



io-homecontrol®

The residential radio protocol

HOME MOTION by
somfy®

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io-homecontrol®, a choice for the future

Through RTS®, Somfy has acquired unique and valuable know-how in the field of radio technology. By simplifying the integration and installation of motors, and by making it easier to programme control units, Somfy has strongly influenced the way the market has developed, and even invented a new sector: Home Motion.

Boosted by the success of RTS®, with 10 million systems installed worldwide, Somfy has sought to develop and share its new radio communication protocol, io-homecontrol® – designed specifically for the home – with other major players in the construction sector.

In this way, Somfy can extend the interoperability of its own products to other home equipment, providing users with greater comfort, as well as total home management in terms of security and energy efficiency.

With io-homecontrol®, Somfy has once again proved its ability to improve functionality while simplifying household tasks. What's more, Home Motion is set to revolutionise home automation, thanks to the simplicity and flexibility of its highly secure two-way wireless technology.

As ever, Somfy has shown itself to be a pioneer of innovative, sustainable solutions that are in line with the changing market, and which offer high added value for its customers and professional partners.

io-homecontrol® replaces RTS® as the radio protocol dedicated to comfort, security and energy efficiency in the home..

io-homecontrol® heralds the start of a new chapter with Somfy.
So turn the page, and enjoy!

io-homecontrol®, the 1st optimised radio protocol for the residential sector



Today, Somfy incorporates io-homecontrol® into many home applications, such as roller shutters, awnings and blinds, gates, garage doors, and lighting, **in order to create installations that communicate with one another and which are interoperable** –not just with each other, but also with home products made by other major manufacturers.

A radio protocol designed for home equipment

Somfy io-homecontrol® applications conform to specifications that ensure the **long-term fulfilment of all reliability, security and interoperability criteria** in accordance with the specific constraints and requirements of the construction sector, thus guaranteeing high added value for users and professionals alike.

io-homecontrol® technology in 4 words

1

Two-way

A communicative installation: io-homecontrol® makes it possible to exchange information between control units, automated systems and motors, enabling feedback in real time, thus making installation, use and maintenance easier.

2

Multi-frequencies

More reliable transmission: io-homecontrol® scans three radio frequencies between 868 and 870 MHz, and automatically chooses the best one to transmit the command.

3

Encrypted

Dialogue is 100% secure: The tamperproof 128-bit encryption key will thwart any hacking attempt. This encryption key is exclusive to each installation and provides the same level of security as an online bank transaction.

4

Range

Guaranteed coverage: the frequency used (868 MHz) produces excellent results in terms of signal propagation in residential contexts, and guarantees coverage within a radius of at least 20 m in a concrete building. Out in the open, this range can extend to at least 200 or 300 m. If necessary, range can be increased by simply adding a relay.



FIND OUT MORE

Why three frequencies?

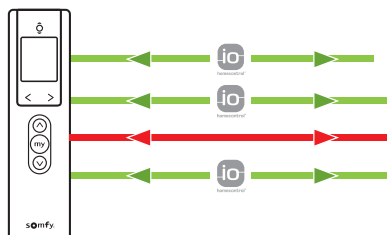
The 868 MHz waveband – the use of which is defined by European standard 300-220 – is generally reserved for radio transmissions for domestic applications. European standard EN 300 220 stipulates either an emission power of less than 25 mW and a limitation of communication time, or constant monitoring of the availability of the frequency used.

With io-homecontrol®, we decided to go beyond the requirements of the standard, by choosing to constantly monitor three sub-wavebands ranging from 868 to 870 MHz. The availability obtained in this way ensures optimum transmission quality without interference – and without creating interference, either.

How does it work?

- Before sending a command, the transmitter "listens to" each of the three available frequencies.
- It selects the one that is free.
- For increased reliability, when the product(s) do not react immediately, the command is also emitted on one of the other frequencies.

This whole process lasts just a few milliseconds. This high communication speed also helps ensure the system cannot be hacked into.



Encrypted emissions: the key to security

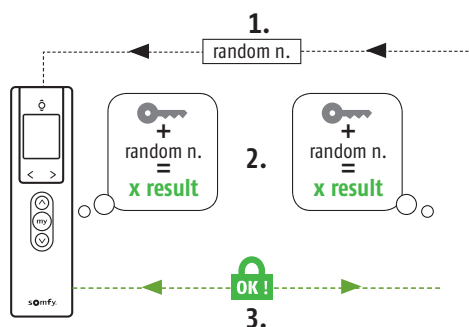
Each io-homecontrol® installation has its own encryption key, which is present in all io products in the home.

This key is automatically activated when the installation is first used. The emitter (the remote control) issues its encryption key to the receiver (e.g. an io roller shutter) once and once only.

How does it work?

- For each command issued by the remote control, the receiver generates and sends back to the emitter a random number generated from a range of several billions.
- The emitter and receiver both perform automatic calculations based on this random number and the encryption key.
- If the results of these two calculations are identical, the emitter and receiver must have the same key, and the command (e.g. close the shutter) can therefore be carried out (e.g. close the shutter). The emitter is then informed that the command has been carried out.

The encryption key is "buried" among these exchanges between emitters and receivers, making it undetectable.



io-homecontrol[®], the 1st radio protocol that performs better than RTS!



io-homecontrol[®] is a
two-way radio protocol
that provides the feedback users
really need. This has enabled
Somfy to develop new functions
that simplify the integration,
implementation and monitoring
of different installations – and,
above all, which make life easier
for the user!

The Feedback Function – making life easier for everyone

Users can be sure that the commands they send have been correctly received and executed by the motor(s) concerned. What's more, they can check the status of this equipment at any time: open or closed, on or off...

Installers can programme installations without any tools – just the remote control. No additional expertise is necessary.

Manufacturers benefit from improved traceability and à la carte information concerning the life of their products by integrating information into the motor's memory (date of manufacture, serial number, etc.). The integration procedure remains the same.

How does it work?

1. The remote control emits the command



2. The motor confirms receipt



3. The remote control confirms the execution of the command



Feedback in all its forms, and on all communicative elements



1. By means of a **visual and/or audible signal** emitted by the remote control.

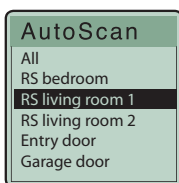
2. On the remote-control screen: the action or status of the motors and automated systems is displayed (e.g. sun system activated). The user is kept informed at all times of both correct functioning and any problems that may arise (e.g. obstacle preventing closure).



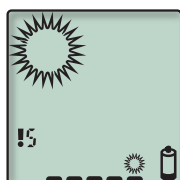
3. Control home equipment **remotely** via the internet with a notepad, PC or a smart phone screen.

THE BENEFITS OF SOMFY IO-HOMECONTROL®

To make installation easier, the installer is guided at each step of the start-up process.



Heat.



Low battery alert.

Quicker and easier to install and set up

Assisted programming on the remote-control screen

The AutoScan Function makes installation and the programming of settings easier. AutoScan means that each motor, once powered, is automatically identified on the network with its own address. Each motor can be named and located with ease on the centralised remote-control screen used to programme the settings. You can easily isolate a motor in order to link it to a control unit, unlink it, programme it, cancel the programming, or even change its direction of rotation, even during installation.

Simplified maintenance

Initial troubleshooting on the remote control screen

Maintenance alerts transmitted by the remote control can be easily understood by users. Most of the time, users can even solve the problem themselves – for example, if the batteries need to be changed.

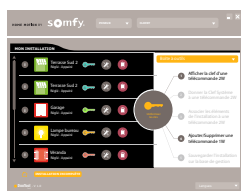
And coming soon...

A configuration tool for optimised installation

The configuration tool for professionals is an installation software which, in the case of a multi-application installation, makes it possible to adjust the io motors and configure an io-homecontrol® installation even more quickly using a laptop computer.

Controlling home equipment, wherever you are, via the internet

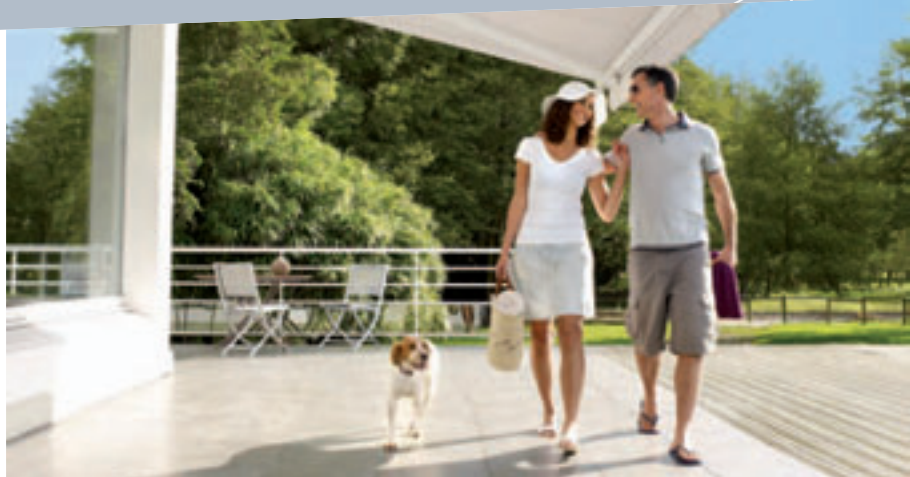
Somfy has developed a brand-new solution for remotely managing the home via the internet. It uses a universal interface that enables the remote control of all io-homecontrol® equipment in the home. It will soon be possible to use this solution to activate all these products via the internet, using a computer or smartphone. This way, users can be kept informed at any time about the status of their equipment.



io-homecontrol®, for accessible home automation, adapted to suit individual



Choosing io-homecontrol® means choosing an intelligent home, by removing all installation constraints, and by ensuring that all of the occupants' home automation needs and desires can be incorporated in the long term.



Upgradability: from the first piece of equipment, homes become “io-ready”

With io-homecontrol®, everyone can equip their home at their own rate. Customers can install a first piece of io motorised equipment, at minimum cost, complete with a local remote control, e.g. a patio awning. They can then choose to gradually include other installations at a later date, such as io-homecontrol® motorised roller shutters, without any compatibility issues.



Accessible technology that's easy to use

io motorised equipment enables easy access to control units and automated systems in terms of costs, flexibility, comprehension and control. As everyone uses their home in different ways, simple settings make for functions that are easily incorporated into everyday life.

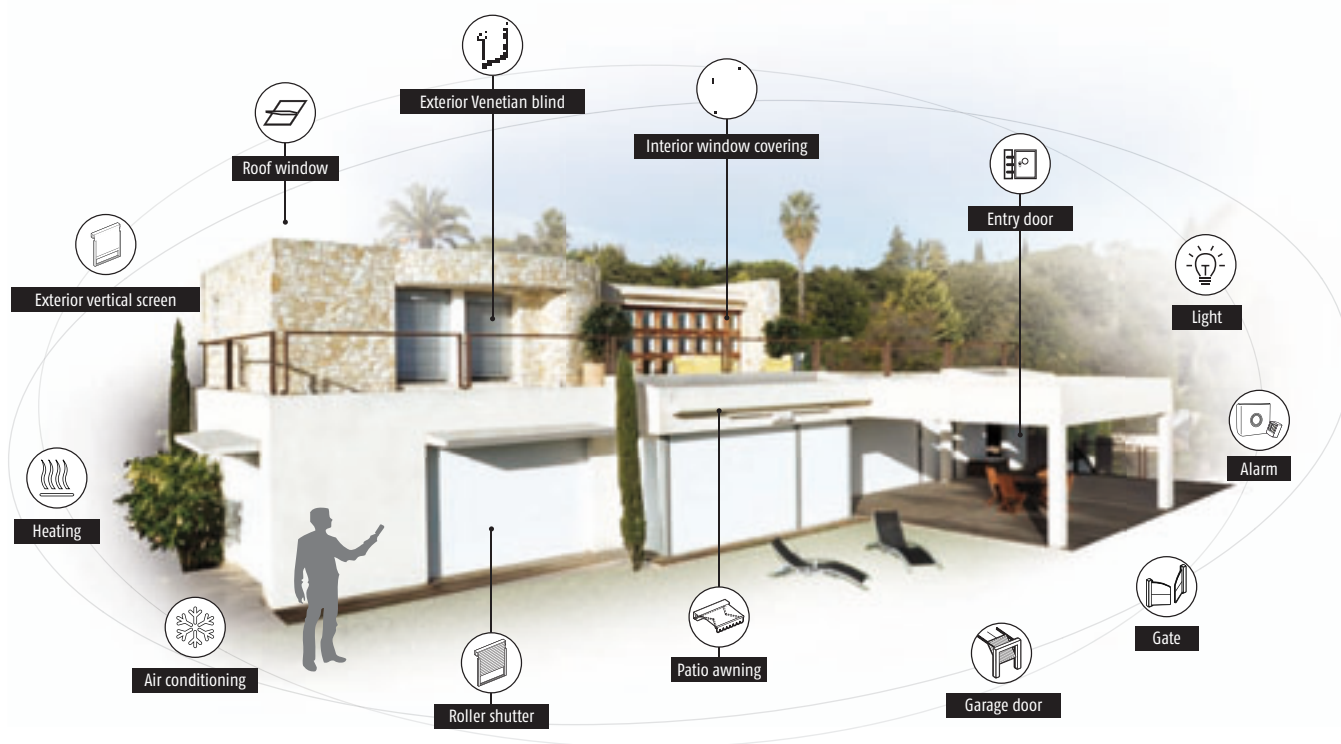
Upgradability, simplicity, accessibility: Home Motion has never been as attractive

Users benefit from the most extensively shared wireless standard in the residential sector, offering greater comfort, security and energy savings every day. They have full control over their installation thanks to innovative, easy-to-use functions. They can gradually add equipment or modify their installation, without any need for major work, while also adding value to their property.

Installers can highlight their skills and know-how by offering made-to-measure wireless installation based on high-performance, sustainable radio technology. Each installation can be personalised and upgraded according to the customer's needs.

Manufacturers can enhance their product offer with high added-value options that meet the needs and expectations of a market that is increasingly interested in intelligent applications.

Guaranteed interoperability means you can take on extra equipment without unnecessary expense: any new application is automatically included in the system without any need for cabling work



io-homecontrol® applications.



For the user, the simplicity of Somfy io-homecontrol® in 4 functions:

With io-homecontrol®, Somfy has developed new easy-to-use functions that make everyday life easier for everyone.

1

Understand

The Feedback Function means that users always know what's going on in their home, without having to check in person. Movements in progress, and whether or not they are being correctly performed, are indicated by a visual and/or audible signal on the screen of the remote control, computer, notepad, smartphone, etc. The slightest problem – flat batteries, for instance – is displayed on screen to make troubleshooting easier.

2

Personalise your home

> By creating scenarios

By programming a scenario, you can set a number of io motorised products in motion at the same time, in just one click (e.g. roller shutters, blinds, awnings, lighting). Scenarios enable you to create and re-create your favourite ambience whenever you like.



Skitter io



Solution 1:

With the Skit'Easy interface, creating scenarios on your computer is as easy as compiling a playlist of your favourite music. These scenarios can be uploaded to Skitter io, Somfy's new "Scenario Player".



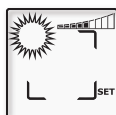
Solution 2:

With the Snapshot Function on the Impresario Chronis io remote control, creating a scenario is just like taking a photo. Simply set the products to be included in the scenario to the appropriate positions and press the OK button to save the scenario.

> By creating groups

Groups can be used to centrally control a number of products in the home – by zone, by floor, by facade, by application type – for instance, all ground-floor roller shutters.

To create a group on the Composio io remote control, simply give the group a name and then transfer each product that you wish to include in the group. Then, one click of the OK button on the remote control is all it takes to save the group.



> By adjusting the sun sensor trigger threshold

With the Easy Sun io remote control, users can adjust and view the sensitivity threshold of the outdoor sun sensor at any time.

3 Always stay in control of your home

Users can override their automated systems at any time, should they wish to temporarily deactivate them, control products manually, or save new settings.

Auto/Manu Function

For all automated systems in the home



Remote control in place on the wall: automatic mode activated



Remote control removed from the wall: automatic mode deactivated = manual mode

For a local control unit



Pressing the A/M button on the local control unit removes it from centralised control.

4 Monitor and control io-homecontrol® equipment in the home, wherever you are

With Somfy's Tahoma io box, it is now possible to control home equipment via the internet.



Simple, user-friendly, dedicated interfaces for configuring, monitoring and controlling installations via the Web.

> How does it work?

The Somfy Tahoma box is connected to the home's ADSL router. So, wherever users may be, they can control and view the status of all io equipment in their home (roller shutters, blinds, awnings, front door, gate, garage door, skylights, heating, lighting, controlled power sockets) using any PC, notepad or smartphone.

Of course, users have organised and personalised their home beforehand.



> What is it for?

When you're away:

- **Reassurance:** you can check that your home is securely locked and that the lights are all off.
- **React to unforeseen events:** if your child has lost his or her key, you can unlock the door.
- **Create a welcoming home:** you can turn up the heating, switch the lights on or open the shutters before returning home from holidays or a weekend away.

When you're at home:

- **Create or modify scenarios** in just a few clicks, programme scenarios so they are automatically activated on a given day or at a given time, or trigger scenarios manually.
- **Control all io or RTS motorised equipment** from a PC or touch-screen tablet.
- **View the status** of this equipment.

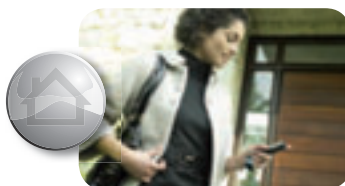
io-homecontrol[®], for a new way of experiencing your home



With Somfy's io-homecontrol[®] solutions, your home can truly become a haven of tranquility and well-being. It can't be easier!

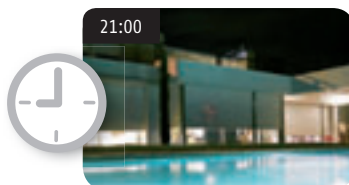
For greater security

- > Lock all or part of your home, even for short absences.



The "House" button closes all openings in the home in just one click. A light indicator and audible signal confirm that everything has been correctly locked.

- > Make it look like someone's at home, by moving the equipment in your home while you're away.



With presence simulation, four different scenarios can be triggered in order to activate the different equipment in your house at whatever times you wish, just as if someone was home.

- > Remotely monitoring and controlling equipment in the home.



With the Tahoma io box, reassurance is just a click away, wherever you are. Via the internet, you can check the status of your equipment and rectify any oversights, using a computer, tablet or smartphone.

For made-to-measure well-being

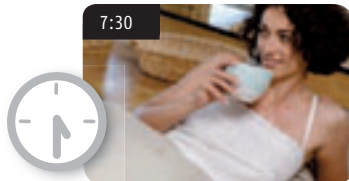
With Somfy's extensive range of io-homecontrol[®] remote controls, you can adapt your home to your needs and lifestyle – simply and intuitively.

- > Controlling equipment by group.



The graphical interface makes it easy to create and save groups of products by zone within the home. The remote control suggests a list of groups by default; these can be easily modified and personalised.

- > Creating a scenario for every time of day!

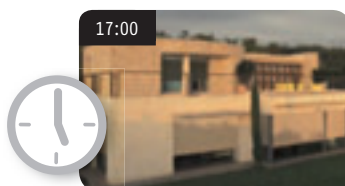


For example, the "Morning" scenario: at the appropriate time, the bedroom and kitchen shutters open, the lights come on, and the skylights are set to the ventilation position...



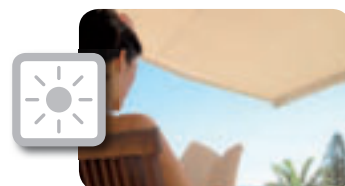
Make energy savings with Dynamic Insulation™

In winter, you can programme the roller shutters to come down at dusk to avoid any heat loss (and save of up to 10% on your heating bill *).



With the dusk function, your roller blinds close automatically when the sun sets.

In summer, awnings can be activated automatically when the sun shines to maintain a cool environment inside (up to 9°C lower, achieved naturally, without air conditioning *) and protect furniture and fittings from sunlight.



In automatic mode, the facade remote control manages the sun protection devices according to sunlight levels.

*Sources :
European Solar Shading Organization,
Brussels/Physibel.

What they think...

"This house isn't an architectural masterpiece or a technological showcase; it's a contemporary home that is built with its environment in mind [...]. The fact that io-homecontrol® is an all-round system that efficiently coordinates the different elements in the home was an important factor in our choice. Being able to programme the roller shutters, for example, means that we can adjust the amount of sunlight we receive according to our needs and the time of year."

Marie-Caroline and Nicolas Thebault – Architects – Rennes, France.



With somfy, there are io-homecontrol® solutions for all sorts of home appli



Somfy offers a comprehensive range of io motors that enable the various openings in the home to communicate with the user and with one another. In addition, there is a wide range of control units and automated systems that can be used to personalise installations, making day-to-day living easier, smoother and free of unnecessary constraints.

Drive units: durability combined with intelligence

io drive units – for access points, roller shutters, sun protection devices, etc. – communicate with each other and help prolong the lifespan of equipment thanks to their gentle motion.

Exterior Venetian blind

J4 io



Patio awning



Perfect Closure Function



Soft Close Function



Back Release Function



Back Impulse Function

Sunea io



Garage door

Dexxo Pro io

For all garage doors up to 15m²



Somfy reliability



Somfy io-homecontrol® motors comply with European safety standards.

All Somfy products are tested during production.



Somfy guarantees its products for 5 years for its installer and manufacturer clients.

Roller shutter



Somfy
Drive
Control®



Obstacle
detection



Protected
against
freezing



Tamper
resistant

Oximo 50 io



Oximo S Auto io

For all narrow windows



External screen

Sunea Screen io



Entry door



Lock Controller io

Receiver for powered locks

Control units: from windows to web control

Somfy's range of io-homecontrol® control units offer a host of innovations, representing new ways of monitoring and controlling the home.

A comprehensive range of control units

Individual control units

For windows

**Smoove 1 io**

Sensitive wall-mounted control unit.

- 1 channel.
- Up, down, stop.
- Favourite position: "my".

**Smoove 1 A/M io**

Sensitive wall-mounted control unit.

- 1 channel
- Up, down, stop.
- Favourite position: "my".
- Local Auto/Manu Function.

For rooms

**Smoove 4 io**

Sensitive wall-mounted control unit.

- 4 + 1 channels.
- Up, down, stop.
- Favourite position: "my".

**Situio Mobile io**

Remote control unit to drive a piece of equipment from anywhere in a room.

- 1 channel.
- Up, down, stop.
- Favourite position: "my".

**Telis 1 io**

To centralize control over a group of up to 30 devices.

- 1 channel.
- Up, down, stop.
- Favourite position: "my".
- Feedback Function.

Control unit and sensors for facades

**Easy Sun io**

Facade remote control for summer comfort.

- 4 manual channels
- + 1 automatic sun function.
- Feedback Function.
- Favourite position: "my".

**Sunis WireFree™ io**

100% wireless sun sensor. Sensitivity can be adjusted using the remote control.

**Eolis WireFree™ io**

100% wireless wind sensor. Sensitivity can be adjusted using the remote control.

Home controls

For centralised control



Telis Composio io

To easily create, name and programme up to 40 groups of equipment.

- Each equipment group can be easily identified on the screen
- Up, down, stop.
- Favourite position: "my".
- Feedback Function.

For creating scenarios



Impresario Chronis io

To create up to 16 scenarios, driving up to 40 devices selected according to time, season or particular moment.

- Scenario recording capacity: 4 different weeks, 4 situations per day.
- Auto/Manu Function.
- Feedback Function.



Skitter io

Portable scenario player for activating 2 scenarios (morning/bedtime, departure/arrival, patio/lounge, etc.).

- Can be positioned wherever it is needed, so it's always within easy reach.
- Simple programming via a downloadable PC interface.

For monitoring and controlling your home, wherever you are



Tahoma io

Control, monitor and maintain your home via the internet. All home equipment can be securely accessed via a PC, notepad or smartphone.

Access point controls



Keytis io

Pocket remote control to drive up to 4 devices.

- Emergency "Stop" key.
- Range: 30 metres.
- Lock keypad Function.
- Feedback Function.



Keytis 4 Home io

Pocket remote control to drive up to 4 devices.

- Lock keypad Function using the "Home" key.
- Feedback Function.

For lighting control



Plug io

Lighting, audio/video equipment, etc.: with Plug io, any device plugged into the mains becomes io-compatible. Ideal for enhanced everyday scenarios.



Lighting receiver io

For controlling outdoor lighting (on/off), 500 W.

io-homecontrol® opens up the intelligent home market



The intelligent home market is constantly evolving. By sharing the new io-homecontrol® two-way radio protocol with other key players in the home equipment sector, Somfy has designed a reliable and flexible radio solution for intelligent homes accessible to as many people as possible.



Home automation is here to stay – but what type should I choose?

On the one hand, there are limited, partial home automation solutions dedicated to separate applications... and on the other, there are complex centralised management installations requiring the intervention of system integrators, as well as major cabling work. There is another option, though: **wireless home automation that is accessible, modular and upgradable** – home automation that uses io-homecontrol®, the most widely shared radio protocol in the residential sector.

It's simpler and more economical to implement, easier and cheaper to upgrade according to users' needs, and provides guaranteed long-term interoperability between different brands of products in the building industry. What's more, io-homecontrol® has become the standard for accessible, easy-to-use home automation.

io-homecontrol®, the most widely shared radio standard for residential use

The io-homecontrol® association, founded by Somfy and Velux in 2002, made quality its top priority from the outset.

Accordingly, io-homecontrol® brings together the leading home equipment specialists, in order to ensure perfect interoperability between all their applications, and compatibility with the radio protocol as a whole.

Honeywell

HONEYWELL is a global player in the heating and air conditioning sectors.



CIAT is an European leader in the field of heat exchange and renewable-energy heating, and a specialist in heat-pump heating systems.

VELUX

VELUX is the market leader in skylights and other home improvement products.



RENSON is the European leader in the field of natural ventilation and sun protection.

NIKO

NIKO designs and produces cutting-edge lighting solutions.

...

ASSA ABLOY

The **ASSA ABLOY** group is the global leader in door-opening solutions.

somfy.

SOMFY is the designer of, and world leader in, Home Motion: powering and moving the various openings in the home using Somfy motors, control units and automatic systems.



WINDOWMASTER is the leading supplier of controlled natural ventilation solutions in Europe.

HÖRMANN

HÖRMANN is a high-performance international partner specialised in doors and gates of all kinds.

A concept built on applications for guaranteed interoperability



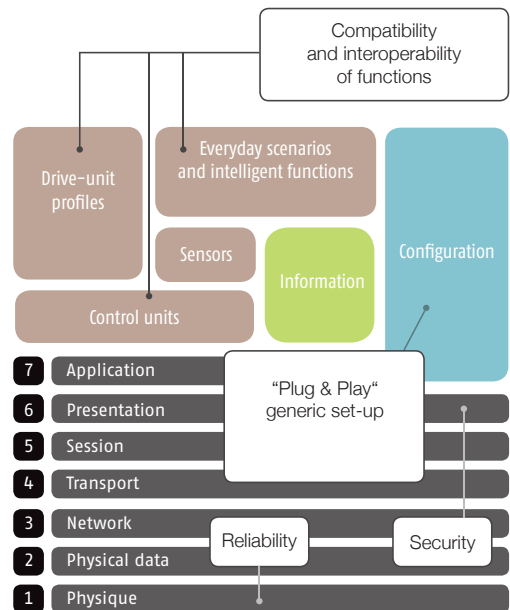
The various io-homecontrol® partners, all from the building sector and leaders in their field, have perfect knowledge of their respective sectors. The whole io-homecontrol® concept is built on the idea of different applications operating together and interacting with each other.

Questions of protocol

The specifications in place in the "Applications" layer ensure that applications of different brands behave in a coherent manner.

For example, there is no risk that activating a Somfy sun sensor will unlock an Assa Abloy lock.

These specifications therefore bring real functional benefits to users. They also facilitate the "Plug & Play" installation of motorised products.



Guaranteed interoperability thanks to io-homecontrol® – an advantage shared by all

Users are guaranteed to be able to control each piece of io-homecontrol® equipment in their home, whatever the brand, using a single remote control. The whole installation works perfectly, because the whole house – from the rooftop to the basement – speaks the same language.

Project managers benefit from applications whose installation is easier to plan: even though each specialist is independent, compatible equipment is automatically integrated into the system.

Installers of any io-homecontrol® application can be sure that it will be automatically «recognised» by the other equipment in the system, and that it will work using the same automated systems or control points.

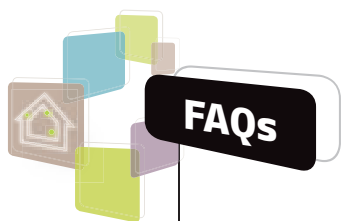
Manufacturers can create commercial synergies with partners in order to satisfy complementary needs on the same market.

Comparison of different radio protocols in the construction sector

	Zigbee	Zwave	KNX	ProLine 2	X2D	io-homecontrol®
Interoperability of protocol ⁽¹⁾	Limited, depending on version (e.g. ZigBee 2006 and ZigBee Pro are incompatible)	Interoperability guaranteed	Interoperability guaranteed (to be confirmed)	Interoperability guaranteed (to be confirmed)	Interoperability guaranteed (to be confirmed)	Interoperability guaranteed
Interoperability of applications ⁽²⁾	Limited (several profiles are not interoperable. Only products with the same profile are interoperable)	Interoperability guaranteed	Interoperability guaranteed (to be confirmed)	Interoperability guaranteed (to be confirmed)	Interoperability guaranteed (to be confirmed)	Interoperability guaranteed
<i>For products to be interoperable, there must be interoperability in terms of both the protocol and profiles (applications).</i>						
Frequency bands (has an impact on performance in terms of range)	2.4 GHz (universal)	US: 908.4 MHz EU: 868.42 MHz	EU only: 863.3MHz	EU 868.3	EU 868.3 MHz + 434.15 MHz	EU 868MHz
Protocol opening	yes	yes	yes	no	no	controlled*
<i>* Controlling the opening of a protocol to a potential member is an absolute necessity in order to guarantee full, effective interoperability between all applications.</i>						
Sources of radio interference	Wi-Fi WiMAX Microwave ovens Bluetooth Wireless Telephones	Limited interference; frequency reserved for remote controls; frequency occupancy time is regulated.				
Two-way protocol	yes	yes	yes + Bus, CPL and IP	yes	yes	yes + (True feedback)
Routing	MESH*	MESH	Relay	MESH	Relay	Relay
<i>* MESH: this is a function whereby motors act as relays in order to route a command when the radio protocol used does not have a sufficient range. For protocols whose ranges are insufficient for the applications concerned (e.g. 2.4 GHz protocols), mesh networking is a solution to the problem of range; however, it is a solution which increases response time. Using a radio protocol with a good range – thus eliminating the need for mesh routing – is a mark of the quality and reliability of radio transmissions.</i>						
Sub-wavebands	16 split sub-wavebands*	1	in development	3*	1 (+ 1 for alarm only)	3 split sub-wavebands*
<i>* Using several wavebands is a mark of the reliability of the transmission of radio messages, provided that the waveband does not suffer from excessive interference, which is not the case with ZigBee (see «Sources of radio interference»).</i>						
Bit rate (data transmission speed)*	250 Kbps	9,6 Kbps	38,4 Kbps	1 Kbps	1 Kbps	38,4 Kbps
<i>* The bit rate depends not only on speed, but also – and above all – on the quantity of data to be transmitted.</i>						
Range in the open / inside	50m/--	100m/30m	100m/--	150 m / 20 m	200–300 m / --	200–300m / 20–30 m
Encryption (security)	AES 128 bit	3 DES	AES 128 bit	nc	same as RTS	AES 128 bit
Product offer	Mainly in the USA. No known home automation system. Independent products.	Mainly in the USA. Products sold direct to private customers in Europe. No home automation system.	EU. 7,000 certified products (radio + Flair). Radio products marketed under the Hager brand.	Remote control and external receivers; awaiting market release. No motor currently available.	France. Home automation product offer.	EU. Home automation product offer.

⁽¹⁾ Ability to operate products that use a new version of the protocol together with those that use an older version. (e.g. Windows Vista _ Windows 7 = forward compatibility).

⁽²⁾ Ability to operate different applications together: the idea of «Profile».



FAQs

1 Why doesn't io-homecontrol® use a universal frequency?

Electrical networks and standards are different on each continent. The «universal» frequency of 2.4 GHz does not perform nearly as well, it is less well suited to applications in buildings, and it suffers from greater radio interference, in particular because of Wi-Fi, which is becoming increasingly common.

2 Why doesn't io-homecontrol® have a “routing” (mesh) function?

io-homecontrol® is a high-performance protocol, as a result of the excellent signal propagation obtained using the 868 MHz frequency. If necessary, a relay can also be added to the installation. Finally, the mesh function is not suited to access-point products such as gates or garage doors, or applications where a delay is not acceptable, e.g. slat tilt control for venetian blinds.

3 Why is frequency hopping used?

Frequency hopping avoids the risk of interference in environments where radio traffic is high; it therefore helps make the transmission of commands more reliable. Note: in the absence of a regulated radio frequency such as the 868 MHz waveband, offering a large number of channels does nothing to guarantee the reliability of the transmission.

4 Why is the 868 MHz waveband more secure?

The 868 MHz waveband is regulated across Europe; moreover, frequencies are reserved for the same types of products, with a maximum frequency occupation time imposed; this minimises the risk of interference.

5 Why does io-homecontrol® offer the best signal range on the market?

The 868 MHz frequency is better suited to residential use, and also requires lower emission power levels – which means lower energy consumption for autonomous products such as sensors and remote controls. The 2.4 GHz frequency, used by ZigBee, Bluetooth and Wi-Fi, offers poorer wave propagation, as its range is weaker at the same power level. Higher power levels are therefore required, which means increased electricity consumption, size and cost.

6 What is transmission authentication used for?

We all protect our homes against burglars; here at Somfy, we also protect our residential radio protocol against hackers, using special locks. The AES-128 encryption standard used by io-homecontrol® is as secure as the encryption systems used for online bank transactions.

7 Why doesn't an alliance with more members mean greater interoperability?

In general, the more members there are sharing a system, the more difficult it is to guarantee the interoperability of different applications. For example, in the ZigBee alliance, most of the key players are not manufacturers of automated systems for residential use. It should be noted that, in alliances such as ZigBee or Z-Wave, not all members are active.

8 What is it that really sets the io-homecontrol® association apart from other multi-brand and multi-application offers?

io-homecontrol® brings together, with Somfy, market leaders and experts in their respective fields. Its members are essentially specialised in residential applications, of which they have a perfect knowledge and extensive experience. This means that io-homecontrol® can guarantee TRUE INTEROPERABILITY. The proof? A single Somfy io remote control can be used to operate and monitor all io-homecontrol® products in the home, whatever the brand.

9 Why is io-homecontrol® for professionals only?

Applications for buildings controlled by io-homecontrol®, such as openings in the home, heating and ventilation, require professional installation, start-up and maintenance to ensure correct operation... even though io-homecontrol® is extremely simple to use and programme by users once in place!

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