ThinKnx

Building supervision platform

GEWISS

Contents

ThinKnx the intelligent building management and supervision platform

ThinKnx is an extremely powerful and versatile platform for **building supervision and control**, capable of meeting the needs of every type of application: from simple residential solutions, such as apartments and villas, to complex scenarios such as offices, student accommodations, retail spaces and shopping centres.

Developed by Pulsar Engineering Srl - a leader in Home & Building Automation for more than 18 years - ThinKnx joined the GEWISS Group in 2024 with a strategic goal of delivering **complete and integrated solutions**.

The platform allows users to synergistically connect and manage all GEWISS systems and products, while also integrating third-party systems and technologies.
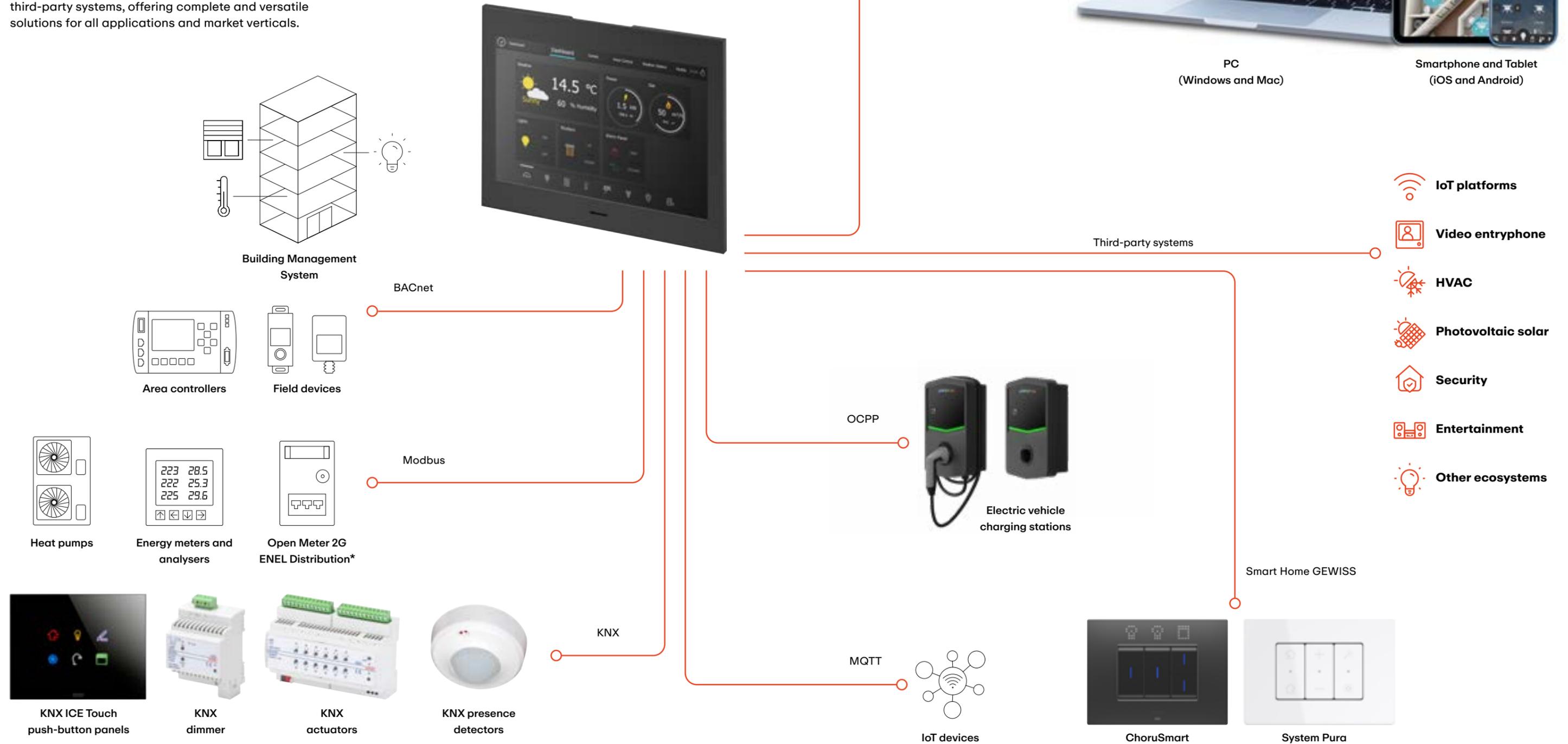
The result is an interoperable and coordinated ecosystem, where the different systems and brands interact with each other without sharing the same communication protocol, generating added value and benefits over using individual non-integrated components.

ThinKnx system architecture

ThinKnx is an open and scalable platform that is compatible with the most popular communication protocols. It seamlessly integrates GEWISS products with numerous third-party systems, offering complete and versatile solutions for all applications and market verticals.

Cloud

PC
(Windows and Mac)

Smartphone and Tablet
(iOS and Android)

Building Management
System

BACnet

Area controllers

Field devices

Heat pumps

Energy meters and
analysers

Open Meter 2G
ENEL Distribution*

Modbus

Third-party systems

OCPP

Electric vehicle
charging stations

IoT platforms

Video entryphone

HVAC

Photovoltaic solar

Security

Entertainment

Other ecosystems

Smart Home GEWISS

KNX ICE Touch
push-button panels

KNX
dimmer

KNX
actuators

KNX presence
detectors

KNX

MQTT

IoT devices

ChoruSmart

System Pura

14.5 °C

* Integration via gateway between "Open Meter 2G" and Modbus, available on the market (e.g. produced by Sinapsi Srl and MAC Srl)

Product range

The ThinKnx product range is structured into several lines:

Pro Line

Professional range of servers capable of interacting with complex systems already known on the market. The perfect solution - extremely easy to set up and fully customisable by the end user. Pro Line can be managed from any platform, and is compatible with Android and iOS operating systems for smartphone and tablet, and with Windows and Mac operating systems for PCs.

Trend Line

Compact and essential range, perfect for different scenarios such as residential buildings, small apartments or hotels. Integrates popular features, simple configuration, and the benefit of being fully customisable by the end user. All Trend Line devices can be integrated within a system where a Pro Line server is installed, allowing the end user to use them as clients. Touch Trendlines can be managed by Android and iOS system apps.

Gateway

ThinKnx product line (Brickdin) that facilitates the connection of all systems to KNX installations that do not natively support this protocol.

Multiroom Audio

Dedicated line for the diffusion of sound (Audiofy) through advanced audio matrices, for entertainment in various home, office or business environments.

ThinKnx **supervision systems** provide complete and integrated control of key functions in building and home, including:

- Lighting
- Air conditioning
- Multimedia
- Security (IP cameras, alarms, presence simulation)
- Energy management and optimisation

through a highly customisable interface, accessible from smartphones, tablets and PCs.
ThinKnx supports integration with numerous protocols and voice assistants, such as Amazon Alexa and Apple Siri, providing a flexible, modern user experience.

Additional services include:

- **ThinKnx Cloud**, for saving projects and data, as well as remote connections and updates.
- **ThinKnx Portal** for centralised monitoring of multiple installations.
- **ViaVai Access Control**, for KNX-based access control.

Pro Line

Micro

Micro 20

Micro DIN

Micro servers give the user complete control of lights, blinds, thermostats and all the functions of a professional automation system. They handle any type of programming and customisation of scenarios and can process complex logic and mathematical operations on data from the KNX bus or external integrated systems. Captured data can be stored and displayed as graphs, and accessed via apps or sent by email. Voice control is supported.

Micro is available in both **desktop version** and with aluminium case for **DIN rail mounting**.

	Micro 20	Micro DIN
Pulsar Code	MICRO_20	MICRODIN
Gewiss code	THS1001	THS1031
Processor	Powerful multicore CPU	
Operating system	Linux	
Connection	KNX net/IP	
Ports	1x KNX TP, 1x Ethernet, 1x USB	
Operation	IP/KNX router or interface	
Accessories supplied	Internal real time clock, solid state memory	
Power supply	9-24 V dc (power supply included)	9-24 V dc (power supply not included)
Installation	Desktop	DIN rail (4 modules)

Compact

Compact 20

Compact DIN

Compact servers offer advanced automation capabilities, extending all the existing capabilities of the Micro model. They feature inputs and outputs, as well as two serial ports, and support integration with different protocols and systems (e.g.: Modbus), as well as with safety installations and multimedia systems. Their **flexible architecture** allows integrations to be customised according to installer-defined logic to meet user needs. Designed for **high performance**, with no limits to the number of configurable systems. The local display simplifies installation, allowing monitoring of IP address and other technical parameters.

Compact is available in both **desktop version** and with aluminium structure for **DIN rail mounting**.

	Compact 20	Compact DIN
Pulsar Code	COMPACT_20	COMPACTDIN
Gewiss code	THS1003	THS1032
Processor	Powerful multicore CPU	
Operating system	Linux	
Display	1.54"	
Connection	KNX net/IP	
Ports	1x KNX TP, 1x Ethernet, 2x USB, 1x RS232, 1x RS485, 4x 6A@230Vac relay, 4x digital outputs, 2x analogue or digital inputs	
Operation	IP/KNX router or interface	
Accessories supplied	Internal real time clock, solid state memory	
Power supply	9-24 V dc (power supply included)	9-24 V dc (power supply not included)
Installation	Desktop	DIN rail (9 modules)

Pro Line

Envision Touch

Envision is an advanced touch controller for home automation, with a 7" or 10" display, available in server or client versions. It offers a customisable user interface and the functionality of a ThinKnx server. Includes sensors, microphone and speaker for internal video intercom and thermostat functions. Supports RS232/RS485 for Modbus and intrusion detection systems. **It must be completed with a frame**, available in different materials and colours.

	Envision 7"	**Envision 10"**
Pulsar Code	ENVISION7_20 (Server) ENVISION7R_20 (Server retrofit*) ENVISION7_C_20 (Client) ENVISION7R_C_20 (Client retrofit*)	ENVISION10_20 (Server) ENVISION10_C_20 (Client)
Gewiss code	THS110170 (Server) THS110270 (Server retrofit*) THS120170 (Client) THS120270 (Client retrofit*)	THS110110 (Server) THS120110 (Client)
Display	7" TFT capacitive (1024x600 pixels) with 155x87 mm visible area	10" TFT capacitive (1280x800 pixels) with 217x136 mm visible area
Processor	8 cores, for maximum performance	
Operating system	Linux	
Connection	KNX net/IP	
Operation	IP/KNX router or interface	
Ports	1x KNX TP, 1x Ethernet, 1x USB, 1x RS232, 1x RS485	
Accessories supplied	Microphone, speaker	
Sensors	Temperature, humidity, brightness	
Consumption	<10 W	
Power supply	12-24V dc	
Installation	Flush-mounting, wall or desktop	

*The "Retrofit" version can be installed in "Agro 9926.90" flush-mounting boxes, which are widely used in some countries, particularly Switzerland, to install 7" panels from competitors. It is therefore suitable for use in "retrofit" plans for previously-installed home systems, replacing touch panels from other manufacturers.

Rack

Rack Server is the optimal solution for complex installations that require numerous integrations and advanced features. Its numerous external ports allow connection to a wide range of systems and devices, ensuring high performance and superior automation for the building. It integrates all the features offered by other ThinKnx servers, but with more resources to manage even larger and more complex installations.

	Rack
Pulsar Code	RACK
Gewiss code	THS1061
Processor	Powerful multicore CPU
Operating system	Linux
Connection	KNX net/IP
Ports	1x KNX TP, 2x Ethernet, 4x USB, 2x RS232, 1x RS232/RS484, 2x analogue or digital inputs
Operation	IP/KNX router or interface
Accessories supplied	Internal real-time clock, solid-state memory, PCI card slot
Power supply	100-240 V ac 50Hz-60Hz
Installation	19" rack mounting (2 units)

Trend Line

K2

K2 is the most advanced device in the Trend Line series, designed for maximum performance and application flexibility. It can function as a stand-alone KNX controller or as a Pro Line client. Equipped with a 5.5" display, microphone and speakers to act as a VoIP video intercom station, and includes temperature and humidity sensors, allowing it to be used as a thermostat. Supports stand-alone mode (such as room controller), ThinKnx client or server. The graphical interface is highly customisable with unlimited pages and a full set of pre-defined and customisable widgets. Available in black or silver colours.

	K2
Pulsar Code	K2_BLACK, K2_SILVER
Gewiss code	THT110255AB1 (Black), THT110255VS1 (Silver)
Processor	Powerful multicore CPU
Operating system	Linux
Display	High-resolution 5.5'' capacitive (720x1280 pixels)
Connection	WiFi, KNX net/IP
Ports	1x KNX TP, 1x Ethernet
Operation	IP/KNX router or interface
Accessories supplied	Microphone, speaker, internal real time clock, solid-state memory
Sensors	Temperature, humidity
Power supply	9-24 V dc + PoE
Installation	Flush-mounting

Piccolo

Piccolo is a multitasking device designed to manage small apartments or individual rooms, offices, and rooms in hotel applications. It works as both a server and client for Pro Line and Trend Line lines and offers a customisable graphical interface with unlimited pages and a full set of pre-defined and customisable widgets. It can also be used in stand-alone mode as a room controller, thanks to the temperature and humidity sensors. Equipped with a 4" display, microphone and speaker, it can also act as a VoIP video intercom station. With its compact design and built-in temperature and humidity sensors, it easily adapts to any environment. In hospitality applications, it can be used as a touch interface for access to doors and rooms in apartments. Pages can be customised with room number and hotel logo, as well as to report room status (do not disturb and/or clean room). Available in black, with possibility to complete with optional frames of other colours, it combines functionality, elegance and versatility in one device.

	Piccolo
Pulsar Code	PICCOLO_B
Gewiss code	THT110340
Processor	Powerful multicore CPU
Operating system	Linux
Display	High-resolution 4" capacitive (480x480 pixels)
Connection	WiFi, KNX net/IP
Ports	1x KNX TP, 1x Ethernet
Operation	IP/KNX router or interface
Accessories supplied	Microphone, speaker, internal real time clock, solid-state memory
Sensors	Temperature, humidity
Power supply	9-24 V dc + PoE
Installation	Flush-mounting

Gateway

Multiroom audio

Brickdin

Brickdin

Brickdin is the ThinKnx product that **allows connection to the KNX system for systems that do not natively support this protocol**. Take advantage of all the features already built into ThinKnx products. Brickdin can be used to control audio sources, in a bi-directional and fully configurable manner, such as Sonos and Denon, multimedia systems, alarm devices, and other bus-based systems (e.g.: Modbus). It is also possible to collect data (reporting, KNX loggers) or verify real-time continuity of system service (KNX device or network pings). The internal services available on ThinKnx servers are also present on Brickdin, such as pre-programmable scenarios, generic gateways, alarm messaging, logic functions, to enable maximum capacity even in the absence of a graphical interface.

Audiofy

Audiofy P1 and P4 controller

Audiofy E4 expansion

Audiofy is a professional multiroom audio system that integrates an audio matrix, dedicated power amplifiers for each output, and up to four independent network players into one device. Each player can be used as an AirPlay and UPnP player. It is also able to collect content from DLNA and UPnP media servers, external sources via the internet (e.g.: Spotify), network shares and removable USB memory.
Fully configurable via the web, Audiofy enables the distribution of audio content from external analogue sources or internal players, up to **32 zones**, ensuring crystal clear sound quality. Navigation is faster and more intuitive from any mobile device, making system management even easier and more accessible.
By enabling the appropriate license, the device also assumes all the functionality of a ThinKnx server, activating bi-directional communication with the home system thanks to the KNX-TP and RS485 ports. All multiroom audio functions can be managed by other devices and systems from the KNX bus.

	Brickdin
Pulsar Code	BRICKDIN
Gewiss code	THB1001
Processor	Powerful multicore CPU
Operating system	Linux
Connection	KNX net/IP
Ports	1x KNX TP, 1x Ethernet, 1x USB, 1x RS232, 1x RS485
Operation	IP/KNX router or interface
Accessories supplied	Internal real time clock, solid state memory
Power supply	9-24 Vdc
Installation	DIN rail (4 modules)

|	Audiofy P1	Audiofy P4	Audiofy E4
Pulsar Code	AUDIOFYP1	AUDIOFYP4	AUDIOFYE4
Gewiss code	THA1001	THA1002	THA1003
Description	Audio matrix	Audio matrix	Expansion
Internal network player	1	4	-
Analogue inputs	5	2	-
Ports	1x KNX TP, 1x Ethernet, 1x USB, 1x RS485		
Amplified stereo outputs	4 (50 W stereo - 4 Ω speaker)		
Power supply	100-240 V ac 50Hz-60Hz - 200 W max		
Installation	19" rack mounting (1 unit)		

Accessories

	Micro_20	Micro DIN	Compact_20	Compact DIN	Envision		Rack
					7"	10"	
Power supply	●	○ (5)	●	○ (5)	○ (6)		-
USB to RS485 adaptor	○ (1)		○		○		○
USB to RS232 adaptor	○		○		○		○
Touch panels that can be used as clients in conjunction with servers	Envision client, K2, Piccolo		Envision client, K2, Piccolo		Envision client, K2, Piccolo		Envision client, K2, Piccolo
Mandatory completion frames	-		-		**Anodised aluminium:** black, silver, dark grey, bronze, gold **Fenix NTM:** black, white **Fenix NTA:** silver, steel, gold		-
Frame colour kit	-		-		○		-
Wall-mounting box (wall fixing also possible with VESA bracket, not supplied)	-		-		○ (2)		-
Table stand	-		-		○ (3)		-
Flush-mounting box for masonry walls	-		-		GW 48 005 (4)	THS144310	-

		K2	Piccolo
Power supply		○ (5)	○ (5)
Touch panels that can be used as clients in conjunction with servers		K2, Piccolo	Piccolo
Optional completion frames		-	**Anodised aluminium:** black, grey, blue, gold, brown **Painted aluminium:** matt white
Flush-mounting box	Masonry walls	Rectangular box 3 modules GW 24 403	Round boxes GW 24 231, GW 24 232
	Plasterboard walls	Rectangular box 3 modules GW 24 403 PM	Round box GW 24 234 PM
Installation		Vertical	Horizontal

- Not available / not required
○ Available as an accessory
● Included in package
(1) Not usable for Modbus RTU
(2) White, black

(3) Black
(4) For Envision 7" Retrofit, use code THS144270
(5) Can be used power supply Gewiss code THS1402 / Pulsar code POWDIN
(6) Can be used power supply Gewiss code THS1404 / Pulsar code ENVISIONPOW

Licenses
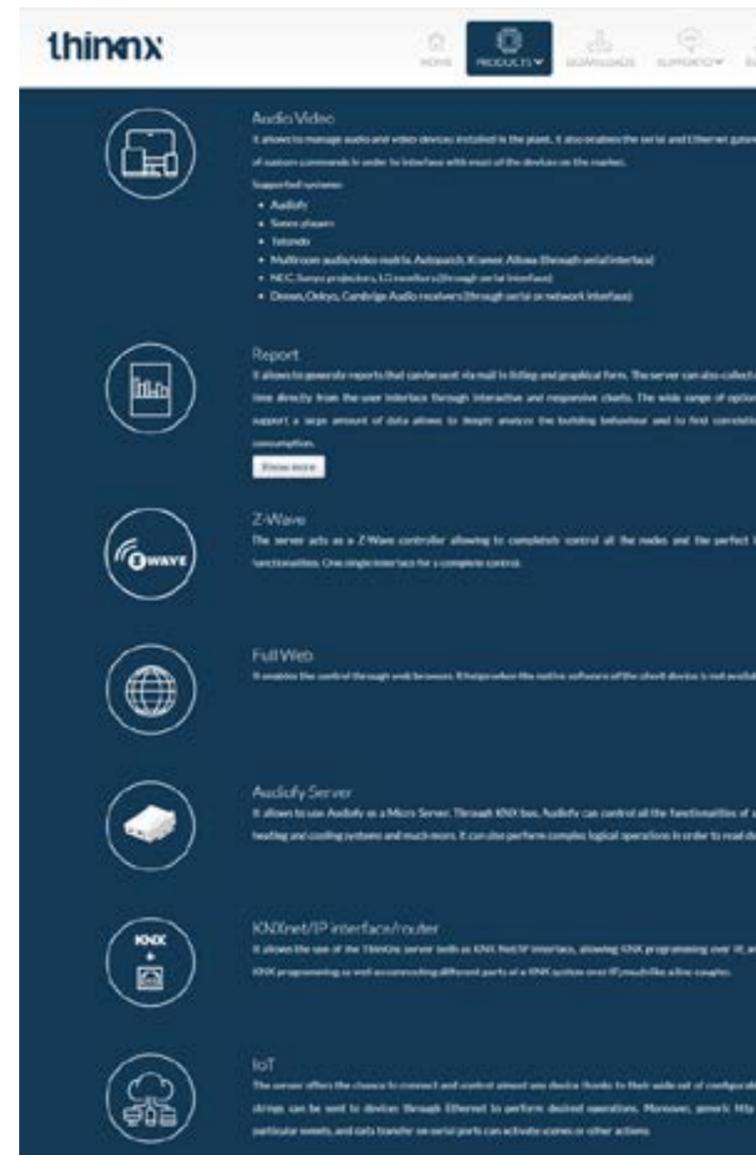
ThinKnx servers come supplied with a broad set of pre-enabled features.
For example, all servers can handle an unlimited number of KNX objects without requiring a license.
However, to enable some advanced features, a specific license must be purchased. All licenses have unlimited validity, i.e. there are no expirations.
The ThinKnx site provides an up-to-date list of available licenses, descriptions of each, and a summary table showing which server models can be applied for each license.

Functions

ThinKnx offers a wide range of features designed to meet the most complex needs of all applications: residential, office, commercial, logistics, hospitality and sports facilities. All functions can be applied in an integrated manner to connected devices and systems, regardless of the protocols and types of systems used.
Control is always at your fingertips: the user can manage every function via apps or PC, both locally and remotely, through intuitive interfaces based on simple, customisable widgets.
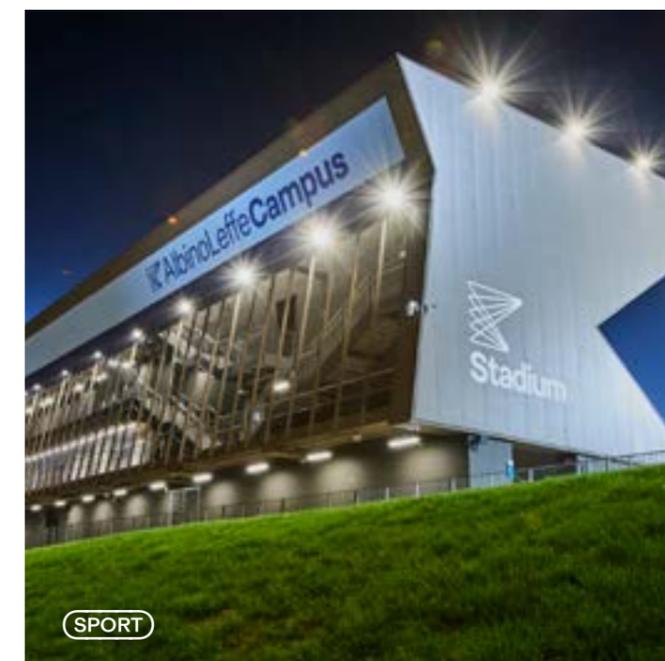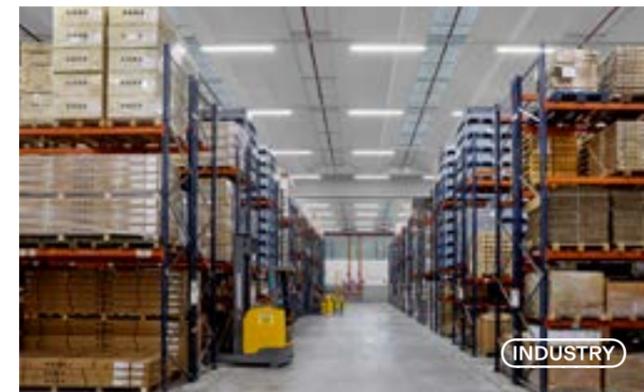
(Comfort)

(Security)

(Energy efficiency)

(Entertainment)

(Advanced functions)

Application areas

RESIDENTIAL

OFFICE/RETAIL

INDUSTRY

HOSPITALITY

SPORT

Comfort

Advanced lighting control

ThinKnx enables full lighting management: power-up, dimming, colour adjustment (RGB and RGB-W), colour temperature, and custom scenarios. Colour management devices, such as those based on **DALI** and **DMX** protocols, are controlled via KNX gateways. Alternatively, for Philips devices, direct integration with the **Philips HUE** system is possible. The platform also supports advanced colour temperature management, replicating the natural cycle of sunlight to promote the circadian rhythm, with positive effects on people's well-being and productivity.
KNX devices allow the system to significantly reduce energy consumption, thanks to the switching on feature depending on the presence of people and automatic brightness adjustment, making the most of the natural light available.

Advanced automation management

ThinKnx allows complete control of all types of automations: blinds, sunshades, venetian blinds, curtains and skylights. These elements can be managed individually via manual commands or by directly setting the desired position, or integrated into custom scenarios.
In addition to devices that can be controlled via KNX actuators, the system allows native management of **Velux** skylights, thanks to integration with their proprietary protocol.
In combination with installed KNX devices, ThinKnx offers intelligent control based on the sun's position and the time, optimising environmental comfort and helping to reduce energy consumption for heating and cooling.

Intelligent customised scenarios

Scenarios are advanced commands that allow the user to perform multiple **actions simultaneously or sequentially**. A typical example is the "leaving home" scenario, which with a single command turns off all lights, lowers the blinds, sets the climate to "economy" mode and activates the intrusion detection system.
ThinKnx allows the installer to configure default scenarios and the user to customise them independently.
Scenarios can be customised simply by performing the desired actions: the system records them and the scenario can be recalled at any time.

Smart climate management

ThinKnx provides advanced climate control, focused on comfort, air quality and energy efficiency. The system manages heating, cooling and ventilation, automatically reacting to environmental conditions: for example, it lowers the blinds in case of excessive solar irradiation or deactivates the air conditioning if a window is opened. Weekly thermal comfort can be programmed for each environment, defining specific temperatures and modes. ThinKnx is compatible with all major types of systems: radiant floors and ceilings, radiators, fan coils, split single/multi systems and VRV/VRF, both ducted and non-ducted. Open systems can be managed directly through supported protocols (**KNX**, **Modbus**, **BACnet**, etc.), while proprietary systems are integrated through their respective protocols (**Daikin**, **Mitsubishi**, **Airzone**, etc.).
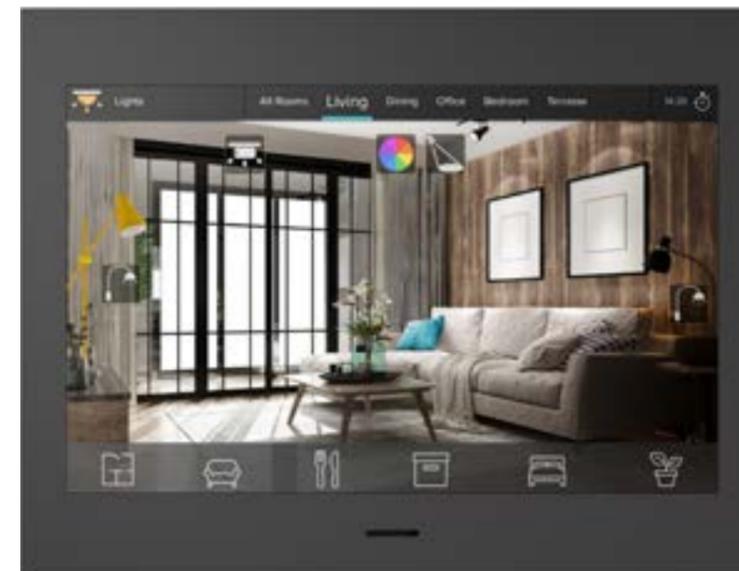
Security

Security and access control

The ViaVai suite from ThinKnx offers advanced and flexible access management within buildings, ideal for office, logistics, sports, hospitality and residential applications.
It is particularly popular in the hospitality sector, perfectly capable of adapting to all sizes of facilities: from simple scattered hotel apartments to B&Bs, hotels and student accommodations. One of the most useful features is the ability to manage access even in facilities that do not have 24-hour attendants, ensuring security and autonomy for guests. The system allows the user to control access to rooms, apartments or gates in a simple and secure way, integrating with other home functions for centralised and efficient management:

- **PIN** via numeric keypad: GEWISS KNX touch push-button panel, ThinKnx Piccolo touch or third-party devices (e.g.: 2N)
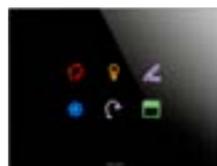
GEWISS
KNX touch push-button panel

- **QR code** via ThinKnx App: QR code can be displayed on Piccolo touch or printed on a sign to be placed near the entrance

The 4" **ThinKnx Piccolo** touch provides a compact and effective access management solution for hotel rooms or apartments in accommodation facilities (e.g.: B&Bs). Key features include:

- **PIN access**.
- **Access via QR code** and ThinKnx App.
- **Display of information and notifications** such as DND (Do Not Disturb), MUR (Make Up the Room), room number.
- **Internal call** via bell key.

In addition, the ViaVai suite supports **automatic number plate recognition** for parking access management, ideal for accommodation facilities. The vehicle number plate is associated with the guest during check-in, allowing the gate to be opened automatically upon arrival.

Piccolo Touch

Advanced access management features - ViaVai Suite

- **Facilities without 24-hour attendants**
  The ViaVai Suite allows the user to manage check-in remotely by sending the guest a PIN or accreditation for access via the ThinKnx App with a QR code. Entry instructions are sent automatically via email, making it easy to welcome guests even when there are no staff.
- **Customised user management**
  The system enables the definition of different categories of users (e.g.: guests, service personnel), each with specific permissions. Access may be limited to the period of stay (for guests) or certain days of the week (for staff, such as cleaners).
- **Access history**
  Each access is logged, allowing the user to view history for all doors and monitored rooms, useful for analysis and security.
- **Integration with management systems (PMS)**
  For hotel properties, the system supports the standard FIAS protocol, enabling integration with leading PMS software.
- **Service "Wallet" management**
  It is possible to associate a virtual credit with the customer (without billing management) to provide additional services, such as e-bike rental.
- **"Virtual pocket" function**
  The system automatically detects the guest's presence in the room or apartment, via presence sensors and door sensors, eliminating the need to use a traditional transponder card holder.
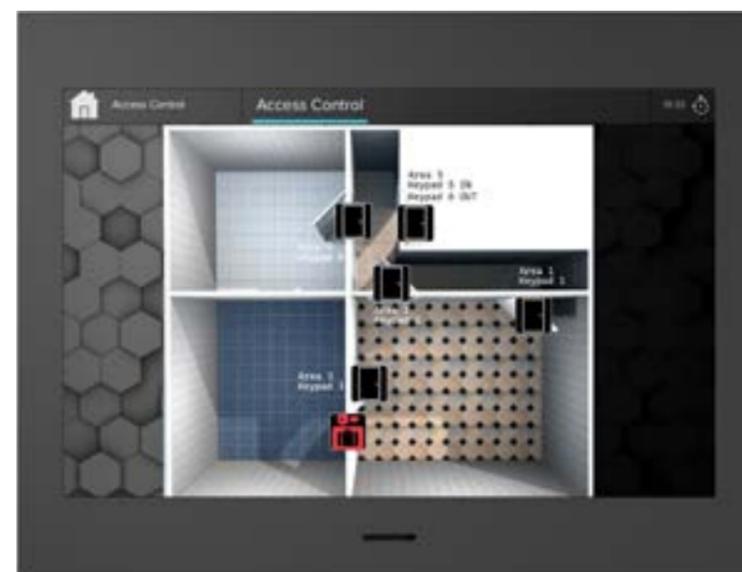
Access control

Hotel room entrance control

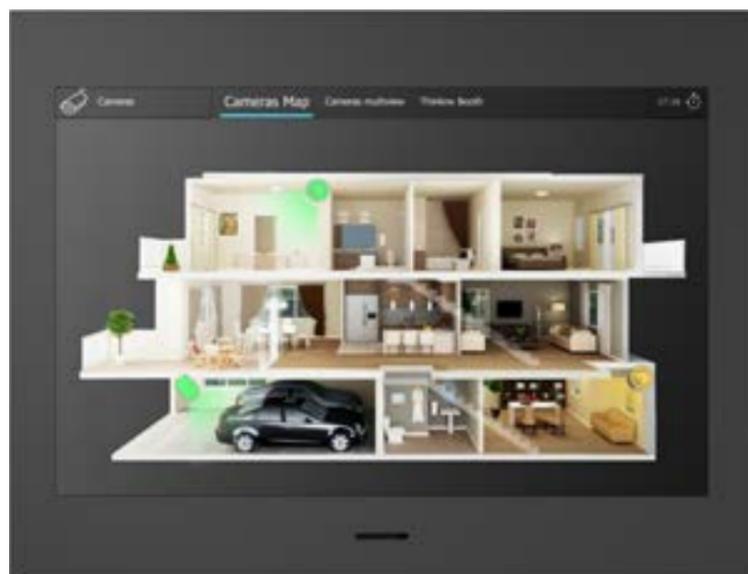# Security

Security and IP camera display

ThinKnx allows the user to view images from IP cameras and from external locations of your video intercom system directly on **touch panels, smartphones, tablets and PCs**, providing complete and integrated control. Images can be **automatically brought to the foreground** in response to specific events. For example, in the event of an alarm, the system can immediately display the camera for the affected area, such as a room where an anomaly has been detected (e.g.: open window), improving the security of the environment.

Security and integrated intrusion detection system

ThinKnx offers a full range of functions for managing intrusion detection systems, providing advanced protection and integration with all home supervision. It is possible to integrate a variety of systems from other manufacturers, including: **Bentel, Elkron, EL.MO., IESS, Honeywell, Inim, Paradox, Tecnoalarm, Urmet**, thanks to ThinKnx multi-protocol compatibility.

Main functionalities

- **Alarm activation/deactivation** command, for both individual zones and the entire system.
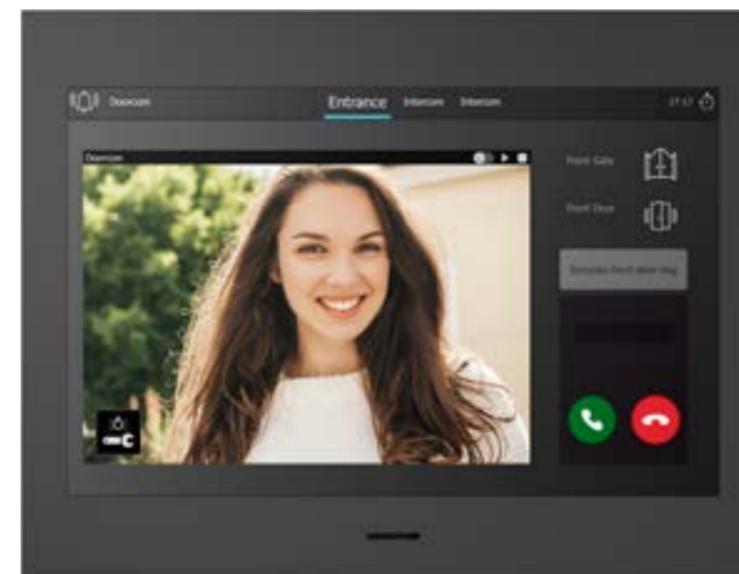- **Real-time alarm** reporting.

Integrated IP video intercom

ThinKnx is an open and flexible solution for IP-based video intercom with the adoption of standard SIP protocol. The system provides centralised supervision and compatibility with a wide variety of third-party devices. Each ThinKnx server includes an integrated PBX server designed to manage VoIP communications between internal devices and external locations. This allows for smooth and reliable video intercom call handling. One particular strength is the ability to use ThinKnx touch panels, smartphones and tablets (via the ThinKnx Up app), as well as PCs (with the ThinKnx Up client), both as internal video intercom stations and as supervisory interfaces for all home automation functions.

Main functionalities

- Answering video intercom calls.
- Opening doors, gates, and driveways.
- Viewing images from external stations.
- Communication between internal stations.

By adopting the SIP standard, the system enables integration with numerous video intercom brands, including: **2N**, **Akuvox**, **Comelit**, **Fermax**, **DoorBird**, **Mobotix**, ensuring maximum interoperability and freedom of choice.

The system provides an immediate overview of the status of the detectors (presence, doors/windows) in the home via intuitive interfaces. With cross-protocol flexibility, it can enable **smart features**, such as sending notifications if windows are left open.

Energy efficiency

Energy management

ThinKnx offers an integrated and scalable solution for building energy management, allowing the user to monitor consumption in detail and optimise usage. The system takes into account both the availability of locally produced energy (e.g.: from photovoltaic systems), as well as the most significant energy demands, such as electric vehicle charging.

Energy consumption monitoring

The platform enables real-time visualisation and historical energy consumption analysis, with the ability to compare different energy flows. It can also automatically generate reports that are useful for control and management, ideal for environments such as schools, public buildings, or sites managed by third parties.

Photovoltaic energy management and load control

The system allows the user to monitor energy produced and manage loads intelligently, especially those related to electric vehicle charging. The goal is to maximise self-consumption and reduce energy delivered to the grid, which is less cost-effective. Integration with photovoltaic systems can be executed via Modbus protocol (supported by many inverters) or, in some cases, directly via native protocol. Charging stations can be managed through standard protocols such as OCPP or Modbus.

Entertainment

Controlling multimedia systems

ThinKnx facilitates advanced management of **multi-room audio diffusion**, allowing the user to distribute sound content independently across different environments in a home or building. The system is compatible with a variety of **audio matrices**, including **Audiofy** and other brand solutions such as **Sonos, Denon, Tutondo and Onkyo**.
It is possible to manage multiple **audio sources**, both internal and external (e.g.: Spotify), and direct them to the desired areas, providing flexibility and customisation of the sonic experience.

Additionally, thanks to integration with **IR transmitters** (replicating the functions of a remote control), such as the **IR Trans** system, ThinKnx enables control of **video and multimedia devices** of any kind, providing complete and centralised oversight of entertainment as well.
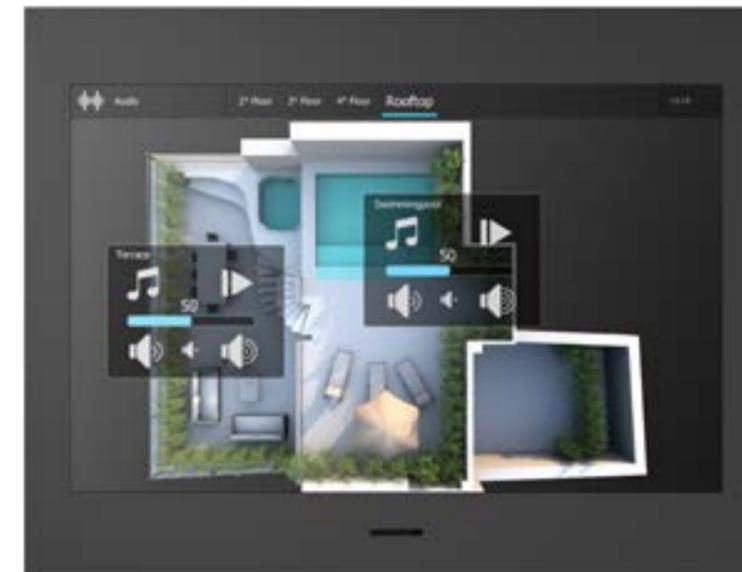
Advanced functions

Logic modules and scripts

ThinKnx provides integrators with a powerful suite for managing complex automations. Automation logics are configured using a **graphical editor** based on **functional blocks**, which allows the user to build logic flows intuitively and modularly.
The block library includes mathematical functions, logics, timers, counters, and more. For more advanced needs, an **"open" function block** is available, whose behaviour can be customised by writing code in **C#**, offering maximum flexibility.
A big advantage of the ThinKnx system is the ability to **process measurements and data from any protocol** and **any integrated third-party system**, making it possible to create cross-sectional and highly customised automations.
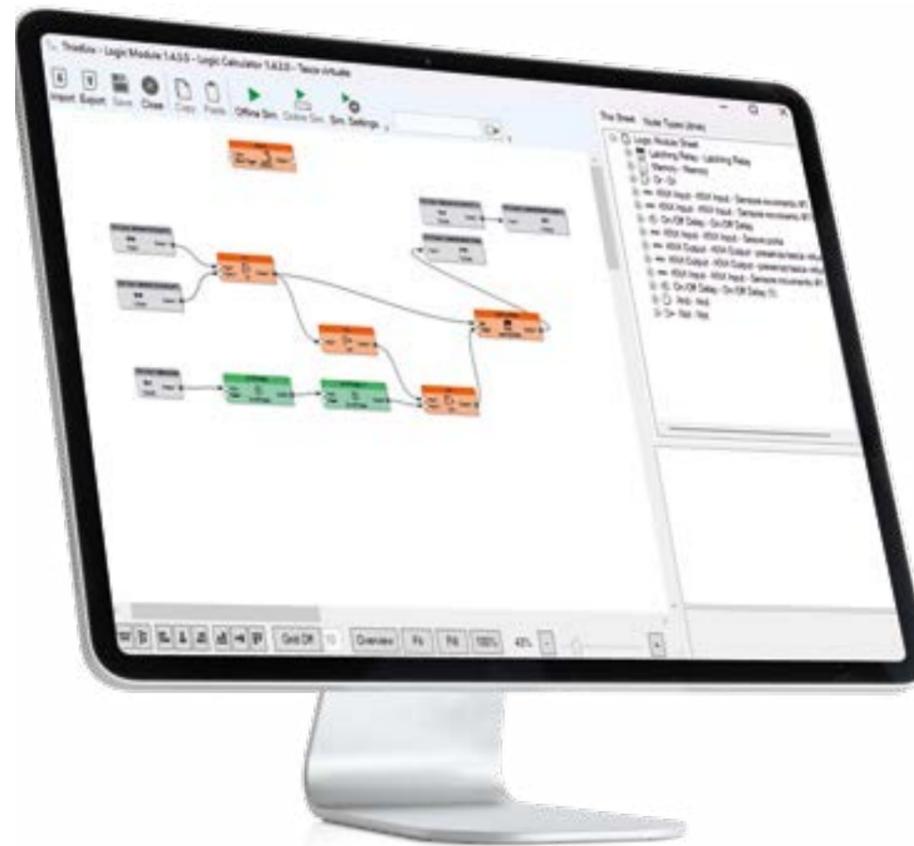
Data storage

ThinKnx allows the user to store relevant data, such as **consumption measurements, device states, and environmental parameters**, both **locally** and in the **Cloud**, depending on project needs. Archiving is intended for data that requires **historical consultation** or will be used for **later analysis**.
To optimise memory space utilisation, the system allows the user to define **custom storage strategies**, including:

- Data logging frequency
- Reduction in the number of samples collected
- Automatically data deletion after a certain period

This flexibility allows the user to maintain efficient and functional storage, which can be adapted to different application scenarios.

Reports and graphics

Data stored, both locally and in the Cloud - such as energy consumption, environmental temperatures and device states - can be used for:

⊕
Real-time display
The ThinKnx user interface can be used to access data via **interactive and dynamic graphs**. Multiple measurements can be displayed within the same graph, providing an immediate and detailed overview, which can be particularly useful for building energy analysis.

⊕
Automatic report generation
Reports can be freely configured, including data in the following formats:
- **Tables**, for in-depth analysis (exportable to Excel).
- **Graphs**, for immediate and intuitive reading.

Reports can be scheduled to be sent automatically via **email** to specific recipients, at a defined frequency. This feature is particularly useful for **periodic monitoring of system consumption and performance**.

Building Management Systems (BMS)

A **BMS** is a centralised platform that allows to **coordinate, monitor and optimise** the different systems in a building, with the aim of improving energy efficiency, occupant comfort and safety.
Key features include:

- **Integrated automation**
  Coordinated management of HVAC (heating, ventilation, and cooling), lighting, security, elevators, escalators, and other auxiliary systems.
- **Data monitoring and analysis**
  Collection and analysis of parameters such as electricity and water consumption, temperature, humidity and people presence, useful for assessing efficiency and comfort level.
- **Energy management**
  Optimising system operation to reduce waste (e.g.: lighting and heating) and generating reports on building energy performance.
- **Maintenance and alarms**
  Data analytics to enable preventive or predictive maintenance strategies, detecting anomalies, malfunctions, and risk situations in real time.

With its processing capabilities, advanced features, and compatibility with numerous third-party protocols and systems, **ThinKnx** can operate effectively even in environments where the features of a **Building Management System (BMS)** are required, in two ways:

BMS "light"

In the simplest contexts, ThinKnx can directly assume the role of BMS, managing typical supervisory and control functions. In these cases, high-performing server models, such as the **Rack** or **Compact DIN** versions, are recommended for maximum efficiency and performance.
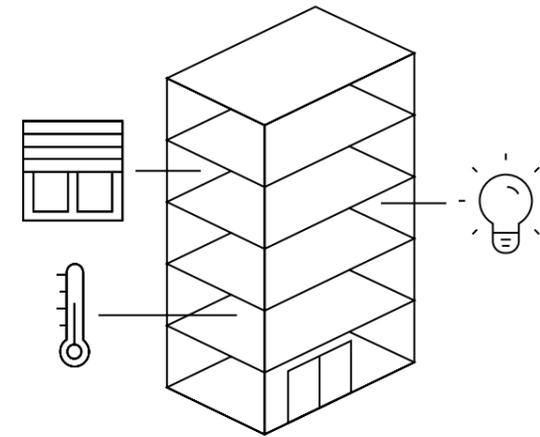
Integration with existing BMS systems

When the system has a centralised BMS for managing and maintaining all building systems, ThinKnx can play a strategic role as an **interface between the BMS and field devices**, facilitating communication and integration between different levels of the system.

ThinKnx integrates effectively and naturally into a BMS system, thanks to its compatibility with **BACnet** and **Modbus** protocols. It can act as a **smart interface** between the BMS and lower level facilities, systems and devices, providing pre-aggregated data and translating coordination commands into understandable instructions for each system. In this way, the BMS is **released from the technical specificities** and protocols, whether standard or proprietary, used by the individual systems.
Installations and systems that can be managed through ThinKnx in a BMS context include:

- **Ordinary lighting**: control and monitoring of occupancy of environments and lighting levels.
- **Emergency lighting**: management of functional tests and collection of results.
- **Climate management**: control and supervision of energy input into environments.
- **Power distribution**: monitoring of electrical flows (single phase and three phase), status of lines (open, closed, tripped), performance of tests (e.g.: Restart Autotest) and anomaly detection.
- **Energy management**: control and balance between energy produced (e.g.: from photovoltaic systems) and consumed, with a focus on high-power users such as electric vehicle charging stations.
- **Access management**: monitoring attendance and managing access permits, to the different areas of the building.
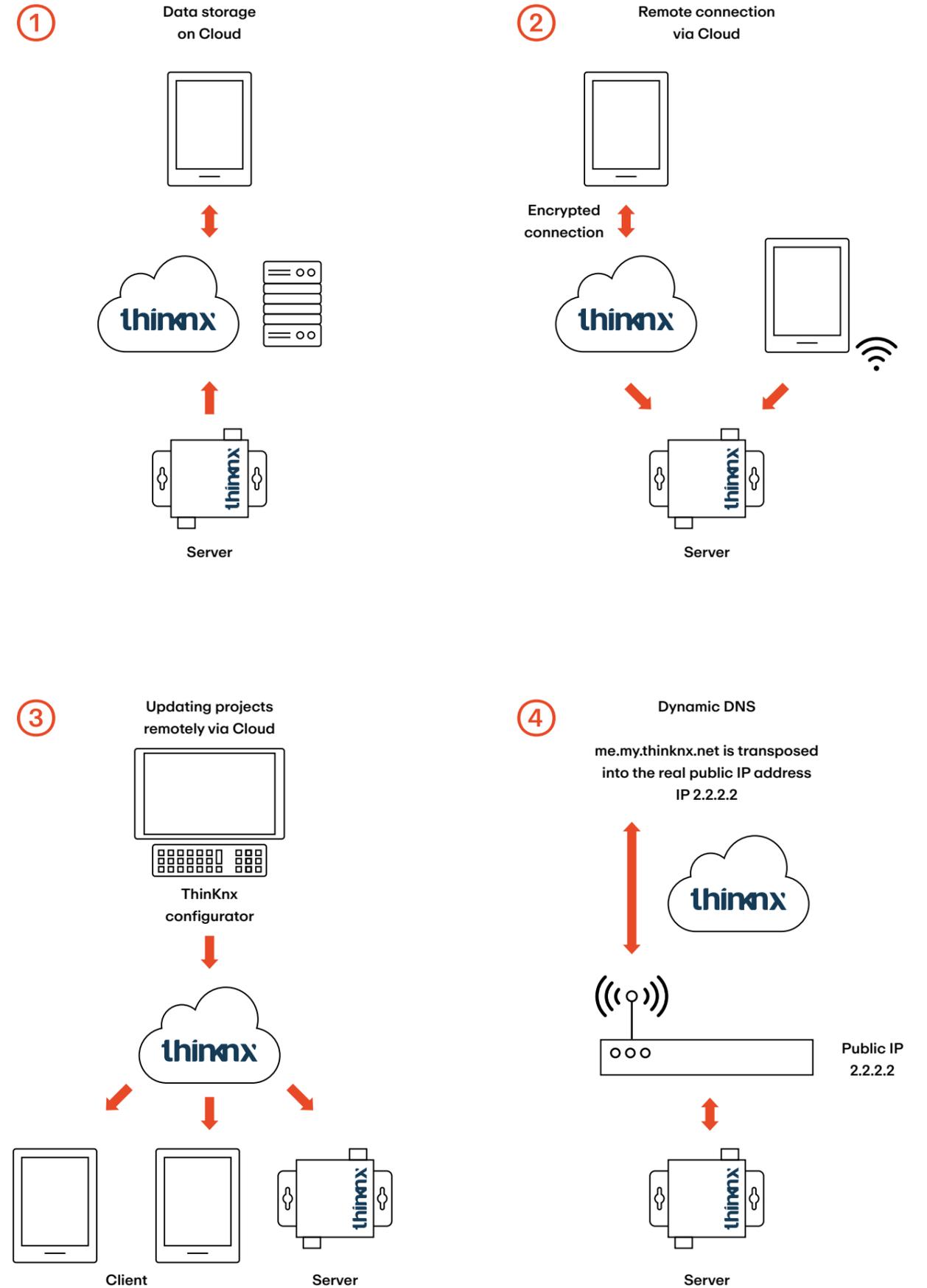
Cloud services

Advanced cloud services are available free of charge to all ThinKnx users, offering:
- Simplified day-to-day operations and connections for the user
- Simplified maintenance and commissioning of integrator projects

Services offered:
- Data storage (free up to 20MByte) ①
- Direct connection to ThinKnx servers via Cloud (no port forwarding configuration on local router required) ②
- Remote project modification and updating (configuration) ③
- Service operation checks and remote server maintenance ③
- Dynamic DNS for remote connection ④

① **Data storage on Cloud**

Server

② **Remote connection via Cloud**

Encrypted connection

Server

③ **Updating projects remotely via Cloud**

ThinKnx configurator

Client   Server

④ **Dynamic DNS**

me.my.thinknx.net is transposed into the real public IP address IP 2.2.2.2

Public IP 2.2.2.2

Server

Integration between Smart Home and ThinKnx

The devices and functions of the **GEWISS Smart Home**, both from ChoruSmart and System Pura, can be integrated into the **ThinKnx** system, creating a synergy that enriches both solutions and extends their application possibilities.

- **For Smart Home**, integration with ThinKnx extends wireless capabilities to include advanced applications that are not natively available, such as video intercom.
- **For ThinKnx**, integration with Smart Home allows the user to extend wireless solutions even into non-residential settings, facilitating a flexible response - and without having to modify infrastructure - to the reconfigurability needs of spaces that change and evolve over time. It also enriches the ecosystem by adding an entire wiring devices range, with the EGO SMART plate, making environments modern and customisable.

ThinKnx Up app

ThinKnx Cloud

Modem Router Wi-Fi / Internet

LAN

Wi-Fi

Wi-Fi

ThinKnx Server

Voice assistants (Alexa, Siri)

Home Gateway

EGO SMART plate

Connected dimmer module

Connected two-way switch module

ZigBee

Connected ECO push-button panel

Connected thermostat

Connected sensors and technical alarms

Connected roller shutter module

Connected 2-command module

Connected power meter

Connected actuator

Connected motion sensor

Advantages

ThinKnx transforms the Smart Home into an even smarter, higher-performing ecosystem

⊕

ZigBee network expansion
The ability to manage multiple Home Gateways expands both the maximum number of ZigBee devices that can be connected and the network extension, overcoming the limitations typical of standard solutions.

⊕

Local control of ZigBee devices
ZigBee device features can be managed via app or PC, even without connection to the Cloud, ensuring maximum operational continuity.

⊕

More versatile EGO SMART plate
Messages can be customised further and made static or dynamic, and displayed in response to events or commands, such as displaying the apartment number in an accommodation facility.

⊕
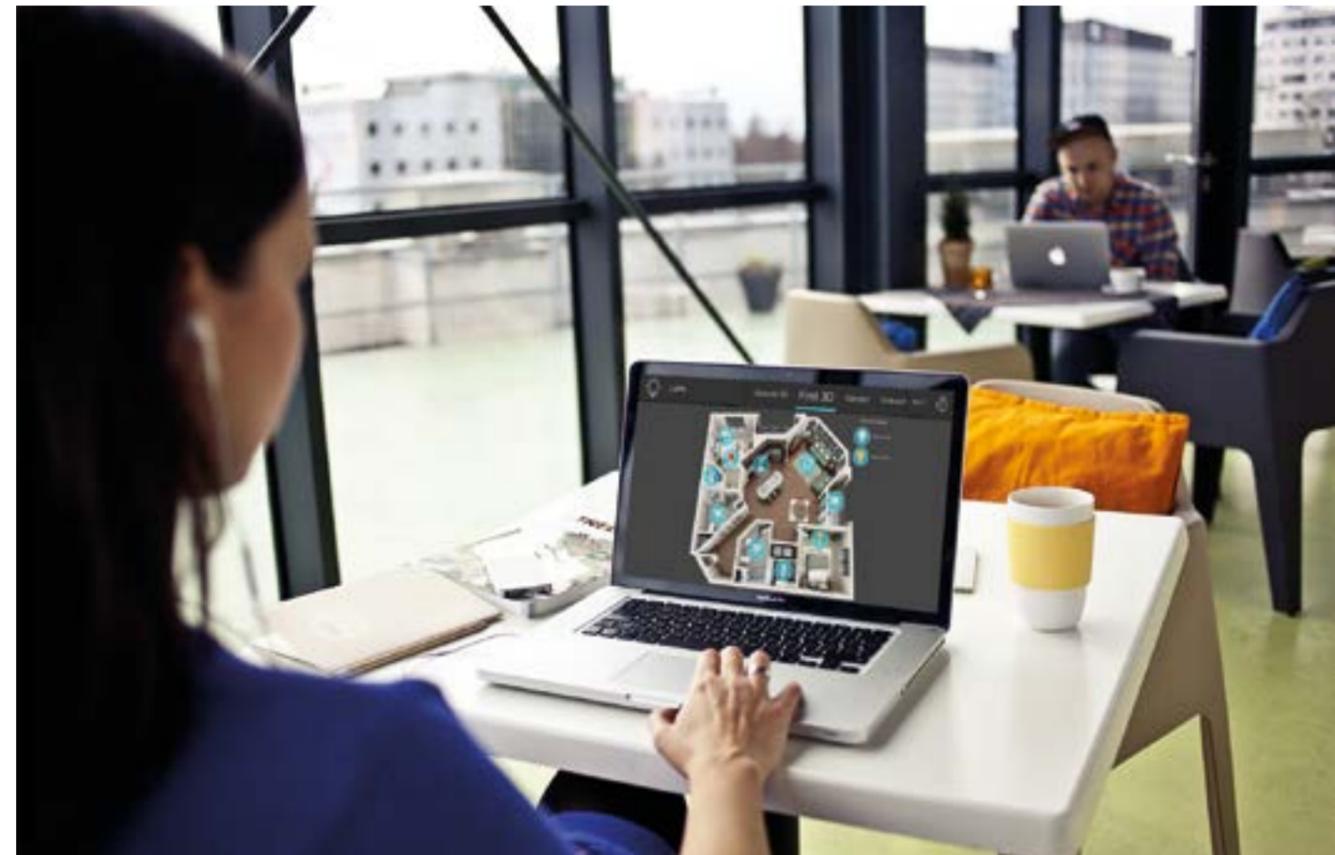
Advanced supervision
Custom graphical interfaces, using floor plans or photographs of environments as backgrounds, with widgets and icons that can be positioned freely. In addition, ThinKnx touch devices can also be used from the app and via PC.

⊕

Completing the solutions offered
Integration of systems not natively available in the Smart Home, such as video intercom, antiburgler, photovoltaic systems, and electric vehicle charging stations.

⊕

The full potential of your ZigBee devices
ThinKnx also allows the user to view and manage measurements, states and parameters generated by ZigBee devices that are not accessible via the Home Gateway app, such as voltage and current in energy meters and sensor status (motion, window opening, water, smoke).

Advantages

The ThinKnx ecosystem evolves and empowers, paving the way for a new world of wireless solutions

Wi Fi

Home Gateway - ChoruSmart or System Pura
Connection element with ThinKnx server

⊕

Full interoperability
All Smart Home features are fully integrated into the ThinKnx system, enabling interaction with third-party devices and systems through supported protocols, including: **KNX, Modbus, BACnet, Lutron, MQTT, OCPP**.

⊕

Multi-protocol integration
Full integration across all ThinKnx-integrated devices, including ZigBee. For example:

- A ZigBee command can activate KNX actuators or actions on other systems (e.g.: antiburgler activation).
- Conversely, commands from other protocols or systems can control ZigBee actuators.

⊕

Configuration and supervision
All ThinKnx Clients and servers are configured with a single configurator and supervision is possible from both smartphones and tablets and PCs*:

- **ThinKnx Configurator** for setting up.
- **ThinKnx Up app** (smartphone and tablet) and **ThinKnx Up Client** (PC) for supervision.

*The first stage of configuration is performed through the ThinKnx app, before moving on to the ThinKnx configurator. Alternatively, for those already familiar with Smart Home device configuration, the first step can be carried out via the Home Gateway app.

EGO SMART: the smart wireless plate enhances the ThinKnx ecosystem

EGO SMART transforms the traditional plate into an advanced device, integrating interactive features in addition to aesthetics. While maintaining the size and design of a traditional GEWISS plate, EGO SMART incorporates an RGB LED perimeter lighting system and integrated graphic display, making it an active element in managing and communicating information within the home environment.
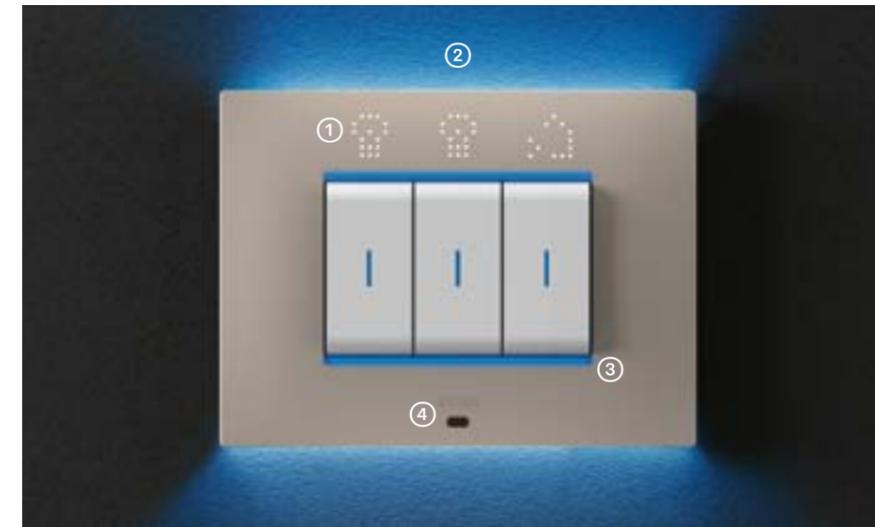
① Display with dynamic icons and scrolling text messages

② External LED illumination

③ Internal LED illumination

④ Proximity sensor

The display is dynamic: text messages scroll on the plate and the icons change shape to indicate the different commands activated. The edges are illuminated with a coloured light strip: each colour indicates something different. By combining design and technology, the user can control home or office at a glance.

⊕

SAFETY: alarm alerts
- Water leaks
- Gas and smoke sensors
- Exceeding of humidity levels

⊕

MONITORING: assistance with home management
- Welcome and goodbye scenarios
- Status of lights (on/off)
- Status of windows (open/closed)

⊕

COMFORT: display and control
- Temperature
- Humidity

⊕

SUSTAINABILITY: efficient home management
- Load status and consumption
- Excessive consumption alerts and load control
- Notification of energy produced by photovoltaic system and delivered to the grid (useful to maximise self-consumption)

⊕

SHIFT FEATURE: more features in less space
- Doubles the functions of connected devices installed in the plate

Integration for complete solutions

ThinKnx is a multi-protocol, multi-platform supervisory platform designed for advanced home automation and building management. In addition to controlling more complex automations, it enables the integration of a wide range of devices and systems into a single ecosystem by:

- **Broad compatibility with communication protocols**: ThinKnx supports major protocols used in the sector, ensuring maximum interoperability between systems.
- **Direct integration with GEWISS and third-party systems**: with support for proprietary protocols, many third-party systems can be integrated, covering different application areas. This includes all GEWISS solutions available in Building, Installation, Energy, Mobility and Lighting Business Units.
- **Integration with IoT Platforms:** Amazon Alexa, Apple HomeKit, and IFTTT.

Supported protocols

Standard protocols for managing automation functions:

KNX | Modbus | Zwave

Standard protocols for IoT device management:

Mqtt | API

Protocol for integration with BMS systems:

BACnet

Standard protocol for electric vehicle charging station integration:

Ocpp

Proprietary protocols for integrating other home & building automation solutions:

Lutron | MyHome

Integration with GEWISS systems

Building

- Home&Building Pro (KNX devices)
- Smart Home (ZigBee devices)
- Wiring devices ranges
- Data and multiservice network infrastructure

Installation

- Distribution boards
- Domo Center
- Building wiring infrastructure

Energy

- Restart Autotest
- Energy meters
- Network analysers
- Protection devices
- Switchboards

Mobility

- Electric vehicle charging stations
- Turrets for piers and campsites

Lighting

- Ordinary lighting equipment (traditional, Dali, Dmx)
- Centralised Beghelli emergency lighting equipments and systems

Integration with third-party systems

This section describes third-party systems that can be integrated into ThinKnx. For a complete and up-to-date list of systems compatible with integration and controllable functions, please refer to the documentation on the website. Note: manufacturers of systems compatible with integration may make changes without prior notice that could affect their integration.

Integration of HVAC systems

- Brands compatible with integration: Daikin, Mitsubishi, Airzone, RDZ, CoolMaster
- Controllable functions for single split VRV/VRF systems:
    - Temperature setpoint
    - Operating mode: cooling, heating, automatic
    - Ventilation speed
    - Horizontal "louvre" movement: yes/no
    - Vertical "louvre" movement: yes/no
    - Fault display

Integration of intrusion detection systems

- Brands compatible with integration: Bentel, Elkron, EL.MO., IESS, Honeywell, Inim, Paradox, Tecnoalarm, Urmet
- Controllable functions:
    - Complete antiburglar and individual zones activation/deactivation
    - Alarm detection notification
    - Single status of all sensors (for possible representation on supervision pages)

Integration of video intercom systems

- Brands compatible with integration: 2N, Akuvox, Comelit, Fermax, DoorBird, Mobotix
- Controllable functions:
    - Respond to calls from external stations, door and driveway opening
    - Intercom calls to other apartments
    - View images from external stations (even outside of a call)
    - From touchscreen (Envision, K2, Piccolo)
    - From app and PC locally

Electric vehicle charging station integration via OCPP protocol

- Brands compatible with integration: all those supporting the standard OCPP protocol, including GEWISS charging stations.
- Controllable functions:
    - Station status: charging and consumption
    - Start/Stop charge command
    - Maximum power setting that can be used by the station

Integration with solar production systems

- Brands compatible with integration: Solar Edge, Sma, Fronius, and all those communicating via Modbus
- Controllable functions:
    - Display and graphics: energy produced, consumed and delivered to the grid
    - Battery charge status view
    - Inverter operation status display

Integration with audio diffusion entertainment systems

- Brands compatible with integration:
    - Direct integration: Sonos, Denon, Tutondo, Onkyo, UPnP compatible devices
    - IR Integration: all audio and video systems that can be controlled by IR remote control, using 'IR Trans' transmitters
- Controllable functions for each individual environment/zone:
    - Selection of source to be played
    - Volume
    - Integration into "home" scenarios
    - In the case of audio/video devices integrated with IR (IR Trans), all functions controllable with the remote control supplied with the devices can be controlled.

Integration with voice assistants

- Voice assistants compatible with integration: Amazon/Alexa, Apple/Siri
- Voice-command controllable functions:
    - Light control: on/off, dimming
    - Shutter control: up/down
    - Running scenarios

Integration with Philips HUE system

- Integrating control of all managed lighting fixtures through the Philips HUE panel
- Controllable functions:
    - Control: on/off, dimming, colour and colour temperature
    - Running scenarios

Integration with LUTRON and MyHome systems

- Integration of control of all Lutron and MyHome home & building automation system actuators and controls.
- Controllable functions:
    - The main Lutron and MyHome functions can be controlled by ThinKnx
    - Through ThinKnx, Lutron and MyHome actuators can be controlled by commands from other protocols, and Lutron and MyHome commands can control actuators in other protocols

Integration of VELUX skylights

- Integration of VELUX skylight control.
- Controllable functions:
    - Opening/closing
    - Positioning

Supervision and user experience

Supervising and controlling all system features can be easily and effectively managed via PC, apps or voice commands, providing an intuitive and flexible user experience.

Trend Line series server (supervision via app)

Trend Line, Piccolo and K2 series servers can be controlled using:

- **smartphones and tablets,** via the Trend ThinKnx app, available for iOS and Android

The graphical interface is based on graphical widgets and is very intuitive and easy to configure. Ideal solution for small installations.

ThinKnx Trend app

Example of graphic widget interface

Pro Line series server (supervision via PC and app)

The Pro Line, Micro, Compact, Envision and Rack series servers can be controlled by:

- **smartphones and tablets**, via the ThinKnx Up app, available for iOS and Android
- **PC** via ThinKnx Up client, available for Windows and Mac.

The graphical interface can be structured using pre-defined widgets (like the Trend Line series), or fully customisable: the user can insert background images and freely position widgets and command icons on the screen.
Ideal solution for large and complex installations.

ThinKnx Up app

ThinKnx Up Client

Custom interface example

Voice commands

All servers, both Trend Line and Pro Line versions, can be controlled with voice commands using Alexa and Siri voice assistants.

Multi-site supervision

Pro Line servers are designed to manage complex and distributed facilities across multiple geographical locations, such as retail chains, supermarkets or municipal buildings (gyms, schools, etc.). Multi-site supervision allows not only centralised monitoring of each system, but also in-depth performance analysis, such as energy consumption. This approach allows the user to compare different sites, identify any abnormalities, and optimise facility management.

For each site, energy consumption related to lighting and air conditioning, alarm status and safety systems can be monitored in detail. Additionally, the user can set up periodic report generation in Excel, HTML, and graphic formats, which are useful for deeper offline analysis.

Configuration

All ThinKnx servers and clients are configured through a single tool: the **ThinKnx Up Configurator**, available for Windows PCs and downloadable from the official ThinKnx site. This intuitive and powerful software allows the user to manage the graphical formats available for each server and configure all protocols and integrations with supported third-party systems.

ThinKnx Up configurator

Advantages of the ThinKnx platform

Scalability and flexibility

A complete range of scalable devices, features and integrations designed to build systems of any size and complexity. The flexibility of the system offers the possibility to meet the demands of even the most demanding customers.

Complete solutions

A flexible platform that offers integrated solutions for managing all major applications: lighting, air conditioning, energy, security and entertainment. Ideal for major applications such as residences, offices, schools, shops and shopping centres.

Fully integrated solutions

With support for multiple protocols and integration with third-party systems, the user can manage systems composed of devices from different manufacturers and types in a fully interoperable and integrated way.

Simple configuration

A single configurator for all ThinKnx devices, easy to use and intuitive.

Reliability and security

A robust and secure platform, ideal for even the most critical automations. Its reliability is confirmed by more than 18 years of market presence, more than 20,000 installations in more than 80 countries and more than 150,000 active daily sessions.

Aesthetics and design

The touch devices and graphical interface offer a modern and sleek design that can be easily adapted to any architectural context and can be seamlessly integrated into different application areas.

Technical support and assistance

A high-quality, fast and effective service designed to meet the needs of all operators: from simple system builders to those managing large-scale, complex solutions.

Advantages of GEWISS integrated solutions

Total integration of GEWISS solutions

With the capacity to communicate with heterogeneous protocols and systems, ThinKnx allows the users to fully integrate the offering of the different GEWISS catalogues - Building, Energy, Lighting, Mobility and Installation - to provide unique and cross-sectional solutions in all key application areas: residential, office, retail, hospitality, industrial and others. This approach allows GEWISS to position itself as the only provider of integrated solutions, with real advantages throughout the system lifecycle from sales to maintenance.

Integrated and complete solutions

Ability to offer complete and fully integrated solutions for different application areas, based on GEWISS systems and, where necessary, enriched by third-party technologies.

Specifications

The ability to offer complete and integrated solutions facilitates the development of specifications based on the GEWISS offering, which are difficult to replace, but also to intercept and acquire specifications originally built on competing solutions.

Economic competitiveness

GEWISS integrated solutions allow users to expand the number of products involved, thereby increasing the capacity to make more effective and competitive economic proposals.

Guaranteed long-term solutions

As GEWISS is the sole provider of these solutions, the customer benefits from continuity over time: updates, maintenance and functionality are always guaranteed, for solutions that are constantly operational as the technology evolves.

Technical support and assistance

Thanks to an integrated approach, GEWISS support can manage the entire solution, ensuring rapid and effective interventions. This eliminates the challenges of multi-brand solutions, where fragmentation of responsibilities can slow problem solving.

Use cases

RESIDENTIAL
- Villas

OFFICE
- Offices

HOSPITALITY
- Student accommodation

RETAIL
- Shopping centres

Villas

Residential solutions are designed to manage all the features of your home in an integrated manner, offering comfort, safety, energy efficiency and ease of use. It is critical that they are able to integrate IoT devices, which are increasingly popular in home environments. In addition, they must be scalable to fit not only apartments, but also larger indoor spaces and outdoor areas such as gardens and pools. They must include advanced features for complex property management, with a focus on safety and energy optimisation.

Functions performed

- Monochrome and colour light control (LED strips or spotlights) for architectural effects.
- Blinds, curtains and skylight control.
- Scenarios with coordinated controls of lights, blinds and climate. Ability to record scenarios (sequence of commands) directly and independently by the user.
- Multi-zone climate control for heating/cooling, with radiant floor and split systems. With fan-coil hydronic system or split VRV/VRF system.
- Outdoor area management for lighting control and automatic garden irrigation.
- Monitoring and historical display of electricity and water consumption, control of electrical loads (to avoid meter disconnection).
- Video intercom system integration.
- Security with anti-theft and video surveillance.
- Multiroom audio control for different rooms/zones/floors.
- Management of all functions via smartphones, tablets and voice assistants.

Key functions

⊕
GEWISS Smart Home integration
Wireless solution based on ZigBee protocol, ideal for both new constructions and renovations. Allows for the proposal of cost-effective solutions and addresses situations where cable routing is not possible.

⊕
Smart energy management
Coordination between consumption and energy production, with control of appliances, household utilities, charging stations for electric vehicles and photovoltaic systems.

⊕
Integration with Philips HUE
Ability to create customised lighting scenarios with dramatic scenic and architectural effects.

⊕
VELUX skylight control
Automation for closure in rain or wind for added protection and comfort.

⊕
Controlled and flexible access
Management of entry via permanent or temporary PINs (e.g.: for cleaning or technical personnel), with local or remote control via the app. Ideal for deliveries, visits by family or friends.

Recommended GEWISS Products

Building
- To manage all functions and respond to the video intercom → ThinKnx **Envision 7"** or **Envision 10"** (at the entrance), **Piccolo 4"** and **K2 5.5"** touch display (on individual floors).

Energy
- For the safety of the electrical system and to ensure continuity of service → **ReStart**.
- To manage and protect photovoltaic systems → **90 PV String boards**.

Mobility
- Safe and intelligent AC charging for efficient use of available energy → **I-CON EVO charging wallbox.**

Lighting
- Outdoor architectural lighting → **Mimik**.
- Indoor and outdoor colour spotlights → **TYK+**.
- Flush-mounted and surface-mounted step lights → **Insert+**.

Installation
- Built-in system column for distribution, home automation and data → **Domo Center**.
- Recessed system for lightweight walls and plasterboard→ **Green Wall.**
- Pliable protective conduit systems → **FK.**

Offices

Smart solutions for office environments promote employee well-being and improve productivity by automatically adjusting temperature, humidity and lighting to ensure optimal comfort conditions. Integration with the Building Management System (BMS) makes them ideal for large surfaces, multi-tenant offices and headquarters.

Functions performed

- Light control based on presence and natural light.
- Centralised emergency lighting control with automated test management and automatic test execution report generation.
- Solar shields and curtain control based on natural light to improve comfort and reduce outward heat loss.
- Multi-zone climate control for heating/cooling, with radiant floor, with fan-coil hydronic system or with split VRV/VRF system.
- Monitoring and historical display of electrical consumption.
- Advanced consumption management, with photovoltaic production control (self-consumption and transfer to the grid) and electric car charging.
- Security management for anti-theft system integration and video surveillance.
- Area/office access control via Pin, QR code with app.
- Multiroom audio control for distribution across offices/meeting rooms.
- Automatic periodic consumption reports for use by the system manager/maintainer.
- Management of all functions from reception/secretary via PC and from employees via smartphone or their work PC.
- ThinKnx, together with the control devices, which must be chosen appropriately by the designer, allows the highest performance levels required by UNI EN ISO 52120-1 (formerly UNI EN 15232) and UNI EN 15193

Key functions

⊕

Advanced energy efficiency
Maximises natural light usage and presence-based control for lighting, automatically making adjustments depending on presence for climate control.

⊕

Environmental comfort and productivity
Smart management of temperature, humidity and light colour temperature, synchronised with the circadian cycle to reproduce the natural pattern of sunlight and promote well-being.

⊕

Meeting room management
Access via PIN or QR code via app, and custom scenario activation (lighting, curtains, audio and projection) to adapt the space to different needs.

⊕

Integration with BMS
Effective coordination between systems and transmission of data to the Building Management System for monitoring consumption and comfort conditions.

Recommended GEWISS Products

Building
- To manage and control the building → ThinKnx **Compact DIN** or **Micro DIN** servers, **Rack** for larger and more complex installations.
- To access meeting rooms with Pin or QR code and inside to control all room functions → ThinKnx **Piccolo 4"** Touch Display.
- To access meeting rooms or reserved areas with Pin → **KNX Touch buttons**.

Energy
- Metal electrical boards for power distribution → **CVX series**.
- To monitor electrical consumption → MID-**certified three-phase** energy meters.

Mobility
- Efficient and connected AC charging with dynamic load balancing → **I-CON EVO charging wallbox.**
- Dual socket solutions for simultaneous charging of multiple vehicles, with smart management and robust design → **I-ON EVO charging stations.**
- Fast, compact DC charging, ideal for reducing downtime at pit stops → **I-FAST charging stations.**

Lighting
- Suspended ceiling light with adjustable colour temperature → **SL720**.
- Built-in panel → **Plato 600**.
- Centralised Beghelli emergency system with wireless autonomous emergency devices, with control unit → **SD-LGFM**.

Installation
- Recessed system for lightweight walls and plasterboard → **Green Wall**.
- Recessed system for masonry walls → **40CDKi, 40CDi, 48PTDIN, 24SC.**
- Pliable protective conduit systems → **FK.**

Student accommodation

Intelligent solutions for university residences ensure complete control of facilities in all areas of the building, with a particular focus on the comfort and safety of student rooms. Efficient management of common spaces - such as recreational and meeting rooms - and dedicated services is also critical. Integration with the BMS, often managed by external companies, enables centralised maintenance and continuous monitoring of environmental conditions and consumption.

Functions performed

- Lights control in common areas according to presence and natural light.
- Centralised emergency lighting control with automated test management and test execution report generation.
- Multi-zone climate control for heating/cooling of common areas and student rooms, with radiant floor, fan-coil hydronic system, or split VRV/VRF system.
- Real-time monitoring and display of electricity and water usage history, with details for rooms assigned to students.
- Management of electric vehicle charging stations, with control of operating status and configuration of maximum power usable for charging according to energy availability.
- Camera display for the most security-critical areas.
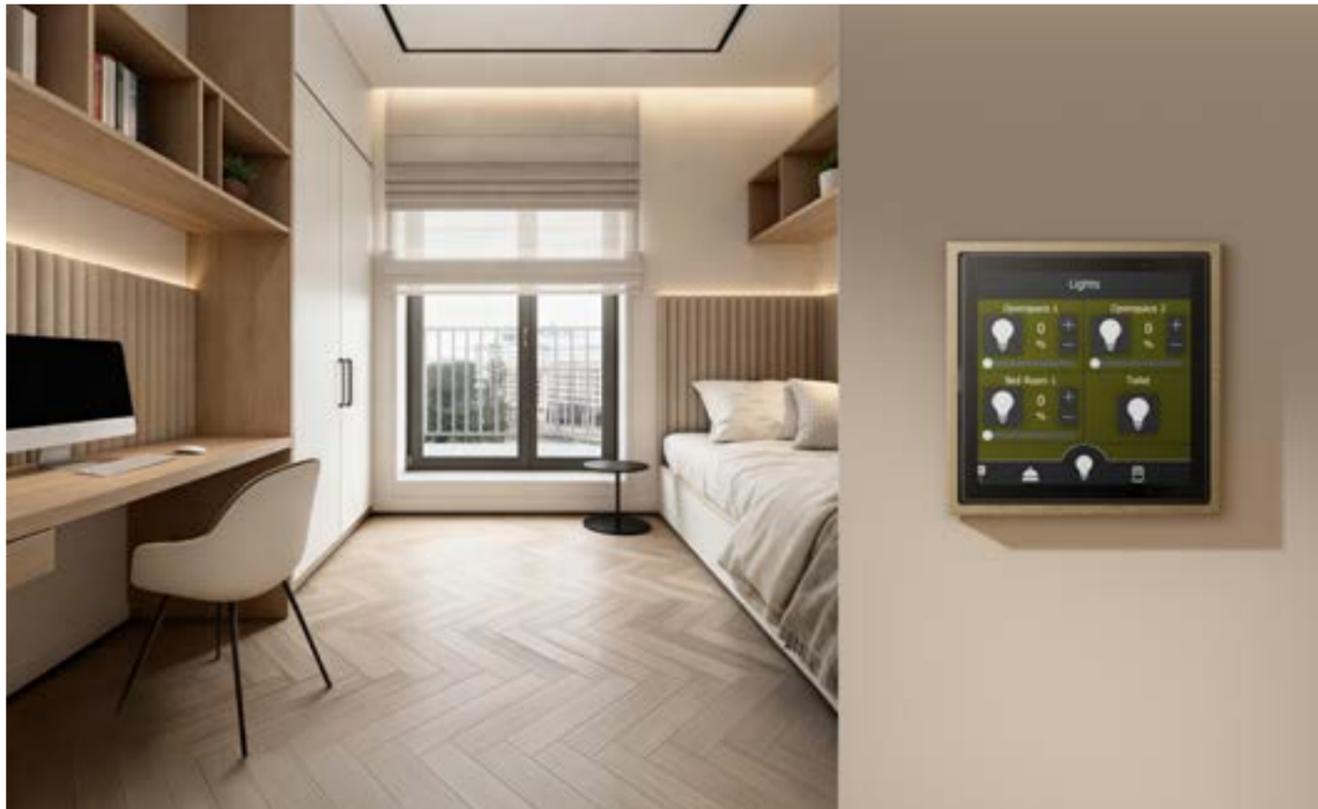
Key functions

⊕

Access to rooms and common areas including parking areas
- Using PIN with numeric keypad.
- Using QR code with app (QR code can be displayed on Touch or printed and posted at the entrance as a cheaper solution).
- Using car license plate recognition (for car park access).

⊕

Check-in when reception unattended
- Possible using PIN and/or QR code and app, depending on the method used, the system automatically sends the guest an email with all the instructions to follow.

⊕

Common space management (recreational rooms, meeting rooms, etc.)
- The system allows the user to manage bookings and then authorise access to those who have booked only.

⊕

Services management (eBike rental, traditional bicycles, etc.)
- In addition to managing reservations and authorisation for use to those who have booked the service, the system provides the capability to manage a "Wallet" associated with users for paid services (invoicing is not managed).

⊕

Student-led management of functions via smartphone
- Control of all functions of the rooms assigned to them (access, lights, climate, blinds, scenarios).
- Access to spaces they are authorised to use: public areas and room.
- Use of the services they are authorised to use.

⊕

Management of the entire student accommodation
- By PC from reception or remotely when reception is not manned, all functions and the status of all systems can be checked: lights on, energy consumption, alarm signals, etc.

⊕

Integration with BMS
- The BMS is typically used by external maintenance companies. ThinKnx makes available to the BMS all data related to energy consumption and use of the systems, reports of anomalies and alarms (central heating system malfunctions, central heating power supply tripping, elevators, etc.).

Recommended GEWISS Products

Building
- To manage and control functions of the student accommodation → ThinKnx Server **Rack** or **Compact DIN**.
- To access rooms or public areas with PIN or QR code → Piccolo 4" **Touch display**.
- To access rooms or restricted areas with PIN → **KNX touch push-button panels**.

Energy
- Cabinets and panels for power distribution → **QDX series**.
- For the protection of low-voltage electrical circuits → **MSX moulded case switches**.

Mobility
- AC solutions with access control, remote monitoring and simple user experience → **I-CON EVO charging wallbox.**
- Dual-socket AC charging, designed for simultaneous use in shared spaces → **I-ON EVO charging stations.**
- Fast, compact DC charging, ideal for service vehicles or shared use → **I-FAST charging stations.**

Lighting
- Post head for outdoor parking area lighting → **HEDO+.**
- Ceiling light for common areas → **FL ROUND.**
- Centralised Beghelli emergency system with wireless autonomous emergency devices, with control unit → **SD-LGFM.**

Installation
- Recessed system for lightweight walls and plasterboard → **Green Wall.**
- Recessed system for masonry walls → **40CDKi, 40CDi, 48PTDIN, 24SC.**
- Pliable protective conduit systems→ **FK.**

Shopping centres

In a shopping centre, an automation system must coordinate complex and highly energy-consuming installations, ensuring visitor comfort, security, and optimisation of running costs.
There is always a BMS in large shopping centres to manage all facilities. In these cases, ThinKnx (one or more servers) can be used by the BMS to coordinate and capture data from different systems.

Functions performed

- Control of ordinary indoor lighting for areas frequented by visitors and staff, depending on presence and natural light.
- Lighting control of exterior and interior areas not frequented by visitors and staff (windows and exhibitions), with time programming or with an astronomical clock (thus avoiding the use of twilight sensors).
- Centralised emergency lighting control with automated test management and automatic test execution report generation.
- HVAC system control: for climate and ventilation with time and seasonal programming.
- Access control for reserved areas and offices: with app or numeric PIN.
- Camera display for the most security-critical areas.
- Management of all functions via PC from the management desk of the shopping centre.
- ThinKnx, together with the control devices, which must be chosen appropriately by the designer, allows the highest performance levels required by UNI EN ISO 52120-1 (formerly UNI EN 15232) and UNI EN 15193

Key functions

⊕
Energy management and consumption monitoring
- Measure consumption of all major lines with status detection (open, closed and tripped).
- Alarm notifications in the event of tripped lines related to critical loads (e.g.: refrigerators, heat control units, etc.).
- Automatic periodic consumption reports for use by the system manager/maintainer.

⊕
Electric vehicle charging station management
- Control of operating status and configuration of maximum power usable for charging according to energy availability.

⊕
Integration with BMS
- Execution of commands received from the BMS, availability of data related to consumption and use of the systems, for the BMS, as well as reports of anomalies and alarms (heating control unit anomalies, elevator, heating control unit power line trips, etc.).

⊕
Multi-site management
In the case of medium-sized shopping centres distributed throughout the territory, where the use of a BMS is not envisaged, ThinKnx offers the possibility, via the Cloud:
- Supervise the operating status of all facilities.
- Monitor consumption, view historical data and compare different facilities to detect abnormal energy consumption situations (which could be caused by malfunctions) or management "best practices".
- Monitor comfort parameters (climate, humidity, etc.).

Recommended GEWISS Products

Building
- For managing the entire building or for sub-areas → ThinKnx **Rack** or **Compact DIN server.**
- To allow staff to control the systems (lights, climate, etc.) in the various areas → Piccolo 4" **or** K2 5.5" touch display.

Energy
- To control the emergency opening of electrical circuits and to remotely detect their operating state → **90AM trip coils and auxiliary contacts**.
- To monitor the quality of electrical magnitudes (voltage, current, frequency, harmonics) → **90AM network analysers**.

Mobility
- Dual socket AC charging stations designed for reliability and continuity of service → **I-ON EVO charging stations.**
- Fast DC charging, ideal for environments with high vehicle turnover → **I-FAST charging stations.**

Lighting
- Watertight ceiling lights → **Smart3.**
- Recesses for general lighting → **DL round / square.**
- Professional floodlights for lighting outdoor areas → **GUELL.**
- Centralised Beghelli emergency system with centralised battery and devices connected via powerline communication, with control unit → **LG230**.

Installation
- Universal wall-mounted board system for distribution and automation → **46QP.**
- Technopolymer, wall-mounted, watertight junction box system → **44CE.**
- Combined board system for terminal power distribution → **68Q-DIN.**

New KNX devices

Enhanced security with KNX Secure

Advanced KNX network protection against external attacks (via IP backbone) and internal threats, thanks to dedicated system security devices. While not yet mandatory by law, the importance of these devices is such that many designers consider their adoption an essential practice in the design phase.

Energy efficiency

Optimising energy consumption through smart lighting control in environments such as warehouses, industrial plants, logistics centres and shopping centres.

Evolved architectural lighting

Dynamic management of coloured light with DMX devices to create evocative scenarios inside buildings and "wall washing" effects on external walls, ideal for enhancing brands and corporate offices.

Smart environmental wellbeing

Smart control of lighting, temperature, humidity and air quality to create comfortable, healthy and sustainable spaces.

KNX network management

KNX Line/field coupler Secure
Line coupler used for the logical and physical connection of two KNX lines, both TP-type, over KNX cable. Both lines can be KNX Secure, or the main line can be KNX Secure and the secondary line non-secure (operating as a Security Proxy).
Code: GW A9 708.
Dimensions and installation: 1 DIN rail module.

KNX/IP Router Secure
Router for logical and physical connection of a KNX TP line, over KNX cable, to a KNX backbone over IP/LAN. Both lines can be KNX Secure, or the IP backbone can be KNX Secure and the secondary KNX line can be non-secure. It can also function as an IP/KNX Secure interface and manage up to 8 simultaneous connections.
Code: GW A9 710.
Dimensions and installation: 1 DIN rail module.

KNX/IP Interface Secure
Interface for creating access to a KNX network from an IP connection, capable of managing up to 8 simultaneous connections.
Code: GW A9 709.
Dimensions and installation: 1 DIN rail module.

KNX network accessories

KNX High Power 1280mA
High-efficiency power supply with maximum supply current of 1280mA, with auxiliary power output. Completes the range of KNX power supplies, which already includes 320mA and 640mA models.
Code: GW A9 703.
Dimensions and installation: 4 DIN modules.

KNX/USB-C interface
Interface capable of supporting ''KNX long frames'', which can be used for both KNX Secure and non-Secure networks. Equipped with USB type-C connector.
Code: GW 90 706 C
Dimensions and installation: 1 DIN module.

New
KNX devices

Lighting control

KNX 4-channel CVD dimmer Secure
Dimmer for controlling 4 independent channels (max. 3A per channel), ideal for monochrome or colour LED (RGB-W) management. Supports the KNX Secure protocol and allows the execution of ON-OFF commands, adjustment and setting of the brightness level for each individual channel and for the 4 channels simultaneously, the selection of status feedback or brightness value, scenario management, timed sequences, priority commands, logic functions, and the enabling/disabling of local commands, even from the KNX bus.
Code: GW A9 326.
Dimensions and installation: 4 DIN modules.
Availability: until current stock of GW90764 is exhausted.

4-channel booster for CVD dimmers
Device that allows an increase in piloting capacity of up to 16A per channel, extending the performance of CVD dimmers (GWA9326 and GW90764). It is added to the current range as a complement to booster GW90766, which offers 4 channels of 10A each.
Code: GW 90 768.
Dimensions and installation: 4 DIN modules.

KNX Universal 1x500VA and 2x300VA 230Vac dimmers Secure
Universal 1- and 2-channel dimmers for 230Vac loads. Support the KNX Secure protocol and allow the execution of ON-OFF commands, adjustment and setting of the brightness level, the selection of status feedback or brightness value, the management of scenarios, priority and timed commands, logic functions and the enabling/disabling of local commands, even from the KNX bus.
Code: GW A9 321 (1-channel dimmer), GW A9 322 (2-channel dimmer).
Dimensions and installation: 4 DIN modules.
Availability: until current stocks of GWA9301 and GWA9302 are exhausted.

KNX/DMX Gateway
KNX protocol-based gateway that allows the DMX-512 system control to be integrated into a KNX network. DMX Master or Slave operation, control of up to 64 DMX dimmable channels, or up to 8 RGB-W channels. Programmable via ETS.
Code: GW A9 721.
Dimensions and installation: 1 DIN module.

KNX Secure/DALI2 Gateway
Gateway based on KNX Secure and DALI2 protocols, with 1 DALI2 line, individual addressing up to 64 lamps and 16 groups. Supports the following Data Types: DT2, DT3, DT4, DT6, DT7 and DT8. DT8 for RGB, RGB-W, and colour temperature control. Integrated DALI power supply. It can operate as a DALI2 Multimaster and DALI2 sensors and controls can be connected. Completes the current range by partnering with Gateway GW90873.
Code: GW A9 726.
Dimensions and installation: 4 DIN modules.
Availability: Q2/26.

KNX presence sensor for high ceilings
KNX presence sensor for high ceilings (up to 16 m), with PIR technology and IP54 protection rating. Presence and brightness detection, constant brightness control with up to 5 channels with independent set point, logic functions (12 blocks), virtual pocket logic, colour temperature control to reproduce circadian cycle. 3 digital inputs for clean contacts (for traditional buttons and sensors) with On/Off control, blinds, dimmers, logic functions. Completes the current range by partnering with the GWA9531A (low ceiling) presence sensor.
Code: GW A9 534.
Installation: ceiling, recessed, or wall-mounting (with accessory GWA9535).

New
KNX devices

Control of inputs and outputs

KNX 4-channel contact interface Secure

Contact interface equipped with 4 input channels and 4 output channels for LEDs, for connecting and managing traditional buttons and sensors from KNX. Each channel can manage On/Off command sending with front management, switching commands and sequences, short/long contact closure management, timed commands, priority commands, commands for managing blinds (single or double push button), dimmers (single or double push button), scenarios (storage and activation), pulse counting, temperature measurement acquisition via NTC sensor.
Code: GW A9 181.
Installation: recessed.
Availability: until current stock of GW90721A is exhausted.

KNX 4-channel On/Off actuator Secure

Actuator for managing 4 outputs up to 16AX at 230Vac. Each channel can be commanded On/Off, in a timed manner, in scenarios, with priority commands and override. For each channel, the number of manoeuvres and the closing time are counted. Ability to enable/ disable local commands from KNX buses as well.
Code: GW A9 151.
Dimensions and installation: 4 DIN modules.

Air quality control

KNX Air quality multisensor Secure

Sensor capable of measuring CO_2, relative humidity, temperature, pressure. Temperature control algorithm with the ability to change setpoint locally (e.g.: ±3°C, definable via ETS), humidity control, VAV control to regulate CO_2 level. Equipped with 4 digital inputs for potential-free contacts (for traditional buttons and sensors) with the possibility of On/Off controls, blinds, dimmers, logic functions, 1 input per NTC probe for additional temperature measurement, 3 outputs 0-10V (e.g.: can be used for control valves).
Code: GW 10 966
Installation: wall mounted.
Availability: Q2/26.

Weather control

KNX Weather Station Secure

Outdoor multi-sensor weather station, with measurements of brightness, rain, wind and temperature, GPS to detect position in order to calculate the position of the sun, logic functions, control of the blind/sunshade position according to the position of the sun (new function not supported by the current GW90800 Weather Station, which will be phased out).
Code: GW 90 888.
Installation: pole mounted.
Availability: Q2/26.

NOTES

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