking, gas or water leakage, etc.

Connection types of wired input devices:

- Without EOL.
- EOL (connection with one resistor).
- 2EOL (connection with two resistors).
- 3EOL (connection with three resistors).
- Roller shutter.

In an Ajax app, you can select the normal state (normally open or normally closed) for the terminal pairs, such as **alarm**, **tamper**, and **malfunction**. This allows connecting any detector with potential-free dry contacts to Superior MultiTransmitter IO (4X4) Fibra.To connect input devices, use the terminals

- **Z1–Z4** — inputs for connecting wired devices.
- **COM** — common inputs for connecting signal contacts of wired devices.

> If a third-party device requires an external power supply for its functioning, it can be powered by the integration module's power terminals:
>
> - **12V** — 11.6–12.4 V⎓, total power supply of up to 500 mA for all wired devices connected to the integration module.
> - **GND** — ground.

The wired devices connected to **Superior MultiTransmitter IO (4X4) Fibra** can operate in one of the following sensor modes:

- **Detect alarms**
- **Switch arming modes**
- **Control of blocking element**
- **Control of bolt lock**

PRO can set up KeyArm Zone that allows switching system arming modes with a third-party device connected to Superior MultiTransmitter IO (4X4) Fibra. KeyArm allows users to arm/disarm the system, individual groups, or manage **Night Mode**.

How to set up KeyArm Zone for Ajax systems

The device type is specified in the settings of the zone to which the wired device is connected. The selected type determines the text of alarm notifications and events of the connected device, as well as event codes transmitted to the CMS.

Control of blocking element and **Control of bolt lock** sensor modes are used to integrate third-party blocking elements and bolt switch contacts to an Ajax system according to the unavoidability principle (German: Zwangsläufigkeit).

How to configure an Ajax system according to the unavoidability principle

Types of wired input devices

Detect alarm operating mode		
Event type	**Icon**	**Meaning**
Tamper alarm		Alarm when the device tamper is triggered.
Intrusion		Alarm when motion, opening, and other detectors are triggered.
Auxiliary alarm		Alarm when the auxiliary button is pressed.
Panic button		Alarm when the panic button is pressed.
Gas alarm		Alarm when the gas concentration is exceeded.

Malfunction		Alarm caused by a malfunction of a connected device.
Leakage		Alarm caused by flooding.
Glass break		Alarm when the glass break sensor is triggered. *This event type is possible only in **Pulse** operating mode.*
High temperature		Alarm when the upper-temperature limit is exceeded.
Low temperature		Alarm when the lower-temperature limit is lowered.
Masking		Alarm when the device masking is detected.

Duress code (opening)		Alarm when the duress code is entered. *This event type is possible only in **Pulse** operating mode.*
Vibration (seismic sensor)		Alarm when the seismic sensor is triggered. *This event type is possible only in **Pulse** operating mode.*
Custom		The event type is customized by the user. Note: This event type is not sent to the security company monitoring station and users via SMS.
Fire		Alarm when fire detectors are triggered. The Ajax portfolio includes a wide range of wireless fire detectors. We recommend using them rather than third-party fire detectors.
Switch arming modes		
Icon	**Meaning**	
	You can set up KeyArm Zone that allows switching system arming modes with a third-party device connected to Superior MultiTransmitter IO (4X4) Fibra. KeyArm allows you to arm/disarm the system, individual groups, or manage **Night Mode**. **How to set up KeyArm Zone for Ajax systems**	

Control of blocking element	
Icon	**Meaning**
	You can set up **Control of blocking element** to receive notification of the third-party blocking element status. This feature is part of the unavoidability principle flow. Learn more
Control of bolt lock	
Icon	**Meaning**
	You can set up **Control of bolt lock** to receive notifications of the lock bolt status. This feature is part of the unavoidability principle flow. Learn more

Connecting to logical outputs

Third-party devices can be connected to logical outputs to control them. The parameters of the control signal outputs are 0 V (as logical zero) and 12 V (as logical one). The maximum load capacity is up to 25 mA.

To connect the device to logical outputs, use the terminals:

- **L1** — first logical output terminal.
- **L2** — second logical output terminal.

> If a third-party device requires an additional power supply for its functioning, it can be powered by the integration module's power terminals:
>
> - **12V** — 11.6–12.4 V⎓, total power supply of up to 500 mA for all wired devices connected to the integration module.
> - **GND** — ground.

Connecting to relay outputs

Both relays must be installed in the electrical circuit gap to control the power supply of electrical appliances connected to this circuit or should be powered by the module itself. The relays are configured and controlled separately.

Various types of devices can be connected to relay outputs with a current consumption of up to 500 mA when powered by the integrating module. If the device is powered by an external power supply, current consumption of up to 500 mA and operating voltage of up to 48 V are allowed.

To connect to relays, use the terminals:

- **Relay 1** — two output terminals of the first relay.
- **Relay 2** — two output terminals of the second relay.

> If a third-party device requires an external power supply for its functioning, it can be powered by the integration module's power terminals:

- **12V** — 11.6–12.4 V⎓, total power supply of up to 500 mA for all wired devices connected to the integration module.
- **GND** — ground.

When connecting a third-party wired device to the relay output terminals, you can select the status of the terminals for this device, namely **normally closed** or **normally open**, in an Ajax app.

The relay operates in the bistable or **Switch state by timer** mode. When operating in a bistable mode, the relay can change the contact state, and the connected electrical appliance turns on or off. When using **Switch state by timer**, the relay switch time can be adjusted from 1 second to 3 minutes. **Switch state by timer** mode is not available when the integration module operates in the **Blocking element** mode.

The wired devices connected to relay outputs of **Superior MultiTransmitter IO (4X4) Fibra** can operate in one of the following modes:

- **Relay**
- **Blocking element**
- **Electric lock**

Automation scenarios

By security mode change			**VdS** is selected for the **Arming/disarming process** in the hub settings
By alarm			
By alarm confirmation			
By schedule		—	—
By temperature		—	—
By temperature, humidity, CO_2 concentration		—	—
By pressing **Button**			—
By touching **LightSwitch**			—
By pressing ManualCallPoint Jeweller			—

If the device is offline, it will not execute the scenario, as it misses the scenario trigger (e.g., during a power outage or when the connection between the hub and device is lost).

Use case: The automated action is scheduled for 10 a.m., so it must start at 10 a.m. The power supply goes out at 9:55 a.m. and is restored ten minutes later. The automation scenario will not start at 10 a.m. and will not start immediately after the power is restored. This scheduled action is missed.

More about scenarios

Fibra data transfer protocol

The integration module uses Fibra technology to transmit alarms and events. It is a wired data transfer protocol for fast and reliable two-way communication between the hub and integration module. Using the bus connection method, Fibra delivers alarms and events instantly, even if 100 devices are connected to the system.

Fibra supports block encryption featuring a dynamic key and verifies each communication session with devices to prevent sabotage and spoofing. The protocol provides for regular polling of devices by the hub at a specified frequency to control communication and display the state of system devices in Ajax apps.

Learn more

Sending events to the monitoring station

An Ajax system can transmit alarms to both **PRO Desktop** monitoring app and the central monitoring station (CMS) in the formats of **SurGard (Contact ID), SIA (DC-09), ADEMCO 685**, and **other protocols**.

Superior MultiTransmitter IO (4X4) Fibra can transmit the following events:

1. Integration module malfunction.
2. Connection/disconnection of the tamper board.

3. Tamper alarm/recovery (if the tamper board is connected).
4. Events and alarms of connected devices.
5. Events of the roller shutter sensor (if connected).
6. Events of the blocking element (if connected).
7. Locking/unlocking of the bolt lock (if the sensor is connected).
8. Loss/recovery of communication between Superior MultiTransmitter IO (4X4) Fibra, connected devices, and the hub.
9. Permanent deactivation/activation of Superior MultiTransmitter IO (4X4) Fibra and connected devices.
10. One-time deactivation/activation of Superior MultiTransmitter IO (4X4) Fibra and connected devices.
11. Short circuit on the line / power supply restoration of connected devices.
12. Short circuit of or damage to the line connecting third-party devices to Superior MultiTransmitter IO (4X4) Fibra (for EOL connections).
13. Connected devices' resistance failure.
14. An unsuccessful attempt to arm the system (if the **System integrity check** feature is enabled).

When an alarm is received, the operator at the security company's monitoring station knows what happened and precisely where to dispatch a rapid response team. The addressability of Ajax devices allows sending events to PRO Desktop or the CMS, including the device type, its name, security group, and virtual room. Please note that the list of transmitted parameters might vary depending on the CMS type and the selected communication protocol for the monitoring station.

The device's ID and number can be found in its States in the Ajax app.

Superior MultiTransmitter IO (4X4) Fibra placement

Follow these recommendations when designing the system project for a site. Only professionals should design and install an Ajax system. The list of authorized Ajax partners is **available here**.

Installing into an Ajax casing

Superior MultiTransmitter IO (4X4) Fibra should be installed inside Case. It is compatible with Case A (106), Case B (175), and Case D (430) casings. The integration module requires a space with the following minimum dimensions: 93 × 55 × 27 mm. Installation inside the casing protects Superior MultiTransmitter IO (4X4) Fibra from external impacts and secures it with a tamper alarm (if the tamper board is connected).

Buy Case

How not to install Superior MultiTransmitter IO (4X4) Fibra

1. In places where temperature and humidity levels are outside the permissible limits, as this can damage the module.
2. In places with low or unstable Fibra signal strength, as this may result in losing connection with the hub.
3. Outdoor.
4. Without compatible **Case**.

Designing

It is crucial to design the system project properly to ensure the correct installation and configuration of devices. The design must consider the number and types of devices at the site, their exact locations and installation heights, the length of wired Fibra lines, the type of cable used, and other parameters. Refer to **the article** to learn tips for designing the Fibra system project.

Cable length and type

For Superior MultiTransmitter IO (4X4) Fibra

The maximum range of a wired connection between the hub and the integration module using the **Beam (Radial wiring)** topology is 6,650 ft, and using the **Ring** topology is 1600 ft.

Recommended cable types:

- U/UTP cat.5, 4×2×0.51 mm (24 AWG) with copper conductor.
- 4×0.22 mm² signal cable with copper conductor.

> Please note that the wired connection range may vary if other cable types are used. As of now, no other cable types have been tested.

For wired devices of third-party manufacturers

The maximum cable length for connecting third-party devices to Superior MultiTransmitter IO (4X4) Fibra is 1300 ft with EOL connection types devices with external power supply.

Recommended cable types:

- U/UTP cat.5, 4×2×0.51 mm (24 AWG) with copper conductor.
- 4×0.22 mm² signal cable with copper conductor.

Preparing for installation

Cable arrangement

Before laying cables, check the electrical and fire safety regulations applicable in your region. Strictly follow these standards and regulations. Tips for cable arrangement are available in **this article**.

Cable routing

Before beginning the installation, we strongly advise you to review the **Device placement** section thoroughly. Stick to the outlined system project without deviation. Violation of the basic Superior MultiTransmitter IO (4X4) Fibra installation rules and the recommendations of this manual may result in incorrect operation, as well as loss of connection with the device. Tips for cable routing are available in **this article**.

Fibra devices are connected to the line one after another. Branching of lines is not allowed.

Preparing cables for connection

First, remove the insulation layer and strip the cable with a special insulation stripper. The ends of the wires inserted into the device terminals must be tinned or crimped with a sleeve. It ensures a reliable connection and protects the conductor from oxidation. Tips for preparing the cables are available in **this article**.

Installation

1. Turn off the power of lines in the **Ajax PRO app**.
    1. **Hub** → **Settings** ⚙ → **Lines** → **Lines power supply**.
2. Route the cable to connect Superior MultiTransmitter IO (4X4) Fibra to the hub casing. Connect the wires to the required hub line.

+24V — 24 V⎓ power terminal.
A, B — signal terminals.
GND — ground.

3. Prepare the holes for cables in the casing inside which Superior MultiTransmitter IO (4X4) Fibra will be installed.

4. Connect the wires to the Superior MultiTransmitter IO (4X4) Fibra terminals according to the diagram below. Ensure the correct polarity and order of the wire connection. Firmly secure the cable to the terminals.

    1. If Superior MultiTransmitter IO (4X4) Fibra is not the last device on the Fibra line, prepare a second cable in advance. Connect the wires to the Superior MultiTransmitter IO (4X4) Fibra terminals according to the figure below.

    2. If Superior MultiTransmitter IO (4X4) Fibra is the last device on the line and you are using the **Beam (Radial) connection**, install a jumper on the two corresponding contacts on the integration module board.

5. Connect the wires to the terminals of the third-party device and to the corresponding terminals of the integration module. The wiring diagram can be found in the user manual provided by the manufacturer of the wired device. Ensure the correct polarity and order of the wire connection. Firmly secure the cable to the terminals.

6. Connect the tamper board of the casing to its connector on the integration module.

Carefully read the manufacturer's instructions before connecting the device to Superior MultiTransmitter IO (4X4) Fibra.

7. Turn on the lines power supply in the **Ajax PRO app**:
    1. **Hub** → **Settings** → **Lines** → **Lines power supply**.
8. **Add Superior MultiTransmitter IO (4X4) Fibra to the hub**.
9. **Add a wired device to the system**.
10. Run the module **functionality testing**.

Adding Superior MultiTransmitter IO (4X4) Fibra to the system

Superior MultiTransmitter IO (4X4) Fibra is compatible only with Hub Hybrid (2G) and Hub Hybrid (4G). Only verified partners can add and configure Superior devices in Ajax PRO apps.

Types of accounts and their rights

Before adding a device

1. Install the **Ajax PRO app**.
2. Log in to a **PRO account** or create a new one.
3. Select a space or create a new one.

    What is a space

    How to create a space

4. Add at least one virtual room.
5. Add a **compatible hub** to the space. Ensure the hub is switched on and has internet access via Ethernet, Wi-Fi, and/or mobile network.

6. Ensure the space is disarmed, and the hub is not starting an update by checking statuses in the Ajax app.

Connecting Superior MultiTransmitter IO (4X4) Fibra to the hub

There are two ways to add devices in the **Ajax PRO app**: automatically and manually.

Automatically **Manually**

To add Superior MultiTransmitter IO (4X4) Fibra automatically:

1. Open the **Ajax PRO app** and select the space to which you want to add Superior MultiTransmitter IO (4X4) Fibra.
2. Go to the **Devices** tab and tap **Add device**.
3. Select **Add all Fibra devices**. The hub will scan Fibra lines. After scanning, all devices connected to the hub that have not been added to the system will be displayed.
4. Select the desired device from the list. Upon selection, the LED indicator will flash to identify this device.
5. Name the device and select the room and security group if **group mode** is enabled. Tap **Save**.

Once connected to the hub, the module will appear in the list of hub devices in the Ajax app. The device status update frequency in the list depends on the Jeweller/Fibra settings, with the default value of 36 seconds.

Superior MultiTransmitter IO (4X4) Fibra works with only one hub. When connected to a new hub, the device stops sending events to the old one.

Adding the module to a new hub does not automatically remove it from the device list of the old hub. This must be done through the Ajax app.

Adding a connected third-party wired device

In an Ajax system, each device connected to Superior MultiTransmitter IO (4X4) Fibra occupies one slot within the hub's device limit.

1. In the Ajax PRO app, go to the **Devices** tab.
2. Find **Superior MultiTransmitter IO (4X4) Fibra** in the device list.
3. Tap on the **Devices** menu under the integration module icon.
4. Tap on **Add device**.
5. Assign a name to the device.
6. Select the wired zone to which the device will be physically connected.
7. Select a virtual room and a security group if the **group mode** is enabled.
8. Tap on **Add device**. The device will be added within 30 seconds.

The device status update depends on the Jeweller/Fibra settings; the default value is 36 seconds.

If the connection attempt fails, ensure the wired connection is correctly set up before trying again. If the maximum number of devices (100 for Hub Hybrid (2G)/(4G)) has already been added to the hub, you will receive an error notification while adding.

Superior MultiTransmitter IO (4X4) Fibra functionality testing

An Ajax system offers several types of tests to help select the correct installation place for Superior MultiTransmitter IO (4X4) Fibra. The tests do not start immediately; however, the waiting time does not exceed the duration of one “hub—device” polling interval. You can check and configure the polling interval in the hub settings (**Hub** → **Settings** ⚙ → **Jeweller/Fibra**).

To run the test, in an Ajax app:

1. Select the required hub.
2. Go to the **Devices** tab.
3. Select **Superior MultiTransmitter IO (4X4) Fibra** from the list.
4. Go to the **Settings** ⚙.
5. Run **Fibra signal strength test**.

Fibra signal strength

The Fibra signal strength shows the strength of the connection between the hub and Superior MultiTransmitter IO (4X4) Fibra. It is determined by the number of undelivered or corrupted data packages over a certain period of time. The icon on the **Devices** tab indicates the signal strength:

- **Three bars** — excellent signal strength.
- **Two bars** — good signal strength.
- **One bar** — low signal strength, stable operation is not guaranteed.
- **Crossed-out icon** — no signal.

What is Fibra signal strength test

Lines power test

It is important to perform the test after all third-party devices are connected.

The test simulates the maximum energy consumption of devices connected to the hub. If the system passes the test, all its devices have enough power in any situation.

During the test, Superior MultiTransmitter IO (4X4) Fibra calibrates its output to the appropriate current. After calibration, the load thresholds for inputs and outputs are adjusted to the maximum consumption of connected third-party devices. If you change the system configuration, you need to repeat the lines power test to recalibrate the device according to the new network characteristics.

What is Lines power test

After the test, the app displays a notification with the status of each line:

- Test passed.
- Test passed with malfunctions.
- Test failed.

Malfunctions

When a Superior MultiTransmitter IO (4X4) Fibra malfunction is detected, the Ajax app displays a malfunction counter on the device icon. All malfunctions are indicated in the module states. Fields with malfunctions will be highlighted in red.

A malfunction is displayed if the connection with a hub is lost.

A malfunction of the connected device is displayed if:

- **Case** is open or detached from the surface (tamper is triggered).
- There is no connection between the integration module and the device (contacts are damaged).

- Incorrect connection of resistors (resistance error).
- Short circuit on the power supply line for the device.
- Low voltage on the Superior MultiTransmitter IO (4X4) Fibra power supply line.

Control via the app

In **Ajax apps**, a user can switch on/off electrical appliances connected to an electrical circuit controlled by relay outputs of Superior MultiTransmitter IO (4X4) Fibra. Also, users can control devices connected to the logical outputs. Tap on the toggle in the Superior MultiTransmitter IO (4X4) Fibra field in the **Devices** menu: the state of the relay or logical outputs will change to the opposite, and the connected electrical device will switch off or on.

Quick control of automation devices is also available in the Automation menu. You can open the menu in Ajax apps:

1. Go to the **Devices** tab.
2. Select the required hub from the list.
3. Go to the **Control** tab.
4. Swipe up.
5. Control the required devices.
6. Swipe down to return to the **Control** tab.

Icons

The icons in the app display some module states. To access them:

1. Open the space in **Ajax app**.
2. Go to the **Devices** tab.
3. Select **Superior MultiTransmitter IO (4X4) Fibra** from the list.

Superior MultiTransmitter IO (4X4) Fibra icons

Icon	Meaning
	Fibra signal strength — displays the signal strength between the hub and the integration module. The recommended value is 2–3 bars. **Learn more**
	A fire detector connected to Superior MultiTransmitter IO (4X4) Fibra has registered an alarm. The Ajax portfolio includes a wide range of wireless fire detectors. We recommend using them rather than third-party fire detectors.
	Superior MultiTransmitter IO (4X4) Fibra has a malfunction. The list of malfunctions is available in the **States** of the integration module.
	Superior MultiTransmitter IO (4X4) Fibra is disabled. **Learn more**
	Superior MultiTransmitter IO (4X4) Fibra is disabled until the first event of disarming the system occurs. **Learn more**
	The device was not transferred to the new hub. **Learn more**

Icons of connected devices

Icon	Meaning
	The **Chime** feature is enabled.
	Delay when entering/leaving is enabled.
	The device operates in **Always active** mode.
	The device will operate when **Night mode** is enabled.
	The device state is OK. *Displayed for **EOL**, **NC**, **NO**, and **roller shutter** connections only.*
	The device is short-circuited. *Displayed for **EOL**, **NC**, **NO**, and **roller shutter** connections only.*
	The device tamper state is OK.*
	Device tamper alarm.*
	The state of intrusion sensors is OK.*
	Intrusion alarm.*
	The state of the auxiliary button is OK.*
	Alarm when the auxiliary button is pressed.*
	The State of the panic button is OK.*
	Alarm when the panic button is pressed.*
	The state of the fire sensor is OK.*
	The device has detected a fire alarm.*
	The state of the gas sensor is OK.*
	Alarm when the gas concentration is exceeded.*
	The device state is OK.*

	Device malfunction is detected.*
	The state of the leak sensor is OK.*
	Alarm was caused by flooding.*
	The state of the glass break sensor is OK.*
	Alarm caused by glass breakage.*
	The state of the high-temperature sensor is OK.*
	Alarm when the upper-temperature limit is exceeded.*
	The state of the low-temperature sensor is OK.*
	Alarm when the lower-temperature limit is lowered.*
	The state of the masking sensor is OK.*
	Masking alarm.*
	The state of the duress code device is OK.*
	Alarm when the system is disarmed using the duress code device.*
	The state of the vibration (seismic) sensor is OK.*
	Vibration (seismic) alarm.*
	The state of the device for which the custom type of event is selected is OK.*
	Alarm of the device for which the custom type of event is selected.*
	The sensor operates in the **Switch arming modes** mode.
	The state of the blocking element.
	The state of the bolt lock.
	The device is automatically **disabled when the number of alarms is exceeded**.
	The device is **automatically disabled by the restoration timer**.
	The device is **disabled** by the system user.
	The device is **disabled** until the first event of disarming the system occurs.

** The icon is displayed for 2EOL and 3EOL connections only.*

States

Superior MultiTransmitter IO (4X4) Fibra states

The states include information about the integration module and its operating parameters. You can find the states of Superior MultiTransmitter IO (4X4) Fibra in Ajax apps:

1. Go to the **Devices** tab.
2. Select **Superior MultiTransmitter IO (4X4) Fibra** from the list.

Parameter	Meaning
Firmware update	Shows the state of the firmware update if a new version is available: • **New firmware version is available**. Tapping on ⓘ opens the instructions for updating the module's firmware. • **Failed to update firmware**. Tapping on ⓘ opens the instructions for updating the module's firmware.
Malfunction	Tapping on ⓘ opens the list of Superior MultiTransmitter IO (4X4) Fibra malfunctions. The field is displayed only if a malfunction is detected.
Temperature	The device temperature. It is measured by Superior MultiTransmitter IO (4X4) Fibra and changes depending on the ambient temperature. You can create a scenario by temperature to control automation devices.

	Learn more
Fibra signal strength	Fibra signal strength between Superior MultiTransmitter IO (4X4) Fibra and the hub. The recommended value is 2–3 bars. Fibra is the protocol for transmitting Superior MultiTransmitter IO (4X4) Fibra events and alarms. **Learn more**
Connection via Fibra	Connection status on the Fibra line between Superior MultiTransmitter IO (4X4) Fibra and the hub: • **Online** — the device is connected to the hub. Normal state. • **Offline** — the device is not connected to the hub. Check the device connection.
Line voltage	The voltage value on the Fibra line to which the integration module is connected.
Blocking element state	Status of the blocking element: • **Power on** — the blocking element is powered. • **Power off** — the blocking element is not powered. • **Inactive** — the blocking element output is deactivated. This status is displayed if **Blocking element** is selected for logical outputs or relays.
Electric lock state	Status of the electric lock: • **Power on** — the electric lock is powered. • **Power off** — the electric lock is not powered.

	• **Inactive** — a user switched off the electric lock. An inactive electric lock is not displayed in the integration module list and Automation menu. This status is displayed if **Electric lock** is selected for logical outputs or relays.
Relay state	Status of the relays: • **On** — the relay contacts are closed. The connected electrical appliance is energized. • **Off** — the relay contacts are opened. The connected electrical appliance is not energized. • **Inactive** — a user switched off the relay. Inactive relay is not displayed in the integration module list and Automation menu. This status is displayed for each relay.
Operating time	Shows the time that is set for the **Switch state by timer** option.
Lid	State of the tamper that is triggered when Case is detached from the surface or the integrity of the casing is compromised: • **Not connected** — the tamper board is not connected to the integration module. • **Front lid open** — the integrity of the casing front panel is compromised. • **Closed** — the detector is installed on the mounting panel. The normal state of the casing. • **Detached from surface** — the detector is removed from the mounting panel. • **Detached from surface and front lid open** — the detector is removed from the mounting panel, and the integrity of the casing is compromised.

	Learn more
Power supply for input devices	Status of the power supply for connected input devices: • **Enabled** — the power supply is enabled. • **Disabled** — the power supply is disabled. • **Shorted out** — the power supply is short-circuited.
Power supply for output devices	Status of the power supply for connected output devices: • **OK** — the power supply is functioning normally. • **Shorted out** — the power supply is short-circuited.
Permanent deactivation	Status of the device permanent deactivation setting: • **No** — the device operates normally and transmits all events. • **Entirely** — the device is completely excluded from the system operation by the hub admin. The device does not execute system commands and does not report alarms or other events. Learn more
One-time deactivation	Status of the device one-time deactivation setting: • **No** — the device operates normally. • **Entirely** — the device is completely excluded from the system operation until the first event of disarming the system occurs. The device

	does not execute system commands and does not report alarms or other events. Learn more
Firmware	Device firmware version.
Device ID	Superior MultiTransmitter IO (4X4) Fibra ID. It is also available on the integration module board, on the back of the casing, and on its packaging.
Device No.	Number of the device loop (zone).
Line No.	Number of the Fibra line to which Superior MultiTransmitter IO (4X4) Fibra is connected.

States of connected devices

The states display information about the devices and its operating parameters. You can find the states of the devices connected to Superior MultiTransmitter IO (4X4) Fibra in Ajax apps:

1. Go to the **Devices** tab.
2. Select **Superior MultiTransmitter IO (4X4) Fibra** from the list.
3. Tap on **Devices** under the Superior MultiTransmitter IO (4X4) Fibra icon.
4. Select the device from the list.

Parameter	Meaning
Malfunction	Tapping on the (i) opens the list of connected wired device malfunctions. The field is displayed only if a malfunction is detected.
Name of connected wired device	Connection status on the line between Superior MultiTransmitter IO (4X4) Fibra and connected wired device:

	• **Online** — the device is connected to Superior MultiTransmitter IO (4X4) Fibra. Normal state. • **Offline** — the device is not connected to Superior MultiTransmitter IO (4X4) Fibra. Check the device connection.
Device state	Status of the connected wired device: • **OK** — the device is operating normally. The state is available for **Without EOL**, **EOL**, and **Roller shutter**. • **Alert** — the device has detected an alarm. The state is available for **Without EOL**, **EOL**, and **Roller shutter**. • **Shorted out** — the device is short-circuited. The state is available for **2EOL**, **3EOL**, and **EOL** with **Normally closed** state. • **Contacts damaged** — is displayed if there is a broken connection with the device. The state is available for **Roller shutter** and **EOL** with **Normally open** state. • **Closed** — the state is available for **Without EOL**, **EOL** with **Switch arming modes** selected for **Sensor mode**. • **Open**. State is available for **Without EOL**, **EOL** with **Switch arming modes** selected for **Sensor mode**. • **Locked** — the state is available for **Without EOL**, **EOL** with **Control of blocking element** or **Control of bolt lock** selected for **Sensor mode**. • **Unlocked** — the state is available for **Without EOL**, **EOL** with **Control of blocking element** or **Control of bolt lock** selected for **Sensor mode**.

“Name of the selected event type” Sensor 1 *Displayed for **2EOL** and **3EOL** connection types*	Status of the connected wired device: • **OK** — the connected device is operating normally. • **Alert** — the connected device has detected an alarm.
Arm switch state *Displayed for **2EOL** and **3EOL** connection types when the **Switch arming modes** option is selected for **Sensor mode** (for Sensor 2).*	Status of the connected wired device: • **Closed.** • **Open.**
Blocking element state *Displayed for **2EOL** and **3EOL** connection types when the **Switch arming modes** option is selected for **Sensor mode** (for Sensor 2).*	Status of the connected blocking element: • **Locked.** • **Unlocked.**
Bolt lock state *Displayed for **2EOL** and **3EOL** connection types when the **Switch arming modes** option is selected for **Sensor mode** (for Sensor 2).*	Status of the connected bolt lock: • **Locked.** • **Unlocked.**
Always active	If the option is enabled, the device connected to Superior MultiTransmitter IO (4X4) Fibra is constantly armed and reports alarms. You can configure the option only for certain event types. Learn more
Device resistance *Displayed for EOL, 2EOL, and 3EOL connection types*	The total resistance of the resistor(s) connected to the device is measured automatically. Values can also be set manually in increments of 100 Ω.

Permanent deactivation	Allows a user to disable the device without removing it from the system. Two options are available: • **No** — the device operates normally and transmits all events. • **Entirely** — the device is completely excluded from the system operation by the hub admin. The device does not execute system commands and does not report alarms or other events. Learn more You can also separately configure the device disconnection: • **By number of alarms** — the device is automatically disconnected by the system when the set number of alarms is exceeded. • **By timer** — the device is automatically disconnected when the restoration timer expires. The feature is configured in Ajax PRO apps. Learn more
One-time deactivation	Status of the device one-time deactivation setting: • **No** — the device operates normally. • **Entirely** — the device is completely excluded from the system operation until the first event of disarming the system occurs. The device does not execute system commands and does not report alarms or other events. Learn more
Alarm reaction	

Operating mode	Shows how the detector reacts to alarms: • **Instant alarm** — the armed detector immediately reacts to a threat and raises the alarm. • **Entry/exit** — when the delay is set, the armed device starts the countdown and does not raise the alarm even if triggered until the countdown is completed. • **Follower** — the detector inherits the delays from Entry/exit detectors. However, when the **Follower** is triggered individually, it immediately raises the alarm.
Delay when entering, s	Delay when entering: 5 to 120 seconds. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the secured area. Learn more
Delay when leaving, s	Delay when leaving: 5 to 120 seconds. Delay when leaving (arming delay) is the time the user has to leave the secured area after arming. Learn more
Arm in Night mode	When this option is enabled, the device will enter the armed mode when the system is set to **Night mode**.
Night mode delay when entering, s	Delay when entering in **Night mode**: 5 to 120 seconds. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the secured area. Learn more

Night mode delay when leaving, s	Delay when leaving in **Night mode**: 5 to 120 seconds. Delay when leaving (arming delay) is the time the user has to leave the secured area after arming. **Learn more**
Wired input	The Superior MultiTransmitter IO (4X4) Fibra zone number to which a wired device is connected.
Device No.	The device loop (zone) number.

Settings

Superior MultiTransmitter IO (4X4) Fibra settings

To change Superior MultiTransmitter IO (4X4) Fibra settings, in an Ajax app:

1. Go to the **Devices** tab.
2. Select **Superior MultiTransmitter IO (4X4) Fibra** from the list.
3. Go to **Settings** by tapping on the icon.
4. Set the required settings.
5. Tap on **Back** to save the new settings.

Settings	Value
Name	Name of the module. Displayed in the list of hub devices, SMS text, and notifications in the event feed. To change the name of the device, tap on the text field.

	The name can contain up to 12 Cyrillic characters or up to 24 Latin characters.
Room	Selecting the virtual room to which Superior MultiTransmitter IO (4X4) Fibra is assigned. The room name is displayed in the text of SMS and notifications in the event feed.
Logical outputs	Opens settings menu of the corresponding logical output.
Relay outputs	Opens settings menu of the corresponding relay output.
Power supply for input devices	Enables power supply for the connected detectors. The option is disabled by default.
Alert with siren If any connected device has power supply shorted out	When this option is enabled, the **sirens** added to the system will activate in case of a short circuit of the power supply for devices. The option is enabled by default.
Scenarios	Opens the menu to create and configure the scenarios.
Firmware update	Switches the device to the firmware updating mode.
Fibra signal strength test	Switches the device to the Fibra signal strength testing mode. **Learn more**
User guide	Opens the Superior MultiTransmitter IO (4X4) Fibra user guide in an Ajax app.
Permanent deactivation	Allows a user to deactivate the device without removing it from the system. Two options are available:

	• **No** — the device operates normally and transmits all events. • **Entirely** — the device does not execute system commands and does not participate in automation scenarios, and the system ignores alarms and other device notifications. Learn more
One-time deactivation	Allows a user to disable events of the device until the first disarm. Two options are available: • **No** — the device operates normally. • **Entirely** — the device is completely excluded from the system operation until the first disarm. The device does not execute system commands and does not report alarms or other events. Learn more
Delete device	Unpairs the device, disconnects it from the hub, and deletes its settings.

Logical output settings

Name	Name of the logical output. Displayed in the integration module settings, SMS text, and notifications in the event feed. To change the name of the output, tap on the text field. The name can contain up to 49 characters.

Active	Allows users to enable or disable the logical output.
Output mode	Allows users to select the output mode: • **Blocking element** — for automatic door locking/unlocking when switching the security mode. The option is enabled only when **VdS** is selected in the **arming/disarming process** settings of the hub. • **Electric lock** — for locking/unlocking the door remotely. It is possible to control the electric lock via keypad or in the Ajax app when the system is disarmed.
Notifications	Opens the menu that allows users to enable or disable notifications from the device: • **When power is on/off manually.** • **When power is on/off automatically.**
Default output voltage	Allows users to control the default output voltage: • **Supplied.** • **Not supplied.**
React to Night mode	If the option is enabled, the device will react to **Night mode** activation/deactivation in the same way as to arming/disarming. *This option is available when **Blocking element** is selected for the **Output mode** setting.*
Switch state by timer	Allows users to set the timer on which the connected device will automatically change its state to the opposite. Possible to set up from 1 second to 3 minutes with a 1 second increment. *This setting is not available when **Blocking element** is selected for the **Output mode** setting.*

Control of blocking element state	Allows users to manually check the functionality of the connected blocking element by switching its state.

Relay output settings

Name	Name of the relay output. Displayed in the integration module settings, SMS text, and notifications in the event feed. To change the name of the output, tap on the text field. The name can contain up to 49 characters.
Active	Allows users to enable or disable the relay output.
Output mode	Allows users to select the output mode: • **Relay** — for switching the connected device on or off remotely. • **Blocking element** — for automatic door locking/unlocking when switching the security mode. The option is enabled only when **VdS** is selected in the **arming/disarming process** settings of the hub. • **Electric lock** — for locking/unlocking the door remotely. It is possible to control the electric lock via keypad or in an Ajax app when the system is disarmed.
Notifications	Opens the menu that allows users to enable or disable notifications from the device: • **When power is on/off manually.** • **When power is on/off automatically.**

Contact state	Selecting the normal state of the relay contacts: • **Normally closed** — the relay contacts are closed in the normal state. The connected electrical appliance is energized. • **Normally open** — the relay contacts are open in the normal state. The connected electrical appliance is not energized.
React to Night mode	If the option is enabled, the device will react to **Night mode** activation/deactivation in the same way as to arming/disarming. *This option is available when **Blocking element** is selected for the **Output mode** setting.*
Switch state by timer	Allows users to set the timer on which the connected device will automatically change its state to the opposite. Possible to set up from 1 second to 3 minutes with a 1 second increment.
Control of blocking element state	Allows users to manually check the functionality of the connected blocking element by switching its state.

Settings of the connected third-party device

To change the connected device settings, in an Ajax app:

1. Go to the **Devices** tab.
2. Find **Superior MultiTransmitter IO (4X4) Fibra** in the list.
3. Tap on **Devices** under the Superior MultiTransmitter IO (4X4) Fibra icon.
4. Select the device from the list.
5. Go to **Settings** by tapping on the icon.
6. Set the parameters.

7. Tap on **Back** to save the new settings.

Without EOL **EOL** **2EOL** **3EOL** **Roller shutter**

Setting	Meaning
Name	Wired device name. Displayed in the list of hub devices, SMS text, and notifications in the event feed. To change the name, tap on the text field. The name can contain up to 12 Cyrillic characters or up to 24 Latin characters.
Room	Selecting the device's virtual room. The room name is displayed in the text of SMS and notifications in the event feed.
Input type	Selecting the connection type of a third-party device: • Without EOL • EOL • 2EOL • 3EOL • Roller shutter
Sensor mode	Selecting the sensor mode of the connected device: • **Detect alarms** • **Switch arming modes** • **Control of blocking element**

	• **Control of bolt lock**
Type of event	Selecting an event type for the connected device. Refer to the Event types of input devices section for more information. The text of notifications in the event feed and SMS, as well as the code transmitted to the security company monitoring station, depends on the selected event type. *This setting is available if the **Detect alarms** option is selected for the **Sensor mode** setting.*
Default state	Selecting the normal contact state of the connected device: • **Normally closed** • **Normally open**
Operating mode	The operating mode of the connected device: • **Bistable** — for example, an opening detector. After an alarm, a restoration event is sent if the detector returns to the normal state. • **Pulse** — for example, a motion detector. After an alarm, no restoration message is sent if the detector returns to the normal state. Be sure to set a type that matches the connected device. A pulsed detector in the bistable mode generates unnecessary restoration events. A bistable detector in pulsed mode, on the contrary, will not send restoration events.
Arm switch settings	Configuring the arm switch if the **Switch arming modes** option is selected for the **Sensor mode** setting:

	• selecting the arming **Preset action**; • selecting **Security objects** to be controlled by KeyArm. **Learn more**
Notify of changes in bolt lock state	If the option is enabled, the system will notify the user each time the bolt lock changes its state. *This option is available if the **Control of bolt lock** option is selected for the **Sensor mode** setting.*
Always active	If the option is enabled, the device connected to Superior MultiTransmitter IO (4X4) Fibra is constantly armed and reports alarms. You can configure the option only for certain event types. *This setting is not available if the **Switch arming modes** option is selected for the **Sensor mode** setting.* **Learn more**
Pulse time	Pulse time of the device for detecting an alarm: • 20 ms. • 100 ms (by default). • 1 s. An alarm will be activated if the pulse from the device lasts longer than specified in this setting. This can be used to filter out false alarms.

Alert with siren if alarm detected	If the option is enabled, the **sirens** connected to the system are activated when an alarm is detected. *This setting is available if the **Detect alarms** option is selected for the **Sensor mode** setting.*
Chime settings	Opens the Chime settings. The feature is available only for bistable devices. **Notifications will not work for sensors in pulse mode or Always active mode.** **Learn more**
Alarm reaction	
Operating mode	Specifies how this device will react to alarms: • **Instant alarm** — the armed detector immediately reacts to a threat and raises the alarm. • **Entry/exit** — when the delay is set, the armed device starts the countdown and does not raise the alarm even if triggered until the countdown is completed. • **Follower** — the detector inherits the delays from Entry/exit detectors. However, when the **Follower** is triggered individually, it immediately raises the alarm.
Delay when entering, s	Delay when entering: 5 to 120 seconds. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the secured area. **Learn more**
Delay when leaving, s	Delay when leaving: 5 to 120 seconds.

	Delay when leaving (arming delay) is the time the user has to leave the secured area after arming the system. **Learn more**
Arm in Night mode	If the option is enabled, the device connected to the integration module will switch to armed mode when the system is set to **Night mode**. **Learn more**
Night mode delay when entering, s	Delay when entering in **Night mode**: 5 to 120 seconds. Delay when entering (alarm activation delay) is the time the user has to disarm the security system after entering the secured area. **Learn more**
Night mode delay when leaving, s	Delay when leaving in **Night mode**: 5 to 120 seconds. Delay when leaving (arming delay) is the time the user has to leave the secured area after arming. **Learn more**
Permanent deactivation	Allows a user to disable the device without removing it from the system. Two options are available: • **No** — the device operates normally and transmits all events. • **Entirely** — the device is completely excluded from the system operation by the hub admin. The device does not execute system commands and does not report alarms or other events. **Learn more**

	You can also configure the device disconnection separately: • **By number of alarms** — the device is automatically disconnected by the system when the set number of alarms is exceeded. • **By timer** — the device is automatically disconnected when the restoration timer expires. The feature is configured in Ajax PRO apps. **Learn more**
One-time deactivation	Allows a user to disable events of the device until the first event of disarming the system occurs. Two options are available: • **No** — the device operates normally and transmits all events. • **Entirely** — the device is completely excluded from the system operation until the first event of disarming the system occurs. The device does not execute system commands and does not report alarms or other events. **Learn more**

Indication

The Superior MultiTransmitter IO (4X4) Fibra LED indicator may light up green or red depending on the status of the device.

Event	Indication	Note

Adding the module	When the module is added automatically: the green LED flashes quickly when Superior MultiTransmitter IO (4X4) Fibra is selected from the list. When you tap **Add device**, the green LED flashes once. When the module is added manually: the green LED flashes once.	
Removing the module	The green LED flashes six times.	
Lines power supply testing	The green and red LEDs light up constantly until the test is complete.	
Firmware updating	The LED indicator periodically lights up green while the firmware is updating.	
Tamper triggering (if the tamper board is connected)	The green LED flashes once.	
Connection of a wired device to Superior MultiTransmitter IO (4X4) Fibra is short-circuited or overloaded	The red LED flashes 4 times per second until the short circuit is no longer present.	Every 3 seconds, Superior MultiTransmitter IO (4X4) attempts to restore power to the output lines. If the fault has not been cleared, the module switch off power outputs again. This process is repeated until the correct state of the line is restored.

Maintenance

Superior MultiTransmitter IO (4X4) Fibra does not require maintenance when mounted in the compatible Case.

Technical specifications

All technical specifications of Superior MultiTransmitter IO (4X4) Fibra

Compliance with standards

Setup in compliance with EN 50131 requirements

Complete set

1. Superior MultiTransmitter IO (4X4) Fibra.
2. Quick start guide.

Warranty

Warranty for the “Ajax Systems Manufacturing” Limited Liability Company products is valid for 2 years after the purchase.

If the device does not function correctly, please contact Ajax Technical Support first. In most cases, technical issues can be resolved remotely.

Warranty Obligations

User Agreement

Contact Technical Support:

- email
- Telegram

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