# JOURNAL

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## Editorial

*Heinz Lux,*
*Director KNX Association*

### KNX city makes visions come true

**"Vision is the art of seeing things invisible" Jonathan Swift once stated.**
One of these visions is to increase worldwide action for the protection of climate and environment. Climate protection is one of the most urgent and also most interesting tasks facing the international community. The climate-related goals of many countries include plans to to significantly and sustainably reduce carbon emissions.
As long as they are not broken down into concrete resolutions and actions they will remain what they are now: a vision. Reducing energy use is a vision too. A system that offers great potential to put this vision into practice is KNX. It allows to save energy by distributing and using it smartly in order to prevent future energy problems. Energy management is one solution to the problem. This applies not only to public infrastructure, to trade and industry but also to private households. KNX offers strong possibilities for them. Energy efficiency is not possible without thinking of the system as a whole. Today, a development is visible from Smart Buildings in connection with Smart Metering via Smart Grids to Smart cities.
This is the foundation for KNX City – a city with a maximum of energy efficiency. In KNX City, the energy management of KNX buildings is seamlessly integrated into the city's energy management. Electricity supply for cities of the future needs to be secure – even at times when peak loads are required and supply from renewable sources is low. Buildings will need to be flexible. KNX offers this kind of flexibility even today. KNX City concentrates many intelligent solutions in one place that would have been called visions just a couple of years ago and that are now a part of our everyday lives. With its Smart Metering and Smart Grid solutions, KNX City also supplies answers to questions concerning intelligent use and distribution of energy.
Albert Einstein once said "our knowledge is limited but not our imagination". It is imagination that allows us to see uses for KNX that were previously undreamed of – even today within the KNX City. Regarding this, KNX City is not a vision, but it shows how visions can be put into practice while creating ideas for tomorrow.
People who are looking for solutions instead of visions are invited to KNX City.

## Editorial


1 Editorial
2 KNX city


## KNX Projects


4 Shipbuilding
5 Energy Efficiency in Sports Halls
6 Ambient Assisted Living
7 Elevator Control
8 Fire Alarm Systems
9 Social Networks
10 Audio & Video Control
11 Control Center
12 Energy Efficiency in Industrial Buildings
13 High End Residential Buildings
14 Voice Control
15 Solar Shading Control
16 Gateways
17 Telephone Control
18 Event Technology
19 Energy Efficiency in Residiential Buildings


## KNX System


20 KNX RF – more robust
thanks to multi-channel extension


## KNX Tools


21 New apps make ETS4 even more versatile
*Extra functions and more flexibility: customised ETS with new apps*
23 ETS Apps - Overview


## KNX Members


27 New Members
33 New Products


## KNX Partners


51 National Groups
60 KNX Trainings Centers
66 KNX Scientific Partners
68 KNX Userclubs / KNX Professionals


## KNX Out & About


71 KNX at International Conferences/Fairs
80 Imprint

# KNX city

***Urbanisation, scarce resources and global warming present enormous challenges for cities in the years to come. The world's cities account for two thirds of energy consumption, 60 per cent of total water consumption and 70 per cent of emitted greenhouse gases. On top of that, cities continue to grow. For example, in 2010, 82 per cent of US inhabitants lived in cities; by 2050 this will increase to 90 per cent. In China, the twelfth five-year plan states that the urban population will increase from 47.5 percent to 51.5 per cent by 2015. In Europe too, urbanisation is on the increase.***
***In order to achieve sustainable urban development and deal with the challenges, cities have to improve their infrastructure to become more environmentally friendly, improve quality of life and reduce costs. Sustainable buildings are an essential prerequisite for sustainable cities. But that on its own is not enough. Interdisciplinary solutions are needed to equally deal with buildings, mobility, energy generation, infrastructure and communication. In other words, a comprehensive systems approach.***

## KNX City is not a vision

KNX City addresses current challenges related to buildings, mobility, energy generation, infrastructure and communication, and provides appropriate KNX solutions. Internationally, these challenges can vary a great deal.
In Europe, and particularly in Germany, we are facing the so-called energy turnaround. This refers to changes in the energy sector – moving from fossil fuel generation to primarily renewable energy generation. The key challenge of the energy turnaround is to ensure a steady supply of energy in spite of the fluctuating nature of renewable energy sources. Traditionally, energy supply has been adjusted to the demand; in future, it will also be necessary to adjust the demand or load to the fluctuating nature of energy generation. In future, many energy suppliers will offer time variable electricity rates in order to motivate customers to use electricity when cheap, and to not use it in case of peak demands, in order to implement indirect load management. The KNX City system provides solutions for addressing this.

*KNX means connecting buildings, mobility, infrastructure and energy generation with one common communication system: the KNX Standard*

## KNX, a systems approach in sustainable cities

Energy efficient buildings are the basis of a sustainable city. Whether residential buildings or large commercial premises, KNX offers a range of solutions for greater energy efficiency, including load management. Any load management system needs sensors and actuators. Sensors are needed to record e.g. consumption or conditions, which will then trigger the respective actuators for example to open/close electric circuits or to switch on/off equipment such as heat pumps, domestic appliances or other conventional loads. However, what is common to all current solutions is that although they can interact with each other within a building, they cannot do so with the outside world. That is about to change.
**Mobility** is becoming increasingly important and in future large parts of motorised

*KNX already offers systems solutions for buildings*

traffic will be powered by electricity. However, electric vehicles will only be environmentally viable, if charged with renewable electricity. This is not evident, as there is no provision for this in the conventional energy supply systems. Smart grids should change this. Solutions are needed where electric vehicles can be recharged from renewable energy sources, e.g. own photovoltaics (if available), or renewable energy sources from the local power network. KNX provides solutions to ensure that at home or in other buildings, electric vehicles are charged exclusively with renewable energy.

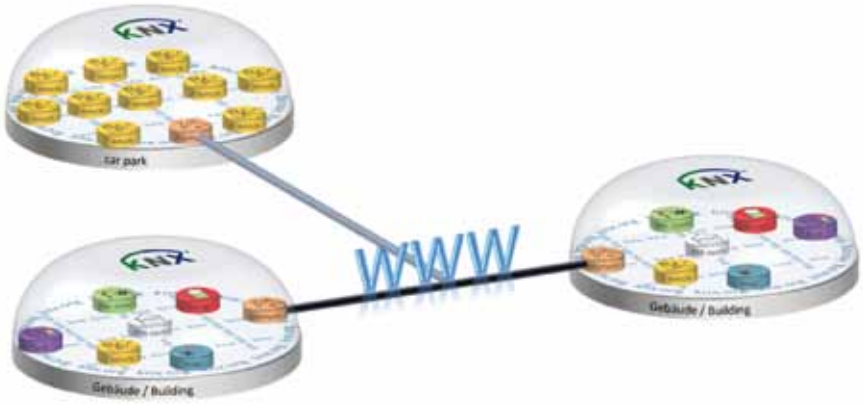
In our growing cities and especially in so-called "mega cities", large quantities of energy have to be provided within a small area. In Asia in particular, where many of these mega cities are located, it is not possible to ensure a continuous supply of electrical energy. As a consequence certain power circuits in buildings are simply switched off. This calls for new infrastructure concepts that provide a solution, if necessary based on the interaction between several buildings and the grid. Load management systems should work for several buildings. KNX City includes intelligent building services solutions such as load management, by means of which it is possible to vary a building's load/demand while maintaining the same comfort level in order to deal with the issues at hand.

**Infrastructure** is becoming an increasingly important topic. It is already clear today that there is no single solution to the challenges presented by the supply of power based on renewable energy, and decentralised energy production in particular. In this scenario, many different systems have to be coordinated to work together to form a comprehensive solution. With KNX City, KNX presents a vision of the future city, a vision of how, in future, KNX can contribute towards the interaction of buildings, mobility, energy generation, infrastructure and communication. KNX presents solutions for how these different fields can be linked together with KNX in order to be able to draw the most benefit from their interaction.

## KNX offers worldwide systems solutions for sustainable buildings

KNX City's solutions include methods for making KNX buildings more intelligent and sustainable. You can learn how KNX electricity tariff management is handled and how, thanks to KNX, more renewable energy than fossil fuel based energy can be consumed in case of time variable electricity tariffs (depending on the availability of renewable energy). You can also learn how KNX links domestic appliances, HVAC equipment and electromobility into building automation systems and thus enables unparalleled load management.

KNX Home as part of KNX City demonstrates intelligent living in a metropolis. KNX Home illustrates how smart metering, energy monitoring, electromobility, energy generation and load management / tariff management can be linked up in a residential scenario without loss of comfort.




*KNX also provides infrastructure solutions, linking up several buildings within a city, as if they were one building.*

*KNX provides interfaces to the smart grid. With methods such as tariff management, KNX can perfectly match the load / demand in buildings to the renewable energy generated for an entire area.*

# Shipbuilding

### Assignment

When it comes to comfort on passenger ships, requirements concerning technical equipment are high. Moreover, all components have to be highly reliable. This especially counts for yachts, as they are a luxury good used by an international clientele. Operating concepts that suit the different habits and expectations of these international clients are required.

### Solution

The engineering company Beyer in Neumünster is experienced in equipping ships with KNX. KNX provides a large range of components for these demanding installations. The sample installation prepared for this fair demonstrates that.

### Realisation

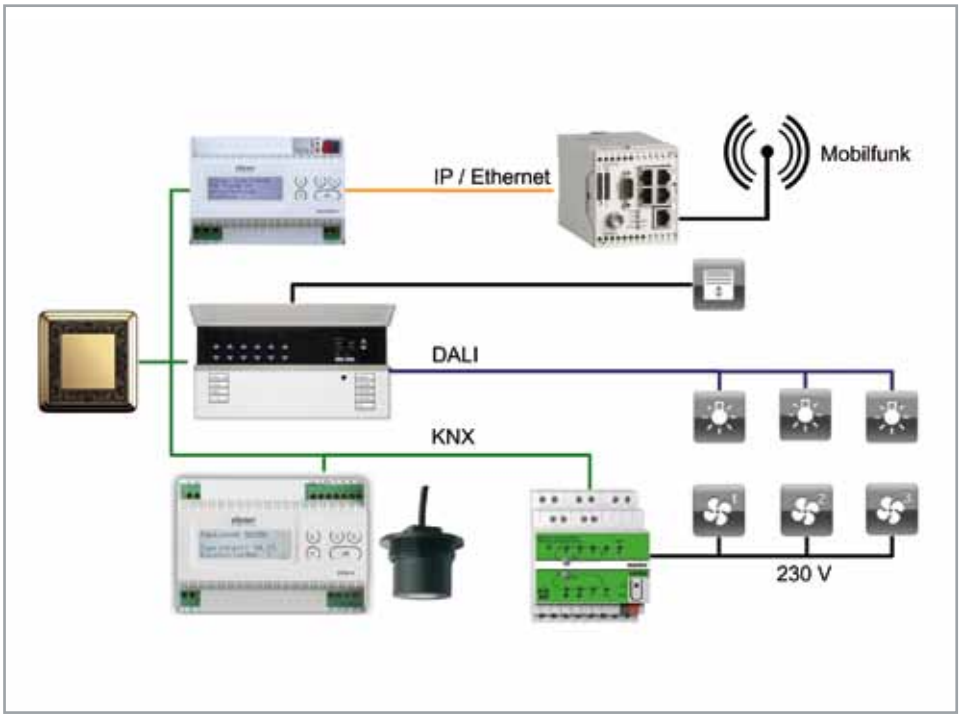
The lighting system using DALI LED lamps, is controlled and operated via a central Lutron GrafikEye unit. Via a KNX interface it also controls the blinds and sun protection. The multi-functional unit is often used in the world of lighting scenarios for the high-end market. A push button sensor with a shiny golden surface (by Gira) offers the possibility to meet very specific preferences – gold is quit popular amongst oriental customers. This push button is not only used for lighting and shading, it also contains a room temperature sensor that transmits the current temperature value to a fan coil actuator (Merten) that is connected to the ship's air conditioning system.

### Features

Additional KNX applications are available for smooth operations on board of the vessel: clean and waste water levels can be monitored permanently. An example of easy integration into a KNX system, is the use of a KNX level gauge with a tank sensor(by Elsner). A power supply with self-monitoring function and IP gateway (by Elsner) is used for remote maintenance to ensure functional reliability. A mobile router (by Insys) allows access when the ship is close to a coast or harbour.

### Advantages

- As far as design and technology are concerned, luxury vessels are comparable to high-end residential buildings. KNX allows the realisation of high-quality solutions in this field.
- Monitoring and safety functions are realised with high-quality KNX components.
- Owners can check the status of ship technology via their mobile phones.
- Remote maintenance by the system integrator is also possible.

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# Energy Efficiency in Sports Halls

## Assignment

Energy use in sports halls for lighting, heating and ventilation is considerably high. This is because of the specific architectural structures used for these types of buildings. Users often forget to switch off the lights and in many cases the ventilation is permanently running. Energy savings can be achieved by using demand-related controls.

## Solution

Presence detectors are not ideal in halls with heights up to 6-8 metres. Detection works well for clearly distinguishable movements, difficulties occur however for quieter activities such as yoga classes. The lights could in cases like the latter be switched off unwantedly. The engineering company Beyer uses an optical sensor to solve this problem.

## Realisation

A CCTV dome camera system with KNX/IP interface (by Dallmeier) surveys the activity area for the presence of persons. The intensity of movement is irrelevant for this process. If desired, the camera can be used in order to prevent vandalism and hence to alarm personnel.

The lighting system of the sports hall is manually switched on and off via a robust KNX panel with eight push buttons and LED display (by GePro) located at the entrance. The default brightness setting is "school sports" (200 Lux). Energy actuators with current detection (by ABB) deliver metering data. Via a touch panel in the control room (by Gira), the brightness can be increased to 300 Lux for training or 500 Lux for sport contests. Fan coil actuators (by Theben) control the HVAC devices.

## Features

The lights are switched off automatically if the optical sensor detects an empty sports hall and when this state continues for several minutes. On the panel, users are informed about the energy consumed since the lighting was switched on last time.

Optical sensors are suitable to control HVAC systems efficiently. They are able to detect the number of persons with a sufficient accuracy of approximately 80%. This information can be used to see how many people are in the hall and hence to set the HVAC controls accordingly.

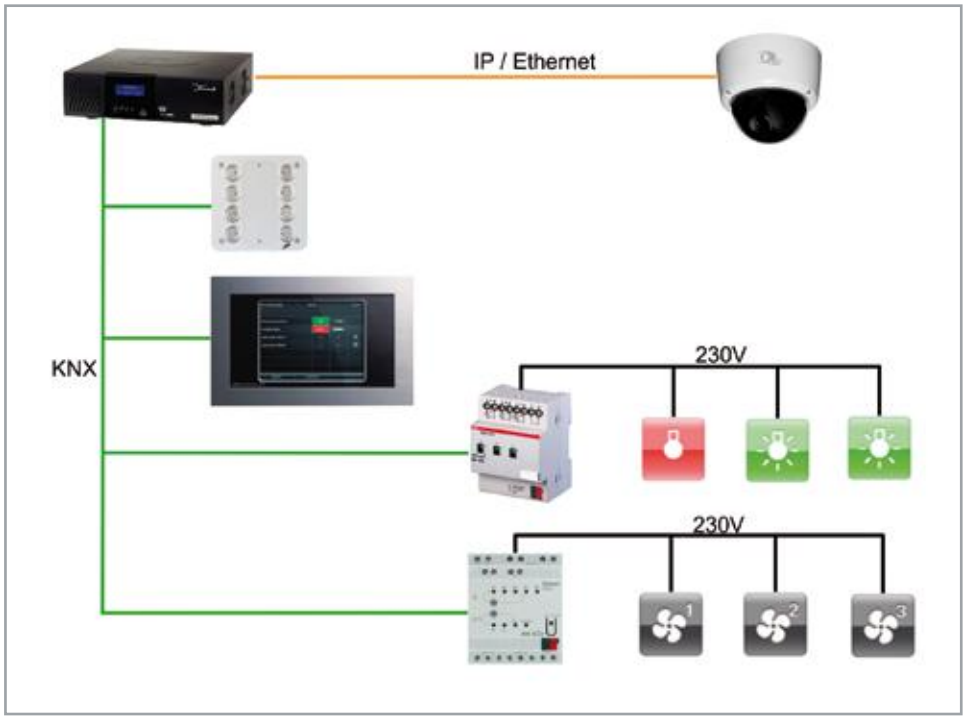
## Advantages

The installation offers possibilities to save energy in sports halls.

If the metering information is saved, users of the hall can be charged according to energy consumed.

As public awareness for energy efficiency is growing, the system offers a useful and very simple feature: the possibility to display current energy consumption on a large public screen.

Energy efficiency in sports halls is increased when the number of persons is counted and if the HVAC system is controlled accordingly. This kind of functionality can also be very effective for training and seminar rooms.

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# Ambient Assisted Living

**Briefing:**

The term "ambient assisted living" refers to living with technical support for older people. CIBEK specialises in this field. The system integrator from Limburgerhof demonstrates how "Ambient Assisted Living" can be implemented with KNX either in people's private homes or in homes for the elderly.

**Solution:**

Cibek has many years of experience in supporting senior citizens who wish to continue living in their own homes. Their solutions offer safety in certain risk situations. In co-operation with research institutes and universities, Cibek developed „PAUL" (Personal Assistant for Ambient Assisted Living). It consists of several hardware components and various software modules that ensure a seamless integration of all components installed in a senior citizen's home. In the solution presented here, movement detectors are used for localisation and information from the use of push buttons is used to detect activities. KNX is used due to its cost-effectiveness and its versatility.

**Realisation:**

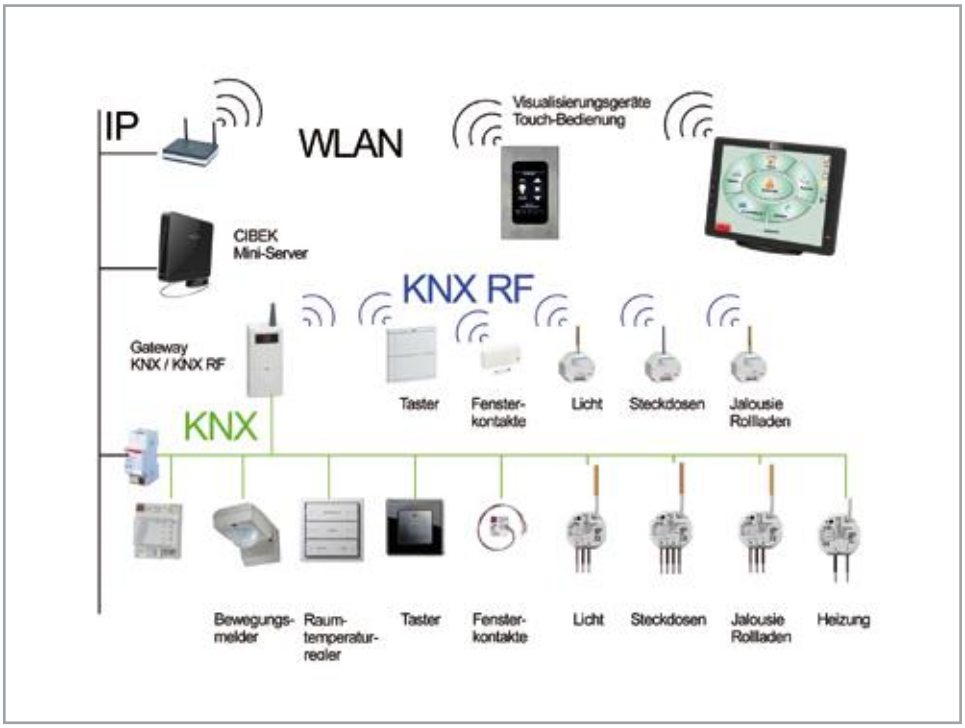
The sample installation shows examples of how one can upgrade existing homes using KNX – including KNX radio components – in order to make them suitable for senior citizens. Apart from the KNX devices, the PAUL system uses a visualisation on a mobile touch display. A design study shows how one can use an iPod not only as a small, mobile visualisation display but also as a multi-function switch for a senior-friendly operating concept, using a specially developed screen.

**Functions:**

KNX components such as switch actuators, blind actuators (by Gira) and KNX radio components (by Siemens) are used for activating the lighting, controlling the blinds and the heating system. Presence detectors (by Theben) automatically switch on the light and provide information about the presence of persons. The system is operated manually via a bus switch with a room temperature controller (by Gira) and via a mobile 12" "senior-friendly touch display" (by TCI). The "multi-functional push button" is CIBEK's own app for the iPod that allows an intuitive operation. The following equipment operates at the back of the panel: IP routers (by ABB), power supply (by Lingg&Janke), a Mini server, a Gateway and a WLAN node (for the iPod).

**Advantages**

KNX functions can be implemented as part of a refurbishment in order to support ambient assisted living (AAL) for older people. In addition, the data from installed sensors can be used for the detection of irregular patterns compared to the regular activities of the person, indicating situations in which help may be required and alerting the respective care service or relatives.

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# Elevator Control

**Assignment:**

It is common practice to switch off the lights, to turn down the heating and to cut off the coffeemaker from the mains via a central control when leaving the house. The integration of an elevator control into this central operating concept is a novelty. CIBEK presents their new KNX application „Lift Control“.

**Solution:**

The system integrator from Limburgerhof integrates the elevator control into a KNX system. This interface allows users to call the elevator from inside the flat and to receive status information about the elevator. An elegant feature of this solution is that the elevator call can be integrated into scenarios, like: “Arrival” and “Leaving”, etc.

**Realisation:**

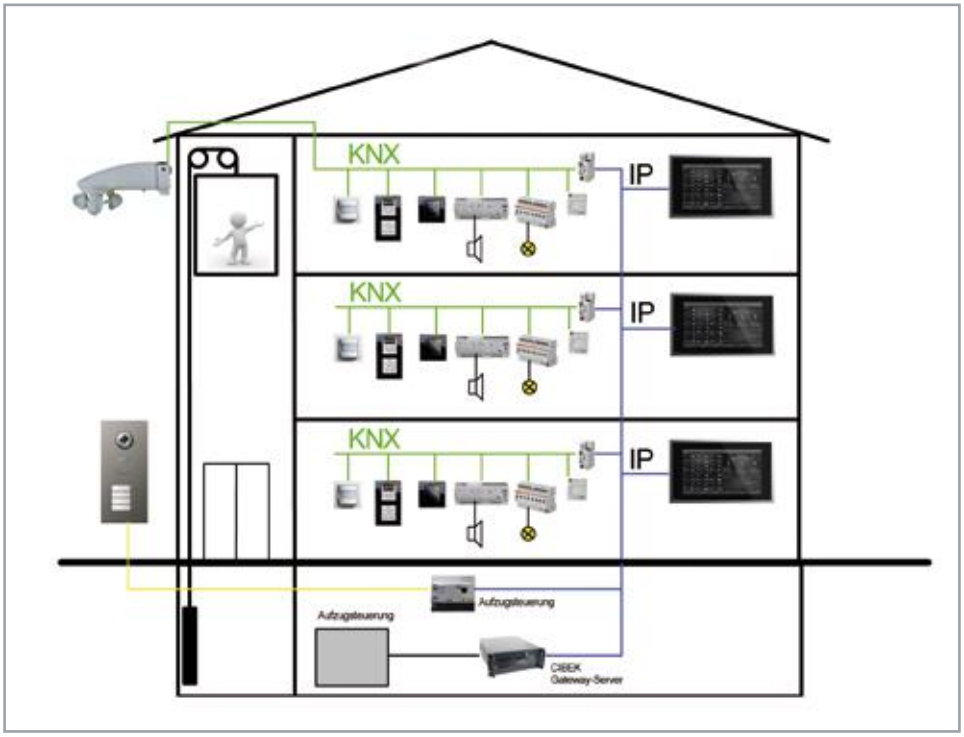
The Cibek gateway is the central control and management unit. It is connected to the KNX installations of the individual flats, via KNX IP. Movement detectors (by Berker), pushbutton sensors (by Gira), actuators (by ABB), KNX radio components (by Jung), a weather station and a power supply (by Theben) build up the KNX environment. A KNX audio actuator (by WHD) is installed for media control. A home server is used as a communication interface between KNX and IP systems. KNX system functions and elevator control functions can be accessed via a Gira touch panel from within each flat. A 3D visualisation software serves as a common user interface, also for calls and images from the IP video-com.

**Functions:**

The touch panel serves as a single access point for both the KNX system and the elevator control. When calling the elevator, users can select immediate arrival, arrival within five or ten minutes etc. The management system co-ordinates elevator calls from all flats in the house.
If scenarios are used, users can see e.g. weather information and the arrival time of the elevator, lights can be switched off and the heating set point can be lowered when calling the elevator, i.e. activate the “Leaving” scenario. When arriving at home, users can activate the “Arrival” scenario via a hand-held KNX radio control: the lights are switched on, the heating is set to comfort mode and music starts to play. Users can also select other customised functions together with the elevator call.

**Advantages**

- Comfortable and prestigious operating concept for high-end single and multi-family houses and apartment buildings.
- No more elevator waiting times in the hallway.
- Co-ordination of the elevator occupation/timing for all users.
- The system can also be used as a special solution for car lifts in hillside or terraced buildings, where inhabitants can park in front of their flats.
- Customisation of the central operating control functions is nearly infinite. Users can retrieve weather information or calendar details, select music or quickly place an order.

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# Fire Alarm Systems

## Assignment

Fire alarm systems work independently. For easier maintenance, status information, information regarding system faults and triggered alarms these systems can be integrated into KNX systems. This helps to reduce false alarms and to improve fire fighting. InstaVer Systems from The Netherlands is very experienced with KNX installations in hotels, theatres, court buildings and police stations. Their demonstration shows how a fire alarm system can be integrated.

## Solution

A NEN2535 certified fire alarm system constitutes the core of the installation. It contains an OPC server and communicates with the KNX bus via an "OPC-Bridge" application from NETxAUTOMATION.

## Realisation

Reliability is the central requirement when integrating a fire alarm system into a KNX installation. For safe operation, visualisation of status and alarms has to be monitored. A KNX switch actuator with current detection (by ABB) and a temperature sensor (by Zennio), ensures this. They detect the input current and the internal temperature of the fire alarm panel. The system also checks whether the browser is still active. Faults are indicated both visually and via an acoustic signal.

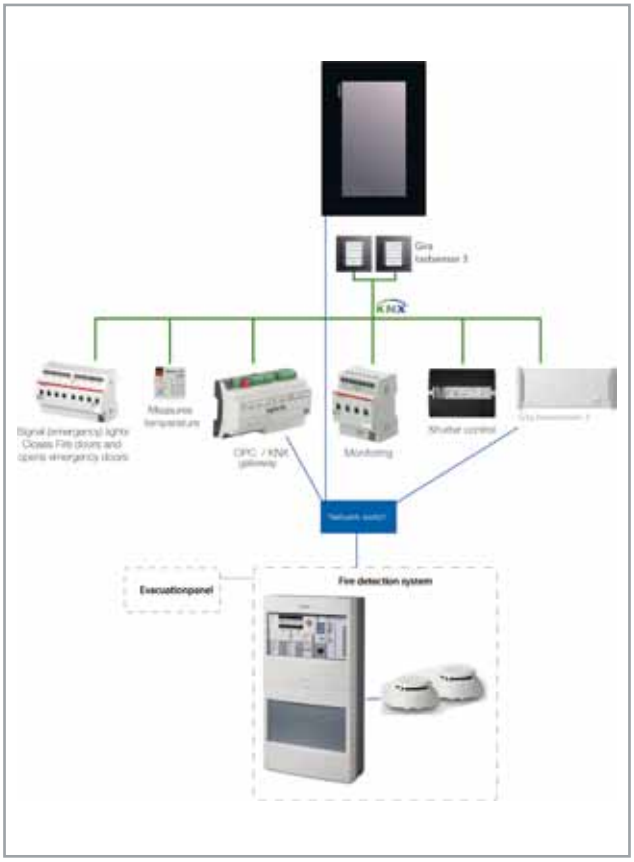
The "OPC-Bridge" consists out of a rail-mounted OPC/KNX gateway (by TCI). Fulfilling a request from the fire brigade, additional KNX push buttons are installed to allow navigation within the visualisation system. In addition to the features shown in the demo installation, status messages from the following functions/sub systems are often monitored in real-life projects: sprinkler systems, emergency messages from toilets for handicapped persons, overvoltage, network supervision, fire protection doors etc.

Functions:

Via the touch screen, status information about fire alarm notification appliances and smoke detectors can be displayed graphically. Several functions like: "Pre-alarm", "Alarm" and "Test", are shown.

If a smoke detector triggers an alarm, the following information is displayed: "Pre-alarm" or "Alarm", together with the indication of the floor where the alarm is coming from, the fastest way to the appliance giving the fire alarm notification, the escape routes and the access for the fire brigade. An audio file with emergency instructions is played.

And at the same time, the KNX system automatically controls the following important functions: granting access (e.g. opening cabinets), driving up blinds, shutting fire resistant doors, switching on lights and closing heating valves.




## Advantages

- Faster diagnose for the causes of each triggered alarm
- Reduction of false alarms to the fire brigade
- Support for fire fighting and evacuation
- Easier maintenance for fire alarm systems
- Tests of fire alarm notification appliances are kept and the yearly rehearsal can be displayed upon request.
- As KNX covers all application fields, synergies are possible thanks to the multiple-usability of components, which makes KNX installations even more valuable.

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# Social Networks

## Assignment

Intelligent Buildings in Social Networks. The requirement is to automatically transmit system faults, alarms, video-intercom images and orders for different services via social networks.

## Solution

A suitable gateway is needed in order to connect a KNX system with diverse social networks such as Facebook, Twitter and Prowl. This is where NOMOS Box, the new IBS product, comes into play. The new multi-protocol gateway/server is the first of its kind and supports up to 25 different protocols. It offers bidirectional access from and to KNX. Interoperability of the different protocols is ensured. Apart from the gateway functionality, the NOMOS Box also provides an HTML5 server that can be used to visualise data from different platforms.

## Realisation

The panel shows basic functions of modern building automation systems: a room controller by Jung serves as a central operational control for presence-dependant functions, room temperature, lighting and service requests via social networks. A motion detector by Busch-Jaeger is used for presence detection and a webcam serves to monitor the room. Actuators and an IP router (by Siemens and ABB) are the system components used here. Various Apple products are used to control the devices and to visualise data. They are connected to the HTML5 server via a Wifi network. A 15“ display is used to show the application’s Facebook account. The NOMOS Box as central device evaluates all KNX events and transmits messages to social networks where appropriate.

## Features

The primary use of this system is to show the possibilities of social networks in combination with smart buildings. For example beverages can be ordered at the supplier with a simple push of a button. Alarms are transmitted together with an up-to-date camera image, if a motion detector triggers an event when the owners are not at home. Also current metering data is transmitted via the social network.

## Advantages

The use of social networks offers many advantages: these services are free of charge and allow users to manage the transmission of data and the access to systems. There are client applications available for nearly all platform that allow users to access social networks. If a residential building has its own Facebook account, a kind of data diary can be kept: How much energy did my house consume? Who rang at what time the doorbell? What kind of malfunctions occurred during a particular period in time?
Persons who need assistance can make their data available to a group of people they trust. This even allows the integration of several types of services.

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# Audio & Video control

## Assignment

Modern intelligent buildings are not only defined by the integration of KNX systems to control house technology such as lighting, shading, heating and air conditioning. Audio and video technology is ever more becoming an integral part of smart homes. „ibs intelligent building services gmbh“ presents an example of how availability and operability of these systems can be seamlessly integrated into KNX.

## Solution

A prerequisite for the integration is the use of components with remote control and suitable gateways supporting the interoperability of protocols. The Control4 HC-800 controller with integrated KNX drivers serves this purpose. Also, the HC-800 ensures communication with different AV devices by offering several interfaces. The C4 system also offers diverse possibilities of visualisation and remote control of the entire system.

## Realisation

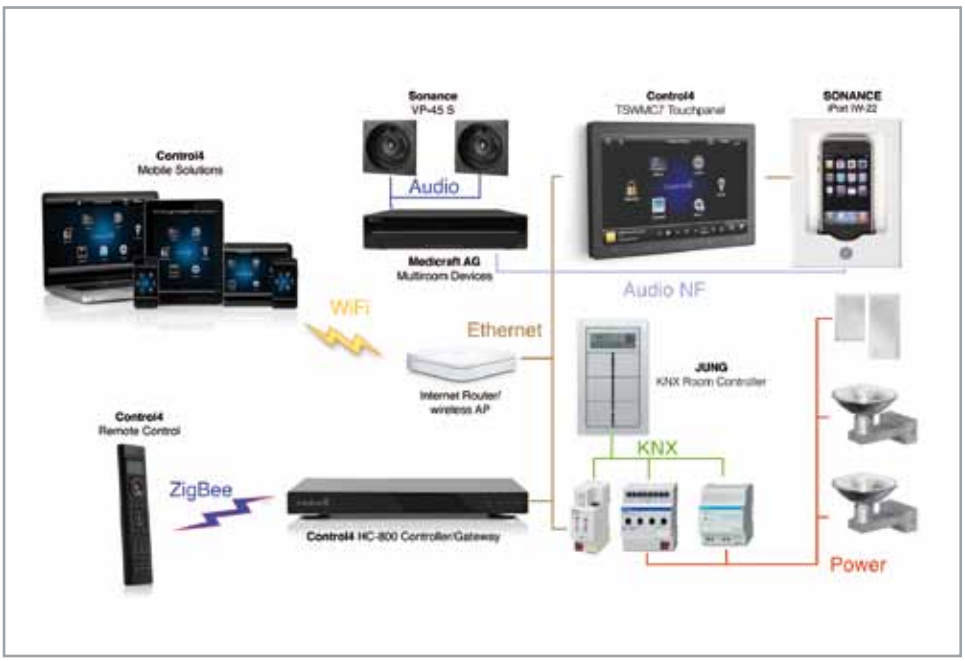
The demonstration shows how the system can be used in modern houses. The common functions of a KNX system to control lighting, shading and heating are accessed via a room controller by Jung. The multi-room audio system by Russound connected to the C4 system is operated via the KNX part of the solution. A touch panel is used to display the central operations of the entire system, including access to the KNX system.

## Functions

Apart from the common functionality of the KNX sensor technology, the application developed by ibs demonstrates the integrated control of the multi-room audio system. It is possible to select an iPod play list via the KNX sensors. The volume of the music in the room can also be set via the KNX part. The C4 system allows remote control for the entire KNX system.

## Advantages

These integrated KNX applications offer a consistent, cost-effective and future-proof infrastructure. Proprietary solutions tend to require a particular additional infrastructure, which is often not compatible with modern architecture – due to its specific operational controls. Thanks to these possibilities, the network can be based entirely on KNX and controls can be integrated based on KNX sensor technology. Also, functions offering additional comfort such as scenarios for arrival and leaving can be combined with audio/video technology.

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# Control Center

## Assignment

As a system integrator, GePro mbH strives to create user concepts for monitoring and controlling tasks in the commercial sector. Ease of use for non-technical personnel is one of their important goals. GePro mbH uses different sensor based observation such as: Visual signals (visualization of operation states and errors), acoustic alarms and haptic technology (technology that interfaces with the user through the sense of touch).

## Solution

The full functional sample installation shows operation and monitor functions as they are customized for reception areas, swimming pools, hotel bars, warehouses, factory buildings.

## Realisation

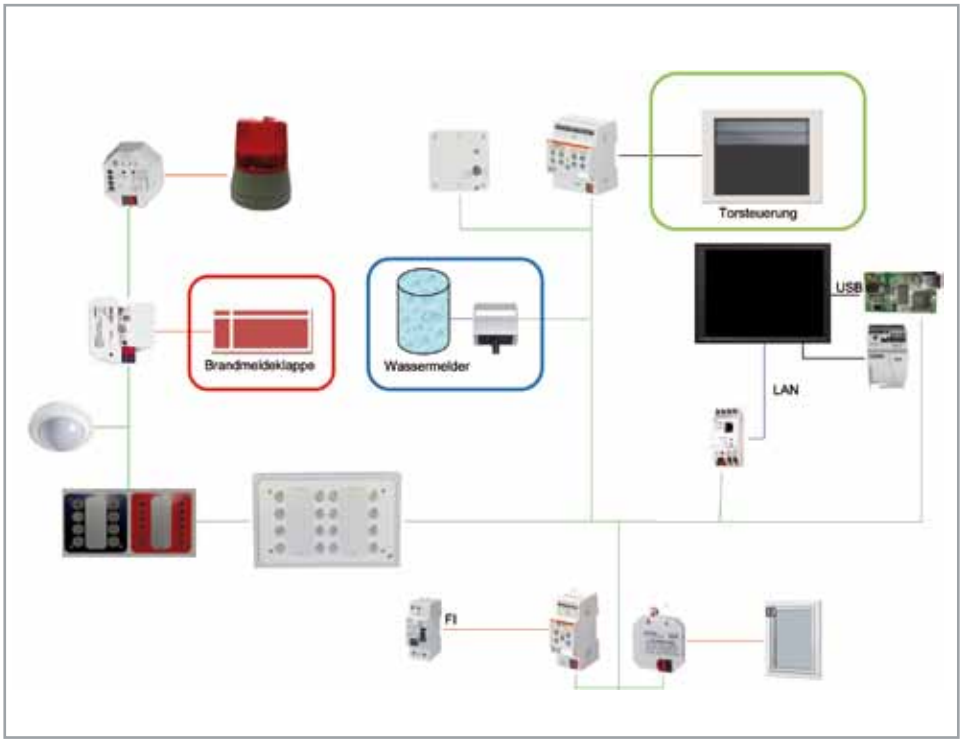
Various functions used in buildings are monitored in order to check proper operation and malfunctions. On the GePro KNX-TAB 12/2 LED control panel, two-coloured LEDs show the current operating state of the system. A Weinzierl IP gateway is connected to a touch-enabled PC using visualisation and GePro's new flush-mount solution. Boolean functions are realised via the software. Safety-related malfunctions are indicated by extremely strong flashlights and additional buzzers, all integrated in the control panel.
For demonstration purposes, the panel is used to simulate a door control unit with operator presence control. More operating and monitoring functions can be realised with the KNX-TAB panels (7 or 16 push buttons/LEDs) or with key-operated switches, presence detectors(Esylux), water detectors (Siemens), actuators (Gira, ABB, Hager) and binary input units (Siemens).

## Features

The door is moved from one stop position to the other either by turning the key-operated switch or by operating the Open/Close push buttons. A visual signal indicates movement of the door. Intermediate stops are indicated with sound (acoustic alarm). Users have to confirm that they have noticed the signal by operating a push button with a red LED. The demonstration installation also shows how the system monitors the opening of windows, flooding, malfunctions of HVAC systems, access control systems and the status of devices, like: current-operated circuit breakers, overvoltage protectors and fire dampers.

## Advantages

Control panels with labelled push buttons and two-coloured LED displays make the system easy to use and to monitor. Green LEDs indicate regular functions. Red LEDs indicate malfunctions. Flashlights and buzzers unambiguously indicate safety-relevant alarms. Central logic and control is realized by using an integrated visualisation via KNX IP.

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# Energy Efficiency in Industrial Buildings

## Assignment

Elektro Hieber from Schwabmünchen presents the KNX installation of a 5700 m² factory. 24 hour operations require artificial light for certain periods and certain areas. The ventilation depends on machine activity, whereas waste heat is recovered for heating purposes. To achieve energy efficiency and cost savings, the customer opted for smart building automation.

## Solution

The KNX bus system allows the integration of components for the automation of lighting, ventilation, heating and alert management. Individual functions can be connected via the network for central operation and control.

## Realisation

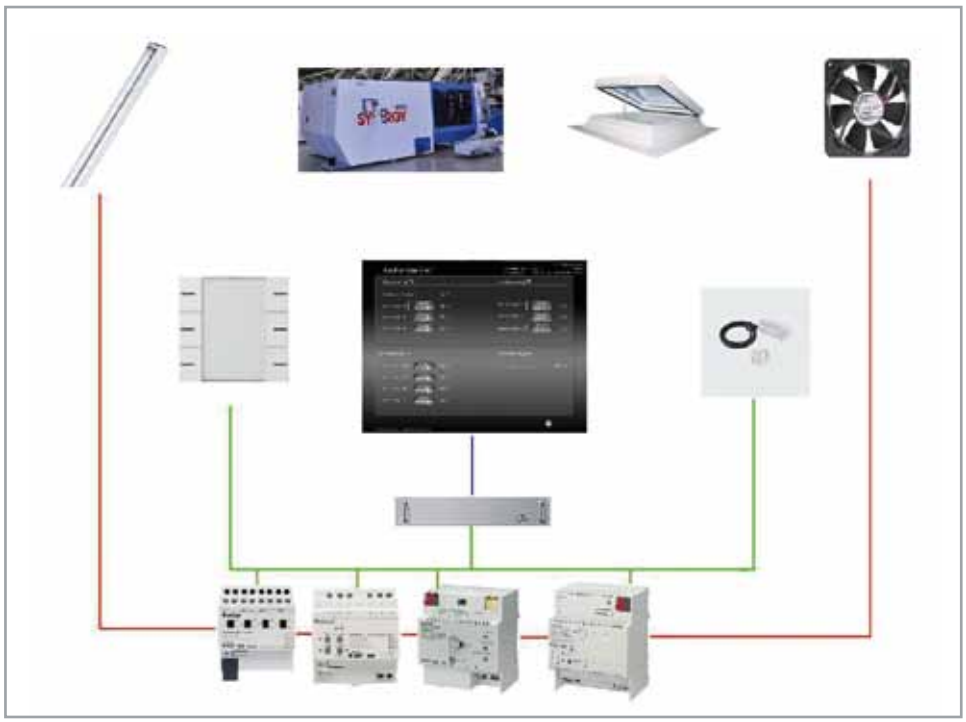
The complete lighting system consists out of 616 fluorescent lamps, controlled via DALI and KNX/DALI gateways (Siemens). Presence detectors (ThebenHTS) and dimmers ensure that all lighting components are used with maximum energy efficiency depending on presence of personnel and daylight. Thanks to KNX, an emergency lighting system approved by TÜV (Technischer Überwachungs-Verein, German Technical Inspection Association) could be integrated into the lighting installation.
Ventilation flaps used as smoke outlets, for heat dissipation and for additional air circulation are controlled via temperature sensors (Arcus-eds). For this purpose, KNX detects the number of machines in operation via an M-Bus interface. The system uses different settings for summer and winter operation. If the room temperature exceeds the set point in summer, the interior and exterior ventilation flaps are opened. In winter only the interior ventilation flaps are opened so that excess heat is used for heat recovery.
Via temperature sensors, the KNX system controls the installed radiant tube heaters used for Room heating. KNX binary input modules (ABB) pick up fault messages from the building automation system and from production. The messages are forwarded to a facility server from Gira where they can be displayed and processed by the responsible staff. Set points, switching times and other parameters can be set via the password-protected access point where they also can be visualised.

## Technical Highlights

- Efficient lighting technology controlled according to customer requirements.
- Integrated emergency lighting system approved by TÜV (German Technical Inspection Association).
- Integration of existing fire protection concept for improved action in case of fire.
- Intelligent temperature management with recovering of waste heat.
- Efficient ventilation according to the requirements of the respective production process.
- 3D visualisation for easier handling and control.

## Advantages

Energy savings of 30% for lighting. Required heating energy cut by half because of recovering waste heat from production. Power consumption of ventilation motors reduced to 70% compared to the not automated operation. Yearly savings: About 50.000 Euro – in addition to other benefits, like higher efficiency.



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# High End Residential Buildings

## Assignment

The application demonstrated by Anton Hieber GmbH & Co.KG shows an installation realised in a two-family house with living spaces of 350 and 700 m2. The customer wanted an enhanced building automation system for all functions such as lighting, shading, heating, cooling, alarm systems, HiFi audio and video. Other requirements were: 3D visualisation, fault management and remote access. A special requirement was to control the heating and cooling system integrated in the ceiling, in order to ensure a comfortable room climate in combination with energy efficiency.

## Solution

KNX is the ideal system for integral building automation, as it offers so many components for all functional areas. For resourceful system integrators, there are nearly no limits. Elektro Hieber developed a solution using dew point shifting for the heating and cooling system integrated in the ceiling.

## Realisation

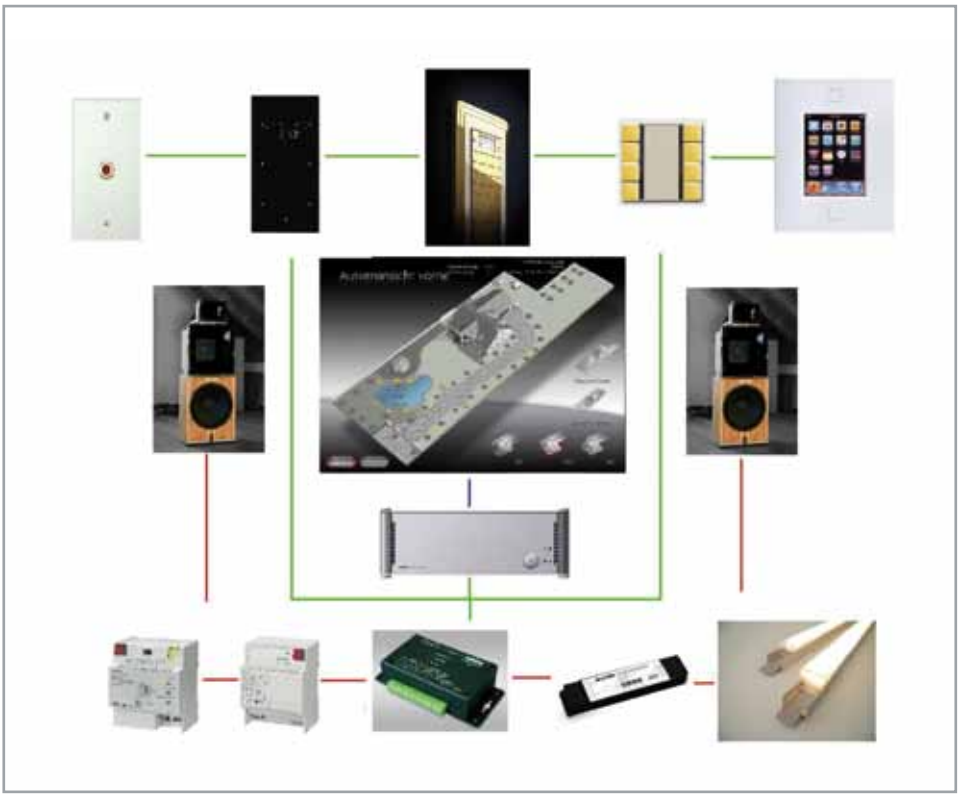
To control the lighting and the shading, dimming actuators, switch actuators and blind actuators (by Gira), were used. Dimmable DALI ballasts are connected via KNX/DALI gateways (by Siemens). HVAC control is realised via: temperature sensors and enthalpy sensors (by Arcus eds), switch actuators and analogue sensors (by ABB). The alarm systems (by Telenot and Honeywell) and the multi-room audio systems (by Revox) are integrated via KNX gateways. KNX push buttons or KNX room controllers with a high-end design (by Berker and Jung) are used to activate functions within the room. At the heart of the system there is a Facilityserver (by Gira). The 3D visualisation developed by Elektro Hieber is very user friendly. The system can besides the 19“ touch panel, also be operated via iPhone or iPad.

## Functions

One of the special functions is the control of the heating and cooling system integrated in the ceiling using dew point shifting. In this setup, the flow temperature is regulated as a function of the dew point. Via window contacts, heating and cooling is disabled when the windows are open. To protect the special wooden floor from overheating, the underneath installed floor heating is monitored via additional temperature sensors.

## Advantages

- One single system provides comfort, security and energy efficiency.
- Central building management for all functions.
- Prestigious touch panel.
- The visualisation developed in co-operation with the inhabitants, uses three-dimensional views based on floor plans of the site for easy operation.
- Mobile access via smart phone and tablet PC.
- The system is flexible: it can via parameterisation be optimised any time, even remotely.



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# Voice Control

## Assignment

Certain application fields require innovative control for building automation systems. Examples are homes, offices, trade buildings, cultural buildings and sport infrastructures. For a particular building there was the requirement to integrate automation technology as invisibly as possible and to ease the installation as much as possible.

## Solution

KOYNE-SYSTEM-ELEKTRONIK came up with new innovations in order to put this requirement into practice: functions can be activated either via voice control or during everyday activities that have to be performed anyway. The solution is to combine voice control with innovative radio-controlled door handles based on KNX.

## Realisation

The INVOX KNX speech server (by Vocali) allows to activate functions through voice commands that can be given via a microphone, an iPhone or other smart phones. Simply pronounce the required words in order to switch the light, to shut the blinds, to open doors or to set the required room temperature. Up to 25 variants per function can be saved. This application makes it possible to meet high hygiene requirements for specific environments, like: laboratories, hospitals or situations where operators need hands-free controls.
Another innovative approach is a door handle with switching and dimming function: A slight turn of the handle, will make the device send a radio signal that switches light and opens/closes blinds. The new door handle works with radio technology, batteries are not required. The KNX/Enocean gateway (Weinzierl) transmits the signal from the door handle to the bus. This is very useful for cellars, storage rooms, garages, public buildings etc.

## Features

A slight turn of the handle creates ambience lighting, whereas a powerful turn makes the lights go on at full power.
With voice commands, users can dim lights and even set the room temperature. All information is displayed on a multi-functional colour touch display named Touch-IT (by Arcus-eds).
Additionally, users can activate a new KNX LED colour control actuator (by Zennio) that makes the glass door appear in a pleasant light. This can be controlled via the display or via a bus-connected push button (by Basalte).

## Advantages

- Controls devices and systems via voice control.
- Up to 25 users can enter and save their own voice commands.
- Hands-free mode to activate functions.
- Simple assembly of door handles, without wires.
- Combined switch and dimmer control via the door handle.
- Fits in seamlessly with architectural design thanks to invisible technology.

KOYNE
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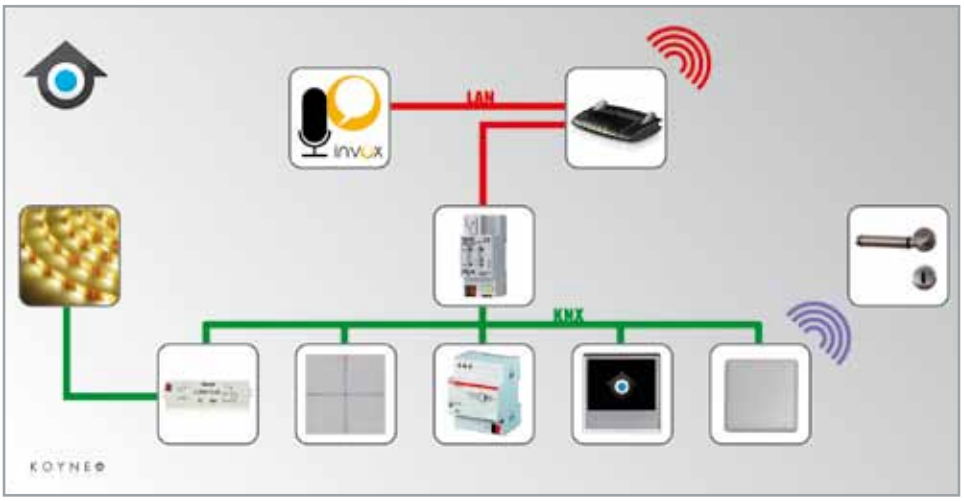


# Solar Shading Control

## Assignment

The automatic solar shading control adjusts blinds according to the position of the sun, provides solar shading and heat recovery in various functional buildings. BMS - Building Management Systems from Kempen demonstrates in their KNX installation how this high-quality technology can be useful applied in residential buildings.

## The Solution:

The solar shading control system of the demo installation works with the new Quadra KNX weather station that is directly connected to KNX actuators, control buttons, room temperature controllers and an IP touch panel. Intelligent algorithms for temperature and heat control are integrated in one device that comes in a compact housing and has no moving parts, which makes it everlasting.

## Realisation:

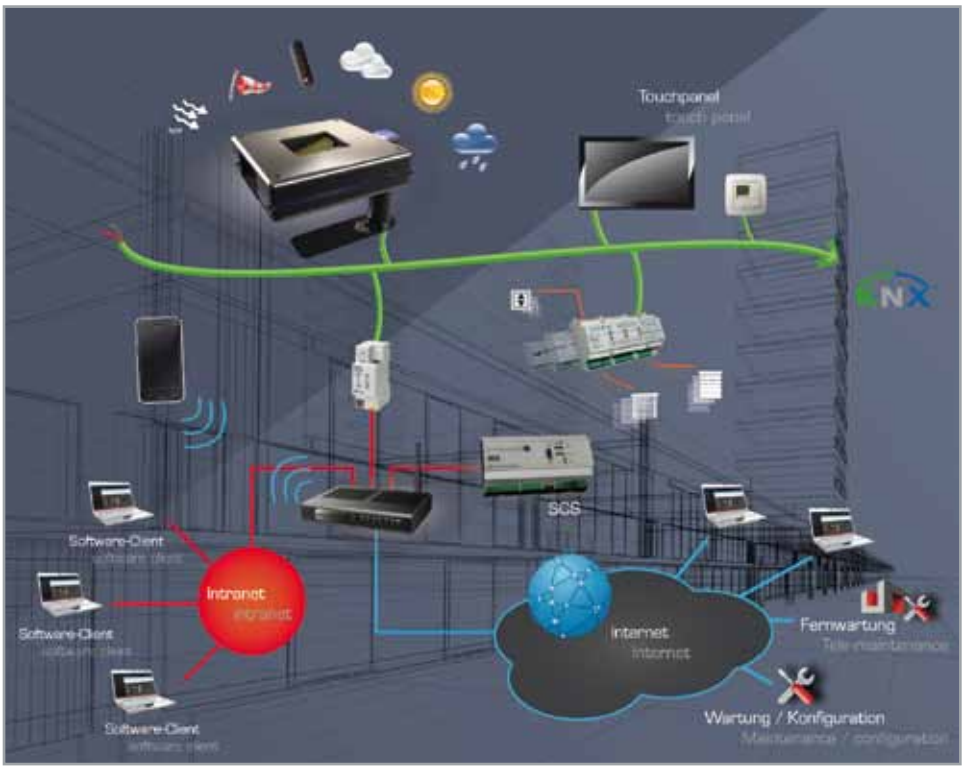
The BMS weather station has 14 sensors that detect brightness, radiation from all four wind directions and rainfall, measure wind force and temperature. The integrated software transmits room temperatures values, season of year, presence of persons and operation mode to the blind actuator (by Grösser) and receives position information from the actuator. The actuator transmits commands to move the blinds. Functions of the simulated solar shading device are shown in a lifelike demonstration, using an intermediate blind and a SMI actuator (by Vestamatic). In a 3D visualisation, a touch panel shows sensor values received from the weather station and status information about the shading devices. The blades of the blinds can be set manually via KNX control buttons.

## Features

Via its sensors, the weather station recognises the position of the sun and the current solar radiance value for a particular facade. An intelligent fuzzy logic based software transmits commands to move the blinds to a position depending on the season of the year: in summer the blinds are closed in order to keep the heat outside. The blades of the blinds are automatically set in order to allow optimal daylight entrance. In winter the blinds remain open when the sun shines so that heat can be gained. They can however always be shut manually via the SMI actuator.

## Advantages

- Compact and high-quality solar shading for residential buildings.
- Cost-effective installation: all required sensors together with the control unit are located in one single device that can be configured via ETS without additional software.
- Contributes to energy efficiency measures for residential buildings, as required for e.g. low-energy houses or passive houses.

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# Gateways

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## Assignment

While KNX the basis is for home and building automation systems, proprietary systems are frequently used for dedicated functions. To realise a consistent building management system, it is important to integrate these dedicated functions into the KNX system too. Advantages: no duplicate installations and operating units, consistent user interfaces for all functions, operating units in tune with interior design requirements, central visualisation functions including error messages and alarm management.

## Solution

To achieve this, either common gateways as they are available on the market or special gateways for proprietary protocols can be used. The engineering company Holger Schult demonstrates how common gateways can be used together with KNX. They have tried and tested all these solutions.

| Function area | Manufacturer / Gateway | Operation and visualisation via KNX for | Functions |
|---|---|---|---|
| Lighting | MDT DALI/KNX gateway | DALI | Control and dimming of DALI lighting from any manufacturer |
| Escape Routes System | WAGO IPC with KNX/TP1 terminator used as CAN Bus gateway | CANopen | Communication with GEZE escape door control |
| HVAC systems | Theben OT-Box | OpenTherm | Connects KNX to the OT Bus used for heating systems, e.g. gas condensing boilers |
| Metering data recording | bb-Steuerungstechnik M-Bus gateway | M-Bus | Reading M-Bus meters from any manufacturer |
| Operating data and error messages Recording for UPS systems (uninterruptible power supplies) | Generex Modbus RTU | Modbus-RTU | UPS monitoring e.g. by Wöhrle |
| Electrical metering (current, voltage) | WAGO Controller with KNX/TP1 terminal and RS485 serial interface | Modbus-RTU | Connection to Janitza and Socomec measurement instruments |
| Access controls systems | | RS485 | Integration of the BlueChip lock system by Winkhaus |
| EnOcean radio technology | Weinzierl Engineering EnOcean Gateway | EnOcean | Connects the wireless radio system with KNX, in this particular case the sensors were from Thermokon |
| Automatisierung mit Standard BACnet | WAGO Controller with KNX/TP1 terminal | BACnet | All systems using the BACnet protocol, regardless of manufacturer |
| Ethernet | Siemens IP-Router | IP | Web Applications |

# Telephone Control

## Assignment

To control building automation systems, intelligent user interfaces are required. It is common practice to use separate systems for each functional area. GLT Planungsbüro für Gebäudetechnik shows how all functional areas can be integrated into one system, all with low integration and administration costs, while increasing performance and flexibility.

## Solution

Members of staff use a client software in combination with their telephone in order to access the individually assigned building automation functions. This allows them to open or close blinds, change the room temperature or to switch and dim light. The client software can also be used as communication means in combination with a headset.

## Realisation

The communication and automation solution CYTEL. WAVE accesses the KNX bus via a KNX IP gateway. Apart from the usual functions of an enterprise class telephone system, CYTEL.WAVE offers a high-performance automation service that can be freely configured via scripts. The system can be used to automate and control telephone and building functions.
The client software allows access: to building control and telephone functions, to surveillance cameras, to historical and energy consumption data, from any office workplace.
Additionally: building automation functions can be assigned to telephone buttons.

## Features

- Access to all building automation functions including KNX via client software and telephone
- Efficient telephone system including chat function, voice mail, video telephony and fax
- Integration of surveillance cameras
- Flexible automation functions
- Extensive authorisation system: access rights can be assigned on the level of functions and group addresses
- Interfaces for IP, ISDN, GSM, SIP
- Log files are sent to an SQL server for later statistical analysis

## Advantages

Complete control for room functions from operator desktop screens. Only one client software needed for building automation and communication functions. One central system controls communication and automation. User concepts are flexible and open for later modification. The software can be installed on various PCs. Significantly lower costs as only one system is needed.

GLTPLAN
Smart Buildings

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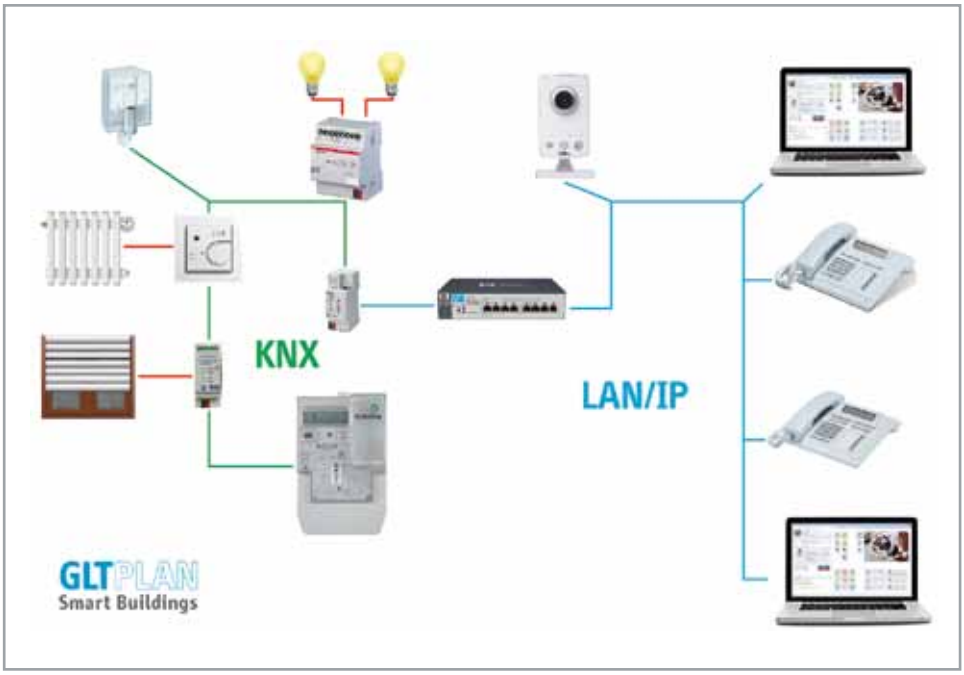


# Event Technology

### Assignment

Experience art in a pleasant atmosphere. The installation shows how art events can be supported with suitable atmospheric lighting and sounds. Also, a safe access to the gallery is required as well as an discrete monitoring and control of the indoor climate. The technical equipment should be flexible enough to be adapted to various scenarios.

### Solution

The specific systems used for media control, internal communication and lighting control are to be brought together, in order to set up consistent operation and control. The use of KNX IP offers an ideal solution for this task.

### Realisation

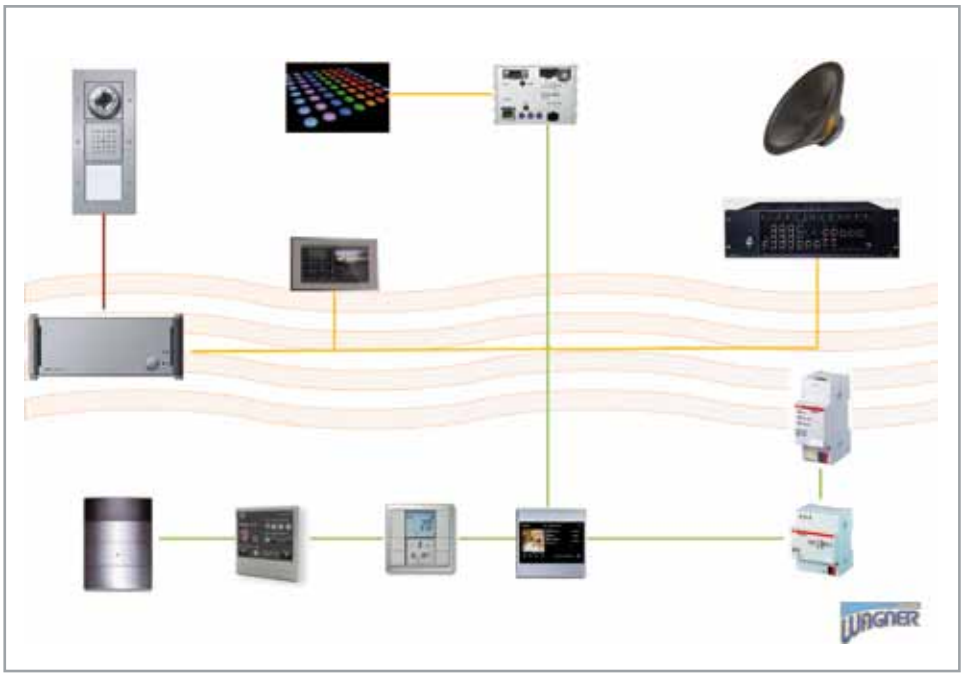
Light and sound are the heart of event technology. Apart from spots and lamps, LEDs with controllable colours and a KNX/DMX lighting control system (Arcus eds) are applied in the demonstration. A multi room system (by Trivum) provides sound in all rooms. For local access to light, music and speech, different touch sensors with integrated room temperature controls are used (by Berker, Merten, Arcus eds). At each door, an access control system with video intercom and KNX IP connection (by Gira) is installed. All functions can be visualised, operated and controlled via a touch screen. Fault messages and video images of the building can also be seen on this screen.

### Features

Customers and guests who want to visit the gallery are greeted at the door with a video when the door opens. This happens either on the regular opening days of the gallery or for special events: Lighting scenarios can be selected in tune with the desired atmosphere. They can either be centrally controlled or selected via push buttons in the individual rooms. Different musical genres can be centrally set for different areas. The touch screen can be used to view historical data of temperature values and to overview gallery entrance. Announcements for all rooms can also be made from there. If there are any irregularities for temperature values (above or below set point) or if lamps are defect, the fault is displayed on the same screen. Outside business hours, fault messages are transferred via email to the responsible technician who has access to the system via a smartphone.

### Advantages

Despite the use of different systems, the entire technical equipment can be controlled via a consistent and clearly structured KNX operating concept. These functions are easy to use, even for personnel without any technical knowledge, staff alteration is not an issue. With a simple push of a button, users can choose the appropriate light setting for each activity in the entire building, be it exhibition, evening event or cleaning. The KNX solution also makes the building automation system flexible with regard to later changes and extensions.



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# Energy Efficiency in Residential Buildings

## Assignments

System integration for high-end residential buildings is one of the business areas of ib company GmbH. The installation made by this system integrator located in Pforzheim demonstrates how transparency of energy use and energy savings can be put into practice in residential applications.

## Solution

Apart from the common functional applications of KNX building automation systems, consumption values for electricity, heating, water etc. can be measured and calculated. This allows for more energy transparency in the domestic area. The occupants can be made aware of lost energy and hence take measures accordingly.

## Realisation

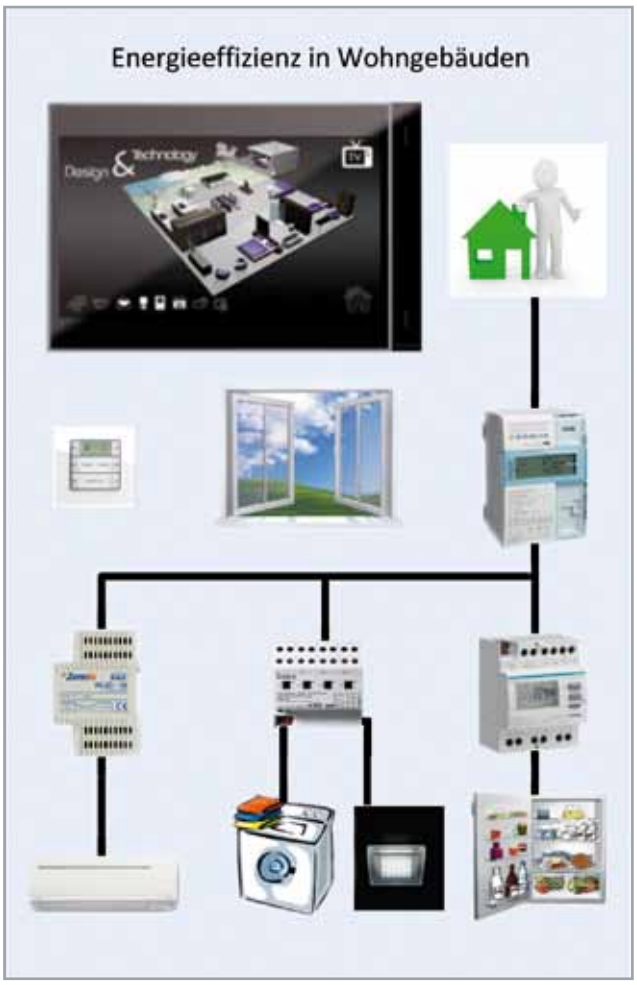
The installation shows customized functions in a residential building. A 3 push button sensor with temperature controller (from Gira) is used as operational control for lighting, heating, air condition etc. The system can also be operated via a 15“ touch panel with visualisation (by Divus). A Daikin air condition system is integrated via a KNX Daikin gateway (by Zennio). HVAC functions are optimized with window monitoring, in order to avoid unnecessary heating and electricity consumption.
In the example, the individual consumption values are detected either via a switch actuator with current detection (by Gira) or via a KNX three-phase meter (by Hager). An electronic meter with a radio unit (by Hager) measures the overall consumption of electricity and sends the values to a KNX/RF media gateway (by Hager) via the KNX bus. Consumption and building functions can be visualised.

## Features

The visualisation allows to display consumption easily either as diagrams or as lists. The system can save the results as messages and hence send them via e-mail or SMS in order to monitor consumption remotely.
The interface to the electronic meter via a KNX radio unit also transmits the current electricity tariff to the visualisation system. This allows the usage of varying tariffs within the Smart Grids framework. Appliances with high consumption (such as washing machines) can be switched on automatically.

## Advantages

Easy realisation by consistent use of the KNX system architecture.
Seamless integration of all technical functions.
Low cost of installation compared to interfacing with other systems.
Visualisation makes it easy to supervise energy consumption.
More transparency for a more conscientious use of electrical appliances.
Optimisation of energy consumption via demand-oriented automatic functions.

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# KNX RF – more robust thanks to multi-channel extension

The original KNX RF specifications describe a single band single channel KNX RF solution. It uses the 868 MHz band with state-of-the-art transmission characteristics. This allows for a very reliable communication within the house or small commercial building. Bidirectional battery powered devices are supported through a subsystem called Bibat.

Yet, such single RF channel communication can be disturbed by non-KNX RF systems with different medium access mechanisms in the same or neighbouring bands. KNX RF Multi copes with these disturbances by allowing the devices to jump from an occupied channel (e.g. F1) to a next or even a further RF channel, i.e. two further possible fast channels F2 and F3 or 2 slow channels S1 and S2.

The fast channels are intended to be used for human controlled applications like lighting, shutters, etc.

The slow channels are intended to be used for devices in non-permanent reception mode for such applications like for instance HVAC control.

Fast channels have a data rate of 16,384 kbps, while the slow channels only have half that data rate.

While the duty cycle in F1 and F2 are limited to 1 respectively 0,1% at max 25 mW, it may be increased to 100% at max 5 mW for the F3 and the S2 channel (between 5 and 25 mW however again reduced to 1%). The duty cycle in the S2 channel is set to 10% at max 25 mW.

Whilst a device may transmit at any time, it can be in sleep mode and reduce its power for 80 % in the fast channels or even up to 99 % of the time for the slow channels, only waking up periodically to possibly receive a frame.

In order to ensure compatibility between single and multi-channel devices, a compatibility scheme has been developed and newly developed single channel devices from now need to send longer preambles. Multi-channel devices need to be downgradable to single-channel devices.

The multichannel feature already increases the probability for a good transmission. Additionally, it allows for verification of proper reception, by supporting a fast immediate acknowledge from up to 64 individual receivers. In case a Fast Immediate Acknowledge is missing, telegrams are automatically retransmitted. KNX RF repeaters moreover collect and relay these acknowledges, so that proper reception can be checked over even larger distances.

KNX RF also checks whether another KNX RF transmission is ongoing before starting its own transmission, thus considerably reducing the amount of possible collisions.

KNX RF, and especially KNX multi, natively supports longer frames. This is necessary to support the KNX Secure Application Layer, which is used also by other KNX communication media, to allow for communication authentication and – confidentiality.

Thus, the Media Coupler does not represent any weak spot in the security. This allows KNX RF to be used for applications like metering, access control and anti-intrusion, fire detection, etc.

# New apps make ETS4 even more versatile

## Extra functions and more flexibility: customised ETS with new apps

***There are apps for iPhone, for smart phones, for tablet PCs – and now there are new KNX apps for the Engineering Tool Software ETS4. In principle, the ETS Professional is sufficient for users wishing to install and configure KNX systems. Just as for mobile phones, users may however wish additional functionality when applying KNX. As not all can be part of the ETS4 basic functionality, ETS apps will soon be offered in the KNX online shop.***

*New ETS Apps make programming more easier.*

The world standard for home and building automation is used everywhere: In residential buildings, in all kinds of commercial buildings and even in large building complexes like airports. The Engineering Tool Software (ETS) is the most important tool for KNX projects. The new ETS4 provides everything users need for configuration, commissioning and service. KNX users, who have familiarized themselves with the system and who are working on large projects sometimes wish special functions, in order to work faster, safer and in a more controlled way. When developing ETS4, the KNX Association already integrated many of the functions demanded by users from the field. It offers everything users need to configure and to design a KNX project. Functions are easy to find and the application is easy to understand and to handle. Therefore, it was only logical to offer any further extras for users as extensions. With the concept of the ETS apps, the KNX Association has found a perfect solution. ETS4 remains open for future wishes of users and technical developments.

### Compatibility is ensured

The apps will be developed by KNX members. Individual apps can be created thanks to the provided API, which already includes many basic functions. This allows for nearly limitless creative ideas. However, compatibility of the entire system is maintained as all apps have to be validated by the KNX Association and will be exclusively available via the KNX online shop only. Owners of ETS4 wishing additional functionality only need to download, install and licence the apps to enjoy the extras.

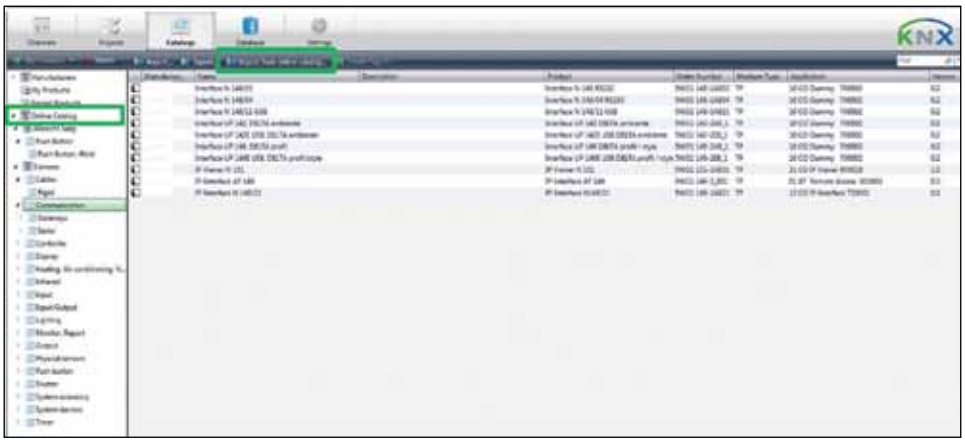
### The first apps are already available

The first apps can already be downloaded in the KNX online shop. KNX users who repeatedly edit the same room functions or building structures in their projects will soon be able to use the new "Extended Copy" app and save a large amount of working time. Completed configurations are simply copied and adapted to additional parts of a building.
Better team work with ETS4 will be possible using the "Split & Merge" app. It offers many advantages for a seamless cooperation when two or more KNX experts are simultaneously configuring different parts of a large project.
Already for a long time, technicians wished the useful functionality offered by the ETS apps "My Product Templates" and "Replace Product". The first one can be used to save KNX device configurations in the database for later use in other projects (including all parameter settings). This saves a lot of duplicate work. The second app supports service technicians, e.g. if an actuator has to be exchanged. Parameters of the old device are automatically taken over for the new one.
The new "Labels" app makes life easier, again for service personnel: It allows consistent naming of devices so that technicians can keep the overview. Also for trouble-shooting, the KNX Association comes up with useful extensions. Telegrams of a KNX installation can now be recorded over a longer period of time without having to leave costly laptops with ETS4 at the building site. The "Long-term Recorder" app for ETS is installed on a less important PC, where it can autonomously be used for on-site monitoring and recording.

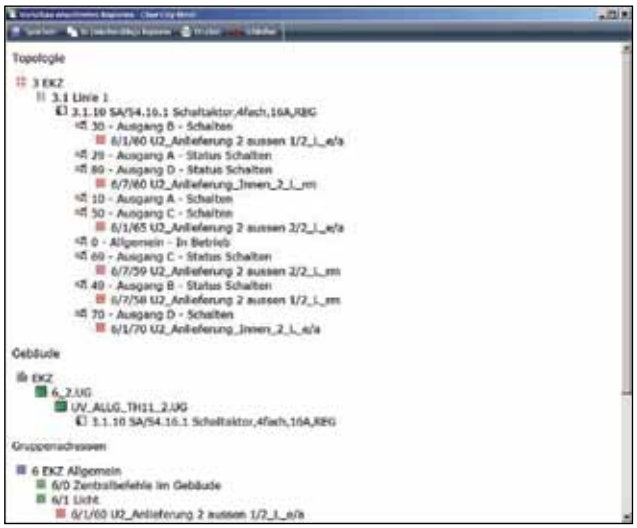
The issue of unauthorised manipulations of the project software during the warranty period is now also a thing of the past: The "Project Tracing" app allows tracking all third party manipulations.
One of the 10 ETS apps presented will include the "Online KNX Product Catalog" app, an extension that saves users time-consuming searching for device software on the websites of various manufacturers.
Another new product is the "Training Centre App", an application that allows the trainer to reset all devices of the practical training sites in one go when preparing the next training session.
And another application for specialists wanting to have a closer look inside devices: The ETS4 app "Device Reader/Editor" allows reading device memory.
Users who are not sure whether the project software on the laptop is the latest version can use the new "Project Compare" app to check. There are more apps to come.

## Customized flexibility

With the ETS apps, KNX presents a concept to adapt the Engineering Tool Software ETS4 to the growing worldwide demands. ETS4 can be customized to individual needs while maintaining compatibility. Especially KNX experts will profit from the transparency and faster configuration offered by these extra tools. Also, KNX members can now tailor their own apps according to the different features of their products and become even more flexible. The ETS apps are available exclusively via the KNX online shop (www.onlineshop.knx.org). Apps can be activated via an ETS4 licence.

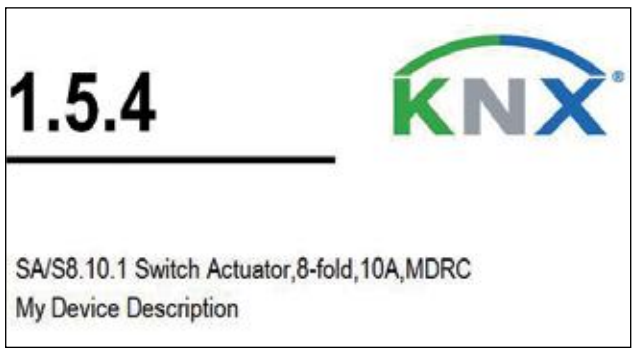


*With the growing importance of KNX, the number of KNX products on the market increases. The applications needed usually have to be downloaded from the websites of various manufacturers. The new "Online KNX Product Catalog" app makes time-consuming searching unnecessary.*




*New ETS apps by KNX make ETS4 more attractive: for instance with the "Extended Copy" application, users can easily highlight and duplicate elements of existing projects. The target copies can then be adapted and used in other parts of a building.*

*Extensions for ETS4 support the realisation of professional projects. The ETS application "Project Compare" for instance can be used to compare the actual status of an existing installation with the target status of the ETS project.*




*The ETS app "Labels" allows to print prefabricated labels available from the office supply store. The information for this is taken over directly from ETS4.*

# ETS Apps Overview

| ID | ETS App | Function | Advantage | Price € |
|---|---|---|---|---|
| 1 | Extended Copy | Duplicates existing project parts | Quick creation of similar structures in a project | 99,– |
| 2 | Split & Merge | Projects can be split, and reunited again | Colleagues can work together on KNX projects | 199,– |
| 3 | My Product Templates | Pre-configured devices can be stored as favorites | Allows to quickly insert pre-configured devices into projects | 79,– |
| 4 | Replace Product | Replaces 1..n units in existing projects with similar devices | Device configurations will be taken over automatically | 79,– |
| 5 | Labels | Use ETS4 project information as base for device stickers | Timesaving and proper labeling | 49,– |
| 6 | Long-term Recorder | From ETS independent tool for long-term recording | No need to leave an ETS4 laptop unattended at the site | 49,– |
| 7 | Project Tracing | Track all possible ETS4 project changes | Proof in case of warranty claims, check project progress | 49,– |
| 8 | Online KNX Product Catalog | Product catalogs from many manufacturers can be retrieved online via ETS4 | No longer look for product catalogs via individual websites, just get them via ETS4 | 0,– |
| 9 | Training Centre Tool | Unload the entire installation, e.g. after course completion in a training center | Quick and easy training session preparation | 0,– |
| 10 | Device Reader/Editor | Retrieve detailed data from KNX devices | Enhanced problem analysis | 49,– |
| 11 | Project Compare | Compare the KNX installation with its ETS4 project | Dissimilarities in device configurations will be shown | 49,– |

KNX Association, Belgium

**Speed up project design!**
**ETS App: "Extended Copy"**

The ETS App "Extended Copy" is used to quickly create similar structures in a project. This feature is meant especially for KNX users dealing with large projects, with for example recurring room functionality. During the copy process, a dedicated dialog will allow devices, bus lines, even complete building parts together with their destination address assignments, parameterization, group addresses, links, text attachments and other information to be adjusted. Thereafter, the configuration is inserted seamlessly. This results in new projects at very short notice. Projects that otherwise had to be re-configured via a very time-consuming workflow.

***Contact:*** *www.knx.org*

KNX Association, Belgium

**Re-use what you created before**
**ETS App: "My Product Templates"**

In practice, configuring KNX devices can be very time-consuming. If you need devices with particular configurations more than once, it may be useful to have them somewhere available for further use afterwards. With the new ETS App "My Product Templates" such ready-made devices can be added to a favorites list. Also KNX devices used in all (or almost all) projects can be handled in the same way. They are then also available for other projects - like from the manufacturer catalog - but then fully pre-configured. Users who repeatedly integrate similar functions can save themselves a lot of time and effort with this ETS App.

***Contact:*** *www.knx.org*

KNX Association, Belgium

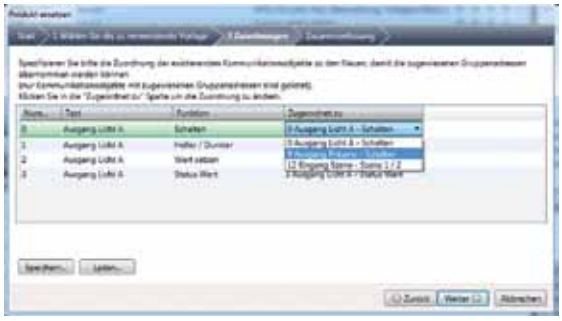
**Involve colleagues for KNX projects!**
**ETS App: "Split & Merge"**

Large KNX projects KNX ask for teamwork. But how to organize the interface between the different parts of the project? The situation where several people simultaneously edit a KNX installation may, e.g. for address assignment or central function configuration, lead to inconsistencies. Using the ETS App "Split & Merge", guarantees smooth cooperation for such situations. The advantage is that you can split a previously defined project into two, three or more parts. Several employees can configure them independently and merge again after completion of the entire project. Thanks to teamwork, the processing time for enhanced projects can be reduced. Even unrelated projects can be merged with this function.

***Contact:*** *www.knx.org*

KNX Association, Belgium

**Exchange Devices, but keep their configurations**
**ETS App: "Replace Product"**

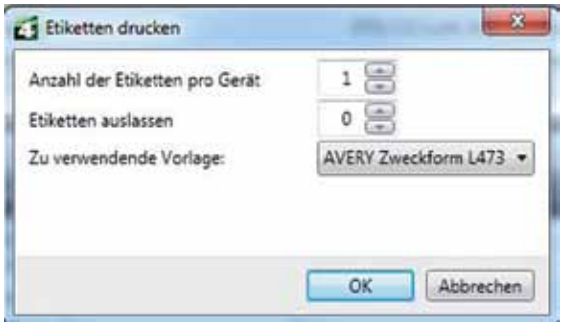


One of the benefits of using KNX electrical installations, is their flexibility and the possibility to realize cost-effective enhancements. Because it usually only concerns parameterization. And even this can now - at least partly – be optimized. This is thanks to the new ETS App "Replace Product", which replaces KNX devices while keeping their parameter settings. If one exchanges e.g. a four-fold actuator with an eight-fold actuator, the parameters of the first four channels are automatically configured. This is possible for devices with similar functionality, regardless of the manufacturer. Even when devices need to be repaired, users benefit from this ETS App.

***Contact:*** *www.knx.org*

KNX Association, Belgium

## Labeling vs. Confusion
## ETS App: "Labels"

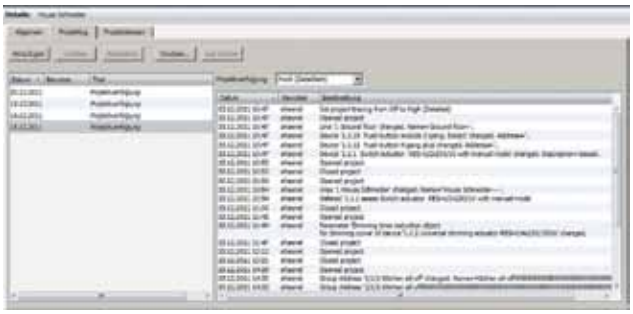



The project is ready for commissioning, but are all bus components really ready for this assignment? The importance of the visual information regarding physical address, mounting, function, etc. on devices, is not to be underestimated. Especially for this situation KNX Association has come up with a very helpful tool. With the ETS App "Labels", device labels based on forms can be printed as stickers. The information is taken directly from the ETS4 Projects. This not only facilitates the work of the installer or system integrator, but also provides consistent overview within distribution boards and cabinets.

***Contact:*** *www.knx.org*

KNX Association, Belgium

## Who made changes in the project?
## ETS App: "Project Tracing"

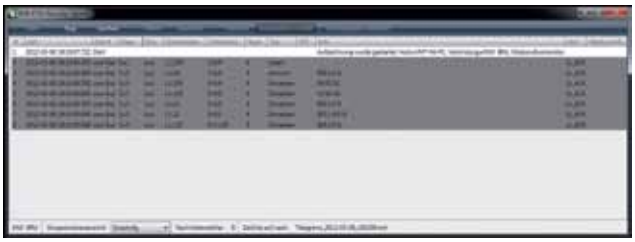


When a KNX project is finished, the installation company will usually handover the ETS4 project to the customer. Which implies that any third party can change configuration parameters afterwards. When this leads to a malfunction, the system integrator has of course every right to decline warranty. The system integrator had however so far no way to proof that a third party caused the malfunction, this situation is now rectified thanks to the ETS App "Project Tracing". This feature is activated via a password, thereafter ETS4 automatically lists all possible changes made for projects, all in chronological order. This App can also serve to monitor the progress of projects under construction.

***Contact:*** *www.knx.org*

KNX Association, Belgium

## Long-term Recorder
## ETS App: "Long-term Recorder"

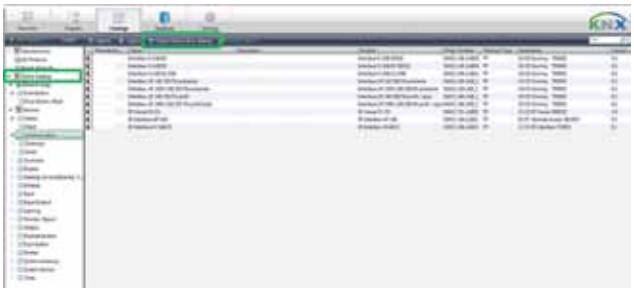


For some KNX system malfunctions, observation of the message traffic over a longer period is required. This is usually done with the ETS4 group or bus monitor. But who is happy to leave an ETS4 laptop unattended behind, as it most probably also needs to be used for other activities/ projects? This is where the new ETS App "Long-term Recorder" comes into play. This App can be installed independently from ETS4. So no problem to monitor at one site and to continue on another or to enjoy the weekend without any worries. The recorded telegrams can later on be taken over and analyzed by ETS4.

***Contact:*** *www.knx.org*

KNX Association, Belgium

## Retrieve product catalogs online
## ETS App: "Online KNX Product Catalog"

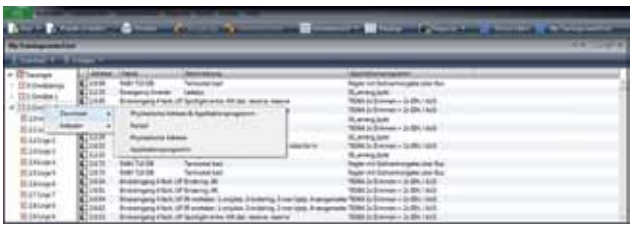


Due to the success of KNX, also the range of available KNX products is extending. The applications that need to loaded into KNX devices, can be downloaded from the individual KNX member company websites. This task a such can be very cumbersome. With the new ETS App "Online KNX Product Catalog" this situation has changed, the required product catalogs can now be retrieved from within ETS4. The offered product catalogs can differ by manufacturer, language and availability per country. It is no longer necessary to download complete product catalogs. This ETS App is especially interesting for beginners and regular users.

***Contact:*** *www.knx.org*

KNX Association, Belgium

## Unload an entire project by a click of the mouse
**ETS App: "ETS Training Center Tool"**



After the devices of a KNX project are programmed, it is still possible via ETS4 to make changes to the project. Unloading the entire KNX project is however not common, unless it concerns the equipment used for KNX training. For a training center, unloading entire KNX projects is daily practice: at the end of a training session the equipment needs to be set to the initial state as quick as possible, in order to start the next session. The ETS App "ETS Training Center Tool" allows the instructor to reset an entire KNX installation with just one mouse click, which makes this App extremely useful for training centers or system integrators offering customer training.

***Contact:*** *www.knx.org*

KNX Association, Belgium

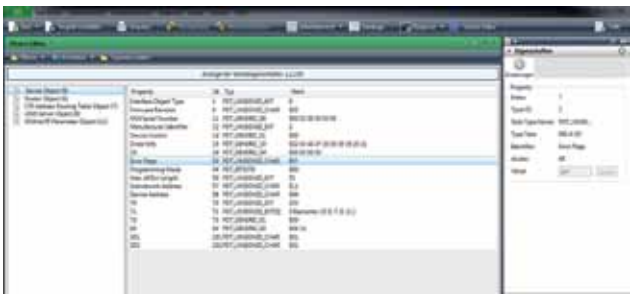
## In case of doubt, compare the installation with the ETS4 project
**ETS App: "Project Compare"**

Which ETS project is the latest? What should not happen, can in practice unfortunately happen. If a KNX project was edited because a particular function has been optimized, doubts can arise. Rather than trying and guessing, use the ETS App "Project Compare". This allows the comparison of individual devices from the installation with the available data in the corresponding ETS4 project. In this way the current state as in the installation can be compared with the expected state as in the ETS4 project. Dissimilarities in device configurations will be shown, the result can also serve as evidence in case a third party has tampered with the installation.

***Contact:*** *www.knx.org*

KNX Association, Belgium

## Experts check out device memory
**ETS App: "Device Reader / Editor"**



KNX devices are characterized by the fact that their application software offer parameters for all possible functions. Furthermore, with the help of ETS4, device configurations can easily be changed at all times. But there are however situations where systems integrators have to dig deeper into devices. It can for example happen that unknown bus components come to the surface unexpectedly, when reconstructing an existing KNX installation. In such cases, the ETS App "Device Reader / Editor" can be used in order to read out the memory of devices, which will provide the user with the crucial and possible clarifying information.

***Contact:*** *www.knx.org*

# New Members

FINLAND
**ABB Oy, Drives**

ABB is represented in over 100 countries with more than 100,000 employees. ABB benefits from over 25 years of experience in intelligent building control systems. ABB develops, produces and sells a complete range of innovative products for building installation. ABB plays a leading role in the KNX Association. ABB's products are conform to the international KNX standard, the leading technology worldwide for intelligent building control. ABB Oy, located In Helsinki, is manufacturing and selling e.g. drives for HVAC applications and offers a complete portfolio of solar inverters from small transformerless single phase string inverters up to hundreds of kilowatts transformerless central inverters. The revenues of ABB Oy are 2.2 billion euros and the company employs more than 6,000 people.

***Contact:*** *www.abb.com/drives*

GERMANY
**ABUS Security-Center GmbH & Co. KG**

ABUS Security-Center is a manufacturer of innovative alarm and video surveillance systems. For the company, the development of particularly user-friendly and holistic security products has priority. The target is the fusion of mechanics, electronics, alarm and video. The integration of the KNX technology into the range of wireless and wired alarm systems sets new standards and allows KNX users to extend their existing KNX systems with high-end ABUS products.

***Contact:*** *www.abus-sc.com*

GERMANY
**ACX GmbH**

ACX GmbH is a company based in Lichtenstein (Saxony) and Zwickau. The company was founded in 2008. They stand for quality and commitment in the development and certification of advanced software solutions and products. They are a provider of software and hardware solutions that are tailored to customer requirements. Noteworthy is their development experience and innovation. Through several years of experience their employees have expertise in:

- development and approval of motor controls
- development and approval of tools for monitoring and parameterization of motor controls
- automation of devices, systems and equipment
- control systems for intelligent buildings and building automation
- Software Engineering for the monitoring and management of operational data
- electronics and software modules for embedded systems

***Contact:*** *www.acx-gmbh.de*

AUSTRIA
**Ce2 GmbH**

MULTICON products are being distributed worldwide through Ce2 and developed and manufactured by GIMCON. They have been focusing on IP-based solutions for smart homes since 2007. With one app for iOS, Android or Win7 their products allow a total integration of home technology (KNX), multi-room audio, multi-room tv/video and security, whereas the app can be customized individually to the customers' requirements. Solutions with their products are scalable, modular, easy to use, require no programming, are based on open standards and are affordable. The integration is being done via gateways (KNX) and controllers, using TCP/IP and PoE for connection and power. For the control of a KNX installation you only need the KNX gateway and app on e.g. an iPad. The multi-room mediasystem allows TV-recording, -streaming in an IP-network and is also a player for music, videos and blu-rays.

***Contact:*** *www.multicon.at*

## ITALY
### Cillichemie Italiana S.r.l

CILLICHEMIE ITALIANA has been operating in the field of water treatment for over 40 years, through a network of qualified agencies, retail centers and service centers spread around Italy. The philosophy the company always pursued, is the continued research and innovation, the quality of its products and the care of pre-and post-sales. CILLICHEMIE is able to propose any solution in water treatment and in particular in the following areas:

- process water
- water use technology
- water for water supply
- water for domestic use
- water for pharmaceutical and cosmetic
- water for the microelectronics industry
- desalination of sea water
- supply of equipment for public fountains
- monitoring
- swimming pool water
- chemical products for all water treatment and conditioning

***Contact:*** *www.cillichemie.com*

## GERMANY
### Dallmeier electronic GmbH & Co.KG

Dallmeier is a leading global provider of products for network-based video surveillance and has been developing and manufacturing high quality components and complete solutions for the CCTV / IP range for more than 25 years. Besides cameras, recorders, storage systems, intelligent video analytics, video management software Dallmeier also offers stand-alone products, but also perfectly matched complete systems for video surveillance from a single source. All products are developed in-house by Dallmeier in Germany and meet the highest standards of quality and reliability, which has been confirmed by independent international laboratories with numerous certificates and awards over and over again.

***Contact:*** *www.dallmeier-electronic.com*

## AUSTRIA
### Digital Elektronik GmbH

Digital Elektronik is a service-oriented Austrian service provider in the fields of electronics and precision engineering with branches in St. Leonhard near Salzburg and Tamsweg. The company was founded in 1978 and is headquartered in St. Leonhard near Salzburg. In 1998, the subsidiary in Tamsweg was opened. Currently they are using KNX in one of their projects to control several lamps, which consist of several LEDs. The respective control of each LED is carried out exclusively via the KNX protocol and allows control of the entire system via a central computer. The large number of controllable lamps (> 350), or their LED composites, contributes to the complexity of the project, because all require a dedicated LED driver control.

***Contact:*** *www.digital-elektronik.com*

## SPAIN
### Domotica Levante

Domotica Levante is a modern home automation company with large experience in the electricity sector and in the development and integration of KNX home and building automation systems. The company is continuously innovating to solve needs of integrators of new technologies. The organization provides accurate advising services and project development, and takes particular attention to after-market service. It has strong engineering and technical expertise with a well-trained team of technical professionals able to offer the best solution to customers based on one-to-one service. The R & D Department creates KNX hardware and software solutions supporting any customer need and empowering interoperability. Innovation is a never-ending pursuit at Domotica Levante.

***Contact:*** *www.domoticalevante.es*

## USA
### ELAN Home Systems

ELAN Home Systems is the US manufacturer of the g! Entertainment and Control Solution. With over 30 years of experience in the home entertainment and control space, ELAN integrates whole-house audio and video, home theaters, security, climate, lighting, shade, irrigation, pool and other systems in the home and commercial spaces. ELAN has expanded its compatibility by integrating KNX devices to leverage the world's most widely used protocols for building control. ELAN sells through a network of International Distributors and is installed by trained and certified professional integrators.

***Contact:*** *www.elanhomesystems.com*

TAIWAN
**Emcom Technology Inc.**

Emcom Technology Inc., established in 1975, has become a reliable and long-term manufacturer for a number of leading brands in the world. Emcom is devoted to providing innovation and quality on motion and presence sensors for lighting control for over 20 years and is now developing KNX presence detectors as well as lighting systems and HVAC (heating, ventilation and air conditioning), controlled cost-effectively and intelligently on a demand basis for energy-saving management. Their R&D team consists of leading electronic and mechanical engineers, working closely with their clients to meet the needs of end users and get feedback from installers. Utilizing the latest information technology, Emcom ensures that its development engineers are able to introduce new products a step ahead of the industry.

***Contact:*** *www.emcom.com.tw*

GERMANY
**GFS GmbH**

The GFS Group, Gesellschaft für Stromversorgungstechnik , was founded in 1984. Innovative ideas, continuity, constant updates, the latest production technologies and a consciously cultivated large vertical integration ensure a successful business development. The GFS group in its current form is one of the leading providers of products and solutions in the field of power engineering. They focus on battery chargers and emergency power equipment. In their main plant in Gottenheim the development of power and control electronics, the design of each device series and finally the assembly of the entire device technology is being done. Their subsidiary, GFS Elektro GmbH in Pößneck was founded in 1991.

***Contact:*** *www.gfs-gmbh.de*

ITALY
**Home Systems Consulting S.p.A.**

Home Systems Consulting S.p.A. is an engineering company fully dedicated to the design and development of technology integration solutions for home and building automation. Home Systems Consulting developed HYSCO, a powerful software server for the integrated control of building automation subsystems, local and remote. HSYCO has a state-of-the-art HTML5 based interface, customizable, accessible and maintainable through the most common wireless devices, providing exceptional flexibility and ease of use. Some of the supported applications: control of lighting, automation, heating and cooling systems, video surveillance, safety and anti-intrusion, timers and scenarios, energy consumption management, networking and VoIP telephony, multi-room music, home entertainment, localization services and digital signage, access control systems, professional audio, video and lighting systems.

***Contact:*** *www.homesystemsconsulting.com*

GERMANY
**ICONAG**

ICONAG was founded 15 years ago with the intent to develop, produce and distribute professional software solutions for building automation. Their philosophy is to define new standards on the market by developing products which are based on the latest and easiest to handle technologies. The KNX OPCServer is one of the products integrators, users, planer and end customers benefit from. More than 3000 KNX projects in home and building automation are realized with their management software product B-CON. Following their guiding principle „Facility control – all over IP", they gaze at building as a whole and unify subsections in one system. For this reason, they realize a sustainable management of buildings and facilities by following ecological and economical aspects.

***Contact:*** *www.iconag.de*

GERMANY
**Infineon Technologies AG**

Infineon Technologies focuses on the three central challenges facing modern society: Energy Efficiency, Mobility and Security and offers semiconductors and system solutions for automotive and industrial electronics,chip card and security applications. Infineon products excell through their quality and their innovative and leading-edge technology in analog and mixed signal, RF and power as well as embedded control. Infineon is the only company to offer power semiconductors and power modules for the entire electrical energy generation, transmission and conversion chain. The portfolio of products offered by the Industrial and Multimarket Division are: power semiconductors and modules, custom ICs, and small-signal discrete semiconductors, used in medical and consumer electronics and computing products as well as in the traditional industrial segments mentioned above.

***Contact:*** *www.infineon.com*

GERMANY
**IT GmbH**

Gesellschaft für Informationstechnik mbH

IT Gesellschaft für Informationstechnik mbH (IT GmbH) is a software development company located in Kalchreuth near Nürnberg (Germany). Funded 1992, it has been active in KNX software development since the very beginning. This includes development for the KNX association, former EIBA (ETS1, ETS2, ETS3, ETS4, MT.) and for several KNX member companies (e.g. Plugins). IT GmbH's own product line includes a lot of ETS addons (e.g. reconstruction) as well as other KNX related software (e.g. the Elvis visualization system).

***Contact:*** *www.it-gmbh.de*

SLOVENIA
**KomfortKlik**

Comfortclick Smart Buildings

KomfortKlik is a system integrator operating in the field of home automation. By offering the complete spectrum of services for home automation, we gained extensive know-how on home devices, systems and automated logic. Working closely with both end users and system integrators enables KomfortKlik to understand their needs and preferences. It uses this knowledge in the development process of its building automation software ComfortManager. The main benefit of ComfortManager is a comfortable and fast system configuration without special training. For end users it offers intuitive visualization, which can be tailored to specific user needs. ComfortManager enables the control of KNX based devices and other main technical applications such as alarm, video surveillance, home theater, etc. ComfortManager is also suitable for iPhone and iPad use.

***Contact:*** *www.comfortclick.com*

BELGIUM
**Lithoss**

Lithoss® DESIGNED SWITCHES

Lithoss nv is a Belgian manufacturer of traditional handmade design switches. These high-end design switches are all in exclusive finishes using massive materials (Stainless steel, Zincor, Zamac, Bras, etc..) and are of a very high quality, all made in Belgium. The Lithoss product range (Select, Immix, Illume) is available in various finishes: Stainless Steel, Bronze, Nickel, Ral 9010 (white) with or without soft touch coating, Fusain (Black), Laiton (brass) and Chrome. Lithoss switches are integrated in different kind of projects worldwide : Hotels, Offices, stores, yachts, sailing boats, residential, private hotels, apartments, .... Lithoss, together with Hager, was able to develop a basic yet versatile KNX interface making the total concept of Lithoss switch and interface very competitive in the global KNX application market.

***Contact:*** *www.lithoss.com*

USA
**NuVo Technologies LLC**

NUVO®

NuVo Technologies is an award-winning innovator in the design, manufacture, and global marketing of Multi Room Audio systems. These systems allow the consumer to access and listen to music anywhere in the home. Music can be accessed from their own music collections, streaming internet services, and mobile devices. Control options include Apple iPhones and iPads, Android phones and tablets, or third-party control devices. Convergence of audio, video, security, environmental controls, and home automation are becoming increasing important to the consumer. NuVo enthusiastically supports KNX as the platform to integrate these systems together.

***Contact:*** *www.nuvotechnologies.com*

PORTUGAL
**NWC – Network Concept**

nwc

NWC began its activity in 2008 in Portugal, after one and a half year as academic research, as a startup from IST (most renowned Engineer University in Portugal), and INESC-ID (most important Institute of Technology in Portugal). Since the beginning, the focus has been the creation of a new interface and control paradigm for Integrated Home Automation Systems, based on simplicity and providing an amazing user experience. iSimplex Home Server provides the central brain and interface for Intelligent Homes. In 2011, the iSimplex product line was launched, and during the same year, the Brazil offices were opened for closer support to the South American market. Maintaining the focus on providing the best home user experience, iSimplex Media Center was launched, not only to bring the ultimate media experience for TV around the home, but also providing Home Automation control via TV.

***Contact:*** *www.nwc.pt*

THE NETHERLANDS
**Philips**

Royal Philips Electronics of the Netherlands (NYSE: PHG, AEX: PHI) is a diversified Health and Well-being company, focused on improving people's lives through timely innovations. As a world leader in healthcare, lifestyle and lighting, Philips integrates technologies and design into people-centric solutions, based on fundamental customer insights and the brand promise of "sense and simplicity". Headquartered in the Netherlands, Philips employs more than 118,000 employees in more than 60 countries worldwide. With sales of EUR 26 billion in 2008, the company is a market leader in cardiac care, acute care and home healthcare, energy efficient lighting solutions and new lighting applications, as well as lifestyle products for personal well-being and pleasure with strong leadership positions in flat TV, male shaving and grooming, portable entertainment and oral healthcare.

***Contact:*** *www.philips.com*

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POLAND
**POOHCO**

POOHCO was established in 2006 and from the beginning of its activities it focused on new technologies and dynamical development. The company mainly consists of electric engineers and technicians. POOHCO actively raises awareness for LED solutions, designing systems and decorative lighting systems, intelligent control and power. It also deals with complex installation and configuration. POOHCO conducts business ecology, respecting the planet and using green technology. It is proud to join the respectable members of KNX Association, considering this an important milestone in the history of the company.

***Contact:*** *www.poohco.pl*

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USA
**Savant Systems, LLC**

Savant designs, develops and manufactures a complete suite of integrated solutions that have defined the modern age of home automation, commercial control, entertainment and communications. These products deliver an array of applications and services beyond traditional control and automation functionality, such as multi-room audio and video, advanced digital audio and video processing, extremely flexible and scalable audio and video switching, digital media server and jukebox capabilities, telephony, and an array of integrated applications and services. In addition to the numerous innovative automation and multi-zone audio/video products, Savant provides an open-programmable, intelligent control and a media management software solution called "RacePoint Blueprint" that configures and controls any media component or subsystem without writing a single line of code.

***Contact:*** *www.savantav.com*

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ITALY
**SBS SpA**

SBS is a market leader company for consumer electronics in Italy and many other European countries. Some years ago SBS developed the first domestic thermostat with a GSM modem fully configurable through SMS. Now it intends to introduce on the market some devices for building automation: Power supplies, push-button interfaces, binary inputs, actuators for switching and blind/shutter control, dimming actuators, push button modules and control touch panels.

***Contact:*** *www.sbs-power.com*

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SWITZERLAND
**Schenker Storen AG**

Schenker Storen, number one in the Swiss market for sun-and weather protection, is a traditional company, which excels through a comprehensive, innovative range of products and high quality installations and services. The most important product segments are slat blinds, which are manufactured in Schönenwerd, as well as fabric blinds, produced in Thanvillé in France. In total, the company employs more than 700 people; 36 branches all over Switzerland ensure quick responses to customer requirements. Schenker Storen places great emphasis on quality assurance, allowing the company to fulfill the requirements of the standards ISO 9001, ISO 14001 and OHSAS 18001. Another core area is the ongoing further training of employees; the knowledge created in this way is then passed on in full measure to the customer.

***Contact:*** *www.storen.ch*

USA
**Texas Instruments**

Texas Instruments is a worldwide supplier of semiconductor components. Texas Instruments is ranked 175 in the top 500 publicly traded companies in the United States with over US$35 billion in annual sales. Texas Instruments is pleased to support the KNX Association by providing customers with a total solution on the basis of the KNX technology. Texas' experience in wireless connectivity supports applications focused in the Sub-1 GHz and 2.4GHz frequency bands. Its radio technology and development platforms with reference designs allow engineers to reduce their development time of up to 50% and cost savings of up to 30%.

***Contact:*** *www.ti.com*

POLAND
**Tokka Sp. Z o.o**

Tokka Sp. z o.o., founded in 2011, is a Polish manufacturing company intending to offer KNX system and bus devices - mainly DIN rail mounted actuators, designed for lighting, heating and blinding control. Functionality of the products will address market demands of system integrators as well as final users.

***Contact:*** *www.tokka.pl*

GERMANY
**Vaillant GmbH**

The Vaillant Group is an international family-owned company with more than 136 years of tradition. Its core business is heating technology. With annual sales of €2.3 billion, the Vaillant Group is the second-largest European company in this branch. In addition, the Vaillant Group is active in the branches of ventilation and air-conditioning technology. With about 12,400 employees they develop and manufacture products at 14 sites in eight countries. The Vaillant Group sells them via own sales companies in 20 countries. Furthermore, they export products in 60 countries. Their business in highly efficient technologies and products based on renewable energies is a growth driver. In particular, against general market trends Vaillant significantly increased its sales of condensing technology, heat pumps and solar thermal systems.

***Contact:*** *www.vaillant-group.com*

DENMARK
**VELUX A/S**

The VELUX Group, which has manufacturing companies in 11 countries and sales companies in just under 40 countries, is one of the strongest brands in the global building materials sector and its products are sold in most parts of the world. The VELUX Group has about 10,000 employees. Their head office is in Horsholm, north of Copenhagen. VELUX creates better living environments with daylight and fresh air through the roof. Their products consist of a wide range of roof windows and skylights. It also offers many types of decoration and sun screening, roller shutters, installation products, products for remote control and thermal solar panels for installation in roofs. VELUX Technology also supplies original VELUX components to its partners working in the field of roof window sun screening. KNX will be available as an option for products related to VELUX modular skylight usage.

***Contact:*** *www.velux.com*

TURKEY
**VIDEOCOM Elektronik A.S.**

Videocom Elektronik A.S. was established in 2003 to produce video intercoms and home automation systems. The expertise of its staff lies in home automation and software. Its product range consists of heating, ventilation, lighting, security, gas- and smoke control, water leakage control, curtain and electrical systems control. Its products are sold worldwide and are included in projects in Turkey as well as abroad. The engineers at Videocom work with self-developed software. As a next step, KNX compatible products will be developed.

***Contact:*** *www.videocom.com.tr*

# New KNX Products

ABB Stotz-Kontakt GmbH

## ABB i-bus® Tool

ABB presents a new software concept with the i-bus® Tool. It supports system integrators during commissioning and servicing KNX installations. The Tool accesses an ABB i-bus® KNX device via a standard KNX interface with the assistance of the physical address. The integrator can trigger the desired functions, read values, simulate states and make settings for the connected device. No divergences to the ETS project can result through the Tool. It is optional, so that the devices are still being commissioned using the ETS. The i-bus® Tool is free-of-charge and can be downloaded at http://www.abb.com/knx.

***Contact:*** *www. abb.com/knx*

ABB Stotz-Kontakt GmbH

## ABB i-bus® KNX Ventilantrieb-Aktoren

The new ABB i-bus® KNX Valve Drive Actuators VAA/S are modular installation devices for installation in the distribution board on 35 mm mounting rails. The devices feature six or twelve semiconductor outputs for control of thermo-electric valve drives in heating and cooling systems. The outputs can be operated at 24-230 V AC. The outputs are short-circuit and overload protected. The outputs can be directly controlled using the manual buttons. The Led's on the front of the device signal the status of the outputs. The connection to KNX is implemented via a bus connection terminal. The devices do not require an additional auxiliary power supply.

***Contact:*** *www.abb.com/knx*

ABB SpA

## ABB Mylos KNX range

ABB offers a new series of certified KNX devices for flush mounting installation, according to Italian standard. These devices have a soft velvet finishing and come in two colors, black and white, for a full coordination with Mylos wiring accessories aesthetics, characterized by exclusive design, materials and colors. Mylos KNX is a complete range for home and building automation: inputs, switch actuators and dimmers for lighting control, shutter actuators, all equipped with one or two switch rockers, IR Receiver, thermostat and chrono thermostat for room temperature control. Mylos KNX range allows the maximum flexibility of installation, perfectly integrating the ABB i-bus KNX range of devices.

***Contact:*** *www.abb.com/it*

Agenor automatika d.o.o.

## Agenor Agent

Agenor automation is launching its first KNX product – a middleware intended for system integrators that implement standard SCADA packages or their own MS Windows-based visualisation software for KNX building automation systems. Agent is a fully developed KNX communication driver, covering all KNX data formats and communicating with a KNX network through a standard KNX IP router on the back end. On the front end, the client software can use a fast-deployable, standard DDE protocol to symbolically address data and send commands, without the need to study and develop the KNX telegram system.

***Contact:*** *http://agent.agenor.hr*

AMBER wireless

## KNX RF Radio Module: AMB8426 KNX

The surface-mounted RF module AMB8426 KNX provides an ideal radio solution supporting the wireless KNX protocol (KNX RF). The RF module supports both unidirectional and bidirectional devices. The tiny RF module is easy-to-integrate into sensors or actuators and helps OEMs reducing time-to-market significantly. The AMB8426 KNX operates in the 868 MHz frequency band and is license-free usable throughout Europe. The RF module provides received signal strength information (RSSI) and Listen-Before-Talk (LBT) functionality to enhance the quality of wireless data transmission. Due to its integrated power save modes, the RF module is also perfectly suitable for battery powered applications.

***Contact:*** *www.amber-wireless.de*

AMBER wireless

## KNX RF Radio Module with integrated antenna: AMB8520 KNX

The AMB8520 KNX is a compact and low-cost radio data transmission transceiver module enabling wireless data communication based on the KNX protocol (KNX RF) in the 868 MHz frequency band. The integrated microprocessor controls the entire wireless data communication, the host system does not have to perform any radio-specific tasks. The tiny RF module also provides an onboard chip antenna, which eases the integration of the module into a device. The RF module supports both unidirectional and bidirectional devices. Its integrated power save modes make the RF module perfectly suitable for battery powered applications.

***Contact:*** *www.amber-wireless.de*

Apricum d.o.o

## UIM KNX 42 - USB Interface

The new USB interface combines high-end technology, functionality and flexibility in a perfect way. This innovative device enables data connection between PC and the KNX bus – not only for ETS, for commissioning of the bus devices, but also for visualisation, protocolling and diagnosis. Any software based on FALCON (ETS4, EITT etc.) communicates via flexible common EMI protocol through UIM KNX 42 with the devices connected. The intelligent USB interface supports long telegrams (max 228 bytes) as well as Raw Frames – a special diagnostic mode. Also available as OEM.

***Contact:*** *www.apricum.com*

b.a.b-technologie gmbh

## eibPort Version 3

Externally it has barely changed, but internally it has won enormous power. The eibPort version 3 from b.a.b-technologie now has a 600MHz Vortex 86DX processor unit, 256 MB RAM and 4GB Flash memory. EibPort now disposes a data history table of 500.000 telegrams, which allows a detailed data analysis with a new graph library. The new hardware also offers a wide scope for new software, so furthermore interesting software updates will come up. Thanks to the energy optimized vortex processors the power consumption of Version 3 still stays below five Watts. The eibPort is available as KNX, Powernet KNX and as KNX/EnOcean Version. A GSM module is optional.

***Contact:*** *www.bab-tec.de*

Balmart

## KTC-Controller

Balmart launches the KTC-Controller as the first KONEXTEC brand product, an advanced device featuring energy saving, security and comfort functions for domestic environments. The KTC-Controller provides six potential free contacts to open/close water or gas supplies. In addition, the inputs for water leak and smoke detection and up to six presence detectors 2-EOLR guarantee a full security performance, sending every self-generated alarm to an ARC through a Contact ID. You can connect sensors to measure indoor parameters, giving the chance to cheap KNX sensing. The KTC-Controller also allows bidirectional communication with KNX over SMS, providing remote control and monitoring with just a cell phone.

***Contact:*** *www.balmart.es*

b+b Automations- und Steuerungstechnik GmbH

## b+b KNX OPUS Gateway

The KNX OPUS Gateway allows the communication between the KNX bus system and the MCU610 controller from OPUS. The Gateway establishes a bidirectional communication, which means you can use the gateway on the one hand for visualization of OPUS MCU610 states like e.g. "Volume", "Input Select", … in the KNX system. On the other hand it is also possible to execute OPUS instructions from the KNX bus system like e.g. "Input Select", "Volume Up" instructions with a normal KNX switch. The parameterization of the KNX OPUS Gateway is performed through the integrated USB interface in conjunction with the b+b Terminal software. You can parameterize up to 200 channels per KNX OPUS Gateway.

***Contact:*** *www.bb-steuerungstechnik.de*

b.a.b-technologie gmbh

## DUO DMX Gateway

The new KNX/DMX Gateway from the company b.a.b-technologie gmbh now has new functions. It is now possible to choose how to continue after stopping a light scene. Two Options are available. Pause: The scene is to be continued where it was stopped. Stop: The Scene will begin with the first programmed step. Each of the 2 x 512 DMX- channels is dimmable. Cause of the multiple group address association, each channel can be mapped different. The ETS data import eases the allocation. A search function lists all gateways connected to the network. This enables an easy change of already programmed scenes.

***Contact:*** *www.bab-tec.de*

Becker-Antriebe GmbH

## B-TRONIC

The B-TRONIC by Becker-Antriebe GmbH will stand for bidirectional KNX RF 1-channel and 15-channel hand-transmitters, bidirectional KNX RF roller-shutter tube-drives and a central control unit for roller-shutters with integrated colour-touchscreen, LAN, WLAN, KNX RF and the approved CENTRONIC-RF-system from Becker. Further KNX RF products are planned.

***Contact:*** *www.becker-antriebe-partner.de*

B.E.G. Brück Electronic GmbH

## KNX SA-8C-230V-EM

This new eight channel KNX SA-8C-230V-EM, is the latest addition to the B.E.G. family of innovative switch actuators. This product has integrated current consumption monitoring in mA/A, as well as the electrical load in kWh. Each channel has 20mA current which can be controlled and linked to the BUS network. Each channel consumption in mA/A or kWh can also logged, which is ideal for knowing when the service intervals are due. These counters can also be reset. The total load is under permanent surveillance, which makes it easy to see failures such as load breakdowns or load transgressions. The unit is easily set up using the standard ETS3/4 software.

***Contact:*** *www.beg-luxomat.com*

Bilton International

## BILTON KNX Actuators

Made in Austria. BILTON International = permanent R&D at the construction site for LED-lightning and their control units. Think local – act global! Innovation summer 2012: integration of power supplies in the control units of Steel and Curve by BILTON. This symbiosis will simplify the usability and installation. The connection power input will be between 90 and 230 V, so they could also be used outside the EU, and with a total output of 100W there are no limits for the use.

***Contact:*** *www.bilton.at*

BleuComm'Azur

## KNX proServ

Tired of complicated and long configuration? An instant taste of success creating amazing and breathtaking native visualization for iOS smart phones or tablets (Android in preparation) is guaranteed! Configure your GUI only in ETS with zones, circuits, shutters, scenes, HVAC, weather stations, using a simple product database. The configuration is stored through Ethernet in the proServ controller, and when any of your mobile devices connects, it will be configured in mere seconds. The whole visualization just pops up. proServ works 100% biderectionally up to 10 mobiles or tablets! There are no additional costs for software, no need for any editor, only ETS. Check out the free "KNX proServ" apps.

***Contact:*** *www.knxware.com*

B.E.G. Brück Electronic GmbH

## KNX CD-4C

This new four channel dimmer actuator, KNX CD-4C, is the latest addition to the B.E.G. family of dimmer actuators. This product enables the switching and dimming of fluorescent lamps with 1-10V EB. This unit allows the total dimming function to be easily set up, the dimming speed, the setting of the minimum and maximum brightness levels, setting up to eight scene selections and the activation and deactivation delay. For example when linked with B.E.G. occupancy sensors, a room's optimal light levels can be controlled using the daylight linked functions of the sensors. Push buttons can also be linked to allow manual operation of the dimming channels, along with setting a stair light function.

***Contact:*** *www.beg-luxomat.com*

BleuComm'Azur

## FIL PILOTE - 2 channel KNX interface

Electrical heating systems, especially in French speaking areas, are equipped with a command wire that is called "fil pilote". The company presents the first two channel KNX interface to control all operating modes of these devices. Now heating systems can be switched to Eco mode, when leaving home or setpoints can be lowered, when rooms are not in use. The KNX application allows an easy configuration together with other temperature controllers, as operating modes are defined according to the KNX specifications. The module is equipped with separate fuses for each of the two channels, so it may be connected directly behind the circuit breaker of the heater. No need for complicated wiring and extra fuses!

***Contact:*** *www.knxware.com*

BMS - Building Management Systems

## BMS Quadra

The Quadra by BMS gives an overview of the weather, totally replacing a complete sun protection central unit. Not only the design of the Quadra by BMS is unique: The device measures the wind ultrasonically with no wear and tear. It detects brightness, solar radiation and wind speed from all directions and measures both precipitation and temperature. Simultaneously, the Quadra is a central unit for eight sectors and offers various security and comfort programs. The device is controlled directly via KNX. You can find BMS at the light+building in hall 9.0, booth A35.

***Contact:*** *www.bms-solutions.de*

CD Innovation

## Maestro KNX

Maestro KNX is an application (App) for smart devices running iOS4 or later such as iPhone and iPad. The application combines the Maestro graphic interface with Apple devices, providing full, wireless remote control of KNX and other home systems. The Maestro KNX application controls and monitors KNX and other systems, integrated by the Maestro Server, enabling wireless (WIFi/GPRS) control over temperature, lighting, security, and entertainment systems. The iPhone/iPad LCD touch screen utilizes the same, unmatched, user friendly, Maestro touch screen design, simplifying control of home systems.

***Contact:*** *www.vcdinnovation.com.com*

Cytech Technology Pte Ltd.

## C-Bus to KNX Translator

Cytech's new Cbus to KNX translator is a gateway between the KNX network and the C-Bus bus system from Schneider Electric, which is another automation system widely used in Australia, Asia and Europe, allowing the two systems to be installed in the same building. KNX switches can control C-Bus dimmers and vice versa. The device is a stand-alone PCB module powered by a wall mount power supply adaptor. The product comes with power supply, KNX Bus connector and C-Bus connector. A free Bus Translator Software allows KNX group addresses to be mapped to any C-Bus Group Address in an appropriate C-Bus Application ID. Up to 3000 group addresses can be mapped on each side.

***Contact:*** *www.cytech.biz*

Dialogic Systems

## HomeCockpit Major

Product development, assembly and quality assurance made in Germany – be inspired by innovative technology and an exceptional scope of services: high IT performance, video intercom, camera, HD TV, radio, internet as well as visualization and control of building automation systems, multi-room audio/video and other Windows software. HomeCockpit Excelsior stands for reliability thanks to high-performance IT industrial components (non consumer-goods). Customized frames to your specification can also be developed. In short, the HomeCockpit Excelsior is the first choice for the high-end sector.

***Contact:*** *www.home-cockpit.de*

Ce2 GmbH

## TouchHome+ App

The MULTICON TouchHome+ App for iOS and the MULTICON Gateway allow the visualization and control of KNX systems via smartphone and tablet (and for Android in the future). The USP's are: 1. control without a server, 2. individually designable graphical interface (no lists), 3. simple setup without programming, 4. connection through TCP/IP and PoE and 5. a good value for money solution. Furthermore the gateway is the interface to their Multimedia-controller (MMC) to integrate any type of multimedia equipment. The app TouchHome+ also allows the direct control of Sonos and the integration of IP-cameras.

***Contact:*** *www.multicon.at*

Dialogic Systems

## HomeCockpit Excelsior

HomeCockpit Major is a touch panel PC for discerning tastes which combines all of the most important household multimedia functions; video intercoms, camera displays, TV, radio, information services, email. It offers the visualization and control of multi-room audio/video, building automation and all Windows software. The touch panel is equipped with resistive touchscreen, microphone and stereo speakers as standard. A camera with a privacy function and the VideoPerformance module are available as optional extras. In short, with HomeCockpit Major you have everything in one.

***Contact:*** *www.home-cockpit.de*

DIVUS GmbH

## KNX TZ

DIVUS presents the new touch panel KNX TZ with 7“ display and projective-capacitive glass touch. KNX TZ was created for use in home and office buildings and can substitute traditional switches and even internal intercom units within your intelligent system. Because of its small dimensions of 136x213 mm, KNX TZ finds its place in every room. A particularity of KNX TZ is its open operating system Android. It not only allows the use of a countless amount of already existing apps, but also simplifies new developments. Therefore, beneath your KNX system, also many other systems may be “docked” to it. KNX TZ can be mounted in different ways, as well vertically as horizontally.

***Contact:*** *www.divus.eu*

DIVUS GmbH

## KNX Server Light

DIVUS KNXSERVER is the heart of the web-technology based visualisation solution for KNX systems offered by DIVUS. Now DIVUS releases a new DIN rail PC version called KNXSERVER LIGHT on the market. KNXSERVER LIGHT fits best in small apartments or projects with less group addresses / functions. Through network access it will give you full control of your system, regardless of whether you are at home or on the way. Various KNX functions like illumination, shadowing, temperature control or similar can be displayed and controlled through the web based visualisation. Because of its compact design, KNXSERVER LIGHT can be mounted directly in the electric cabinet with the other KNX components.

***Contact:*** *www.divus.eu*

easyMOBIZ mobile IT solutions GmbH

## ayControl KNX with SIP door station support

In addition to the professional KNX functions ayControl KNX now offers a seamless connection to door stations. Video and voice connections based on VOIP/SIP protocol are now integrated. By ringing the doorbell a video connection pops up on your iPhone/ iPad/Android device and allows you to talk with the visitor and to open the door. In automatic mode, which is configurable for certain time intervals (e.g. office hours of a medical practice), the door opens without user interaction and the user gets notified by a sound/vibration. Are you interested in a live demo or do you want to talk in person with our ayControl team? Visit them at Light+Building.

***Contact:*** *www.ayControl.com/KNX-SIP*

Eelectron srl

## AD84A01KNX Inwall 8 Input / 4 Led Output Module

AD84A01KNX module includes four digital inputs to interface free potential contacts; four analog / digital inputs for free potential contacts or temperature sensors and four led outputs. Digital inputs can interface sensors, traditional buttons, etc; four led output channels at low voltage can drive LED for synoptic panels or switches. Inputs five to 8, set as analog inputs, can enable up to two temperature probes (with On/Off threshold) and two thermostats to control heating and cooling equipment, valves, two and four pipes fan coils; etc.. The device is equipped with appropriate communication interface with the TP1 bus type.

***Contact:*** *www.eelectron.com*

easyMOBIZ mobile IT solutions GmbH

## ayControl KNX now for Android and iOS

With ayControl you can control buildings easily with iOS and Android smartphones or tablets via WI-FI or 3G connections. Unlike other KNX visualizations, ayControl for Android and iOS is easy to use and does not need an additional server. With its efficient configuration (with ETS import) ayControl is not only an ideal choice for new projects but also for upgrading existing ones. Offer your clients an upvaluation of their KNX systems to control lights, blinds, IP cameras and more. Get the free base version from Android Market or iTunes App Store. Are you interested in all innovations or do you want to talk with the ayControl Team? Meet their team at Light+Building.

***Contact:*** *www.ayControl.com/Android*

Eelectron srl

## PB80AxxKNX HomePad KNX 8 channels / Temperature Sensor

Eelectron enters the residential world with the eelecta ® range, fully based on KNX. The range is composed of KNX HomePads and a Touch panel. Available in seven colors, Eelecta's HomePads feature a central cross (Red,White or Black) , which customizes the product with different finishes, and multiform Pad Covers. The front has five LED status indicators freely configurable by ETS, one for each button channel plus the corner led useful for night localization. The HomePad is available in models with four or eight channels, with or without temperature sensor to realize a room thermostat, with or without four rear free inputs to interface a slave version of the product (PB40AxxCON) or other conventional switches.

***Contact:*** *www.eelectron.com*

EIBMARKT GmbH

## New switch actuator 12fold

Since October 2011 EIBMARKT presents a new switch actuator where six channels provide the usual capacity of 16A in manual operation of the current 8-fold actuator and with six additional channels for 8A without manual operation. This permits the installation of the MDRC casing in only six width units. That means in a standard current distribution board 24 channels can be integrated on one DIN-rail. As an additional option the actuator provides binary inputs for operating, status or malfunction messages. Besides its known high stability and high quality casing and a sophisticated electronic system the actuator offers comprehensive parameters for a diversity of applications.

***Contact:*** *www.eibmarkt.de*

EIBMARKT GmbH

## New shutter / blind actuator 6fold

Since October 2011 EIBMARKT presents a new 6-fold shutter/blind actuator (N000303) with manual operation. In addition to the high stability, high quality casing and the sophisticated electronic system known from the 4/8-fold blind actuator with additional cut-off relay for parallel operation, this actuator disposes of comprehensive parameters for a diversity of applications and, of course, the1-byte object for runtime and slat. From mid 2012 there will be another version by means of capacitive sensor keys for manual operation.

***Contact:*** *www.eibmarkt.de*

ELMOS Semiconductor AG

## E981.03 KNX Transceiver

The new KNX Transceiver IC E981.03 has been successfully assessed by the KNX Association. A UART (maximum data rate 115 kbit/s) and an SPI compatible interface are available for connecting to the host controller. Two voltage regulators provide the power supply for the application and several energy-saving modes are supported. A configurable maximum bus load (determined by a maximum bus current and a maximum slew rate) guarantees KNX compliant behavior even in cases of errors in the system. The component comes in a QFN32L7 package with 0.65 mm pitch.

***Contact:*** *www.elmos.com*

Embedded Systems, SIA

## Logic Machine Communication Center

LM offers full freedom and interconnectivity to your installation. LM is now expanded with more possibilities and features – SMS processing, e-mails, XML for remote object status acquisition etc. In addition LM can be obtained with several serial interfaces on-board. Apart from familiar features like IP router functionality, Enocean, Modbus, DMX support, LM is now paired with Bacnet/IP, ZigBee and OBIX standards. Our customer feedbacks on the product: "Hot product", "Must-have in every installation", "Everyone should try".

***Contact:*** *www.openrb.com*

Elka Elektronik GmbH

## Elka KNX Sever 224R

The KNX Server 224R is ideally suitable as PC for KNX visualisation and control of light, heating, shading, multimedia, etc. within a KNX system. The KNX REG-PC has got a high-capacity 1.0 GHz Dual Core. Two integrated KNX interfaces for parallel use allow KNX remote maintenance by ETS even with application software running. Via the 1Gigabit Ethernet port the KNX Server is integrated into existing TCP/IP networks. The Micro-SD slot at the front side can be used for storing and exchanging of e.g. measuring data. A DVI monitor port and four USB ports are ideal interfaces for service and commissioning.

***Contact:*** *www.elka.de*

Elsner Elektronik

## Touch One Style

The „Style"model of KNX Touch One shows exquisite design and extended functionality. A magnetic system keeps the glass pane of the touch display invisibly at the wall. The display shows graphically animated weather data and individual pages with bus data, such as oil fill level or energy consumption. For an easy readability, values can be converted (Kilowatt instead of Watt). The changing of display pages can be controlled via the bus, e. g. by urgent messages. The internal automatic system for shading and ambient climate is set at the display or in the ETS. Switching events can be linked with the integrated logic module.

***Contact:*** *www.elsner-elektronik.de*

Embedded Systems, SIA

## Streaming High Definition Audio Player

KNX controlled SP plays all your network music in HD quality. Not only the listening experience is made beautiful with SP, but the domestic visual experience as well. SP wants people to distribute their 'audio-money' for real quality and sound experience not investing it into the PC functionality. SP takes care of the flawless stream, the perfect timing needed to get so deep into your digital recordings, you'll completely rediscover everything you've ever heard in digital. SP allows to share your media library throughout all devices in your home. UPnP, DLNA, Airplay, FTP support, 24/96 and lossless formats support, 40W/ch. amp, KNXnet/IP on-board are just few of features charactirizing SP.

***Contact:*** *www.openrb.com*

Enertex Bayern GmbH

### SynOhr® MultiSense KNX

"SynOhr® multi-sense" is the world's first room controller with built in voice recognition. The room controller measures the temperature, humidity and color intensity. A dot-matrix can show KNX compliant 14-byte strings. An integrated speaker outputs audio signals stored on the included SD card. The vocabulary speech recognition is approximately 150 words, need not to be taught separately and can be parameterized via ETS, so that commands as "COMPUTER, LIGHT 30 PERCENT" are possible. SynOhr® multi-sense is fed directly from KNX bus.

***Contact:*** *www.synohr.com*

Esylux GmbH

### wall-presence detector PD-C180i KNX

The new ESYLUX PD-C180i KNX with integrated bus coupler (TK) is optimally suited for presence dependent light control in floors, stairwells, restrooms and where a safety detection from the wall should be realised. 180° detection range as Master or Slave. The coverage of the two PIR's can be programmed separately. Several in/outputs, e.g. external light sensor, sensor key, HVAC, twilight switch and acoustic sensor are showing the universal applicability. Parameter setting happens via ETS. Compatible to DIN 49075, optimal integration in brand switches, cover frame (in five colours) as well as surface-mounted box IP 20 and IP 44 are available in stock.

***Contact:*** *www.esylux.com*

Exor International S.p.A.

### DomiOP eBIS504

The DomiOP eBIS504 combines state-of-the-art features and top performance with an outstanding design. It is the ideal choice for all HMI applications in building automation, when there is the need for remote monitoring, scene programming for more comfortable living and scheduler/timed actions. The eBIS504 features a 4.3" widescreen TFT display with 480x272 pixel resolution, LED backlight and support for 64K colors. The two built-in dual 100Mb Ethernet interfaces with switch function enhance its communication. JMobile, the software platform for real-time monitoring and seamless remote access, makes the eBIS504 an innovative and efficient solution for the new requirements in building automation.

***Contact:*** *www.exorint.net*

Enertex Bayern GmbH

### KNXnet/IP Router

The KNXnet/IP Router (3U) supports up to five KNXnet/IP tunnels and can be used as line or area coupler. Its integrated display shows the most important configuration parameters at any time. This allows putting the device into operation very fast and trouble free. The IP address of the fast ethernet connection can be set manually by ETS or automatically by DHCP or Zeroconf. Furthermore the KNXnet/IP Router has a battery buffered real time clock and offers a SNTP server. The KNXnet/IP Router is fed by Power over Ethernet or an external 20-30V AC/DC power supply.

***Contact:*** *www.synohr.com*

Esylux GmbH

### Outdoor motion detector RC 230i KNX

The approved ESYLUX outdoor motion detector RC 230i is now also available with an integrated bus coupler (TK) as KNX version. The 230° detection range and 360° anti-creep protection are offering a safety detection with coverage of up to 20m by 2,5m installation height for all outdoor-applications. The RC 230i KNX is usable as Master, functions switching or dimming or as Slave. The sensitiveness of the PIR's is separately adjustable. Several in/outputs, e.g. external light sensor, sensor key, locking functions, parallel connection, twilight switch are providing an universal usage of the lighting control. Parameter setting happens via ETS.

***Contact:*** *www.esylux.com*

GePro

### KNX TAB 16 now without auxiliary voltage

With a new bus coupler and ETS product database without any plug-in, key switching, dimming, blinds, value, Lightscene is now configurable as inputs or two-button operations. Highlights are the dead man switch, a second sending group address for long / short pushing and the barrier function of each button. The two-color LED (RED / GREEN / OFF, Blink) have separate objects and can query its state. The priority object is used as the "third state" on a separate group address. New is the integrated buzzer. The device is connected directly to KNX and requires no auxiliary power.

***Contact:*** *www.knx-taster.de*

GEWISS S.p.A.

### CHORUS ICE TOUCH KNX with push buttons

Chorus ICE Touch KNX push buttons offer the latest in technological and design solutions where the purity of glass combines with gentle-touch controls and stylish luminous symbols. These new GEWISS push buttons are available in three colours (black, white, titanium) and with two, four or six independent channels for lights, dimmers, shutters and scenes control via KNX. The colour (blue, amber) of status and localisation LEDs, the touch effect, the acoustic signaling and the touch sensitivity level can also be configured. The push buttons can be installed in Italian standard three module flush mounting boxes and are available in System-Mode and Easy-Mode versions.

***Contact:*** *www.gewiss.com*

Gira

### Gira Control 9 KNX

The Gira Control 9 KNX enables convenient control of the entire building technology even without the Gira HomeServer as a higher-level central control unit. Therefore, the device is ideal for modern single-family houses or smaller building complexes. Thanks to its drag-and-drop design, it can be configured easily and quickly by an electrical engineer. The Gira Interface design wins over users with its high level of user friendliness and fast orientation. As a complete KNX system device, it can be combined with all Gira KNX components, for example with the Gira DCS-IP-gateway. With its various design cover plates, the Gira Control 9 KNX matches any room concept.

***Contact:*** *www.gira.de*

Hager

### Energy management for tebis KNX domovea

The Hager energy manager is a solution to improve the energy efficiency in residential buildings. In addition to basic energy management functions, the energy manager offers electrical energy optimisation and visualisation. Thanks to the three channels meter, the user can monitor his electrical production or consumption on the local display and on domovea, the hager visualisation. Moreover, the hager energy manager transmits for information the current tariff to the local display and domovea. The tariff is also used for the energy consumption visualisation, shown for each individual tariff period. Hager offers a complete solution for electrical energy management, by means of which up to 10% energy savings can be achieved.

***Contact:*** *www.hagergroup.net*

GFR - Gesellschaft für Regelungstechnik

### DIGICONTROL ems4.KNX1E

The DIGICONTROL integration module, ems4.KNX1E, from the house of GFR serves as a bi-directional gateway and a connecting link between the Instabus KNX and DIGICONTROL automation systems. Over and above this, the ems4.KNX1E, in conjunction with other DIGICONTROL integration modules, facilitates the connection of KNX with all other systems of the building automation network, for example, to systems that are based on BACnet, DALI, M-bus, EnOcean, Modbus, CAN bus, Profibus, etc. If KNX is deployed, ems4.KNX1E forms the basis for the implementation of cross-service functions, which, in turn, enable energy-optimized and comfortable operation of modern building systems.

***Contact:*** *www.gfr.de*

Hager

### iPad and iPhone Apps for tebis KNX domovea

The apps for iPhone and iPad enable mobile access to all of Hager's displays and functions of the tebis KNX domovea. Other functions include the creation of individual selected favorite devices or the use of a search function for devices, device groups or categories. Inside the house the apps communicate wirelessly via www.domovea.com. Both apps can be found and downloaded on iTunes with the keyword "domovea". Configuration of the apps is not necessary - it is generated automatically.

***Contact:*** *www.hagergroup.net*

Guangzhou Hedong Electronics Co. Ltd. (HDL)

### DRY Contact 4CH Sensor (M/S04.1)

The HDL KNX M/S04. One product (DRY Contact 4CH Sensor input and output module) can be used as multifunction input and output. Any signal from temperature sensors or switches can be used as an input. The output can be used for 0-10V DC dimming and LED Driving. Sensors, logics and dimming functions are possible. The sensors can control many types of objects, such as switching, dimming, shutters, forced, scenes,… The logic functions contain five logics of four channels. The KNX DRY Contact 4CH Sensor input and output module can be used in a variety of buildings and any other area where temperature control and 0-10V dimming is needed.

***Contact:*** *www.hdlchina.com*

Guangzhou Hedong Electronics Co. Ltd. (HDL)

### HVAC Controller (M/FCU01.10.1)

The HDL KNX HVAC controller can be used as a high power on/off control device for high- medium-low fan speed control and also has cooling and heating functions. Its seven channels can be configured independently for floor heating control with digital accurate temperature sampling. Also, the HVAC controller can be configured as five channel relay output and two channels 0-10V DC. In this case, the staircase light function or some other functions can be configured for each channel. The KNX HVAC Controller can be used in a variety of buildings such as an airport, metro station, sports center, car parks, office building, and any other area.

***Contact:*** *www.hdlchina.com*

Herholdt Controls srl

### KNX Communication Module

The new Herholdt Controls KNX communication module, which is joinable by the lateral IR port to all the Herholdt Controls measurement devices such as single and three phase energy meters, power meters, network analyzers,… is now transmitting a wider range of electric quantities:

- active Energy T1+T2
- reactive Energy T1+T2
- active power
- reactive power
- apparent power
- voltage L/N – L/L
- current
- power factor
- frequency

***Contact:*** *www.hhcontrols.com*

ICONAG

### B-CON

B-CON is the multi-supplier control technology software for larger facilities and sites. It combines all subsections in one system. Target applications in technical facility management are open systems like BACnet, KNX, LON, M-BUS, in combination with proprietary systems of HVAC, malfunction, energy monitoring and security systems. The B-CON Software generates an easy PC-based management system on all levels in facility technology.

***Contact:*** *www.iconag.de*

Herholdt Controls srl

### ECS132 KNX

The ECS132 KNX new single phase Energy Meters line in one module DIN Rail for direct connection 32 and 40A and in three modules DIN Rail direct connection 125A are now available. It is possible to attach the Herholdt Controls KNX communication module to these meters. The meters are MID certified and have the registers of import/export energy. The KNX communication guarantees the availability of 11 important parameters that can be used by upstanding energy management devices.

***Contact:*** *www.hhcontrols.com*

Home Systems Consulting SpA

### HSYCO: the integrated supervision solution

Home Systems Consulting, an engineering company fully dedicated to the design and development of technology integration solutions created HSYCO, a Web Based tool for the development of integrated control systems for KNX, MyHome, Duemmegi, Modbus, TCP/IP, Dali, Tridonic, DMX, Airzone, Daikin, Mitsubishi, Fcc Planterm, Elsner Elektronik, HWGroup, Axis, Panasonic, Mobotix, Sony, Samsung, Vivotech, Bentel, Paradox, Tecnoalarm, Squeezebox, NetStreams, NuVo, Denon, Epson, Rotel, Yamaha, JVC, irTrans, Electrex, Legrand, Schneider, Power One, Ekahau, HID, 2N, Snom. HSYCO provides local and remote control with a customizable Web interface, accessible through the most common wireless devices.

***Contact:*** *www.homesystemsconsulting.com*

Ingenium Ingeniería y Domótica S.L.

### BUSing KNX gateway

Ingenium offers a gateway that permits its BUSing protocol to interact with KNX. The gateway can be operated in three possible ways: integrating a KNX device or installation in a BUSing one by using the BUSing Development System, integrating a BUSing device or installation in a KNX one by using the KNX ETS software; or the possibility to control both systems in a bidirectional way. The new gateway increases the number of possible combinations of KNX and BUSing material. The Gateway is expected to be available in the first semester of this year.

***Contact:*** *www.ingeniumsl.com*

iKNiX

### RTI + KNiX Port V2 & – NEW – V3

iKNiX is pleased to present their FREE & bidirectional "RTI to KNX driver". This easy to set-up driver works with their low cost KNiX Port ("IP to KNX gateway") which will also work with their FREE iPhone and native iPad app. The driver is made for the RTI "integration designer". It supports everything from lighting, blind and HVAC control up to any trigger events (macros). So you can easily use the press of a KNX switch to execute a RTI macro to turn off TVs, the stereo or anything you desire! The all new V3 offers 1.000 data points (group addresses) which is great for bigger projects (V2. 250 DPs). Now available on the ANDROID market!

***Contact:*** *www.iknix.com*

Ingenium Ingeniería y Domótica S.L.

### SR KNX

Ingenium has introduced its new device SR KNX to the market, the new version of their patented SR device, 360° radiofrequency movement detector, which can be installed in false ceilings or walls, thus protecting the device from undesired manipulations or vandalism. SR KNX goes beyond optical detectors, in terms of sensitivity and precision. Detection configuration parameters are: smoothing, saturation control cycles and detection area adjustment. SR KNX detects movement through non-metallic objects. It has a sensitivity adjustment and programmable timings in ETS. It detects movement in a maximum area of 12x6 meters, to 2,5 meters high.

***Contact:*** *www.ingeniumsl.com*

Intesis Software s.l.

### Houseinhand

Houseinhand is the brand new iOS app for KNX by Intesis, very easy to setup, powerful, and with the most simple, flexible and user-friendly interface. Not server-based, which means immediate reaction to your commands. No specific KNX/IP gateway required, visualize and control any new or existing KNX installation. Simplicity of use and quick configuration are the most valuable points of houseinhand. All necessary configurations can be performed with the free software Houseinhand Designer, available for download at www.houseinhand.com. The Houseinhand App is available for download, free of charge, in the Apple App Store, supported devices are iPod touch, iPhone and iPad.

***Contact:*** *www.intesis.com*

iKNiX

### iKNiX iPad App+ KNiX Port V2 & V3

iKNiX proudly presents the first affordable and easy to manage KNX control solution for iPhone, iPod touch and -NEW- iPad. Simply control your lights, blinds, heating and check your weather and status info with your fingertips – bidirectionally! No more fiddling on the iPhone needed, simply use the online portal www.iknix.com OR USE THE NEW ETS application! The FREE App works only in combination with their KNiX Port gateway. The all new V3 offers 1.000 data points (group addresses) which is great for bigger projects (V2. 250 DPs). Now available on the ANDROID market.

***Contact:*** *www.iknix.com*

Intesis Software s.l.

### New version of IntesisBox®

Intesis introduces its 3rd generation of KNX gateways for air conditioners, with a common object interface allowing a very easy integration, and including new and advanced functions: different standard KNX datapoints, smart use of Open Window, Occupancy, and Sleep, Power and Economy modes, providing a step ahead in comfort and energy-savings applications. Four binary inputs have also been included, for free-potential contacts, allowing integrating many different devices. This new generation of gateways is available for Mitsubishi Electric, Daikin, Panasonic, Mitsubishi Heavy Industries, and for other AC brands coming soon.

***Contact:*** *www.intesis.com*

Jung

### KNX rotary sensor

JUNG will be the first manufacturer presenting a KNX rotary sensor for control of dimming, switching and shutter actuators as well as for set point adjustment of a temperature controller. The sensor follows the well-known concept of a rotary dimmer control with incremental encoder. The rotary sensor has three satellite inputs to connect conventional potential free contacts of switches, push-buttons and magnetic contacts. An acoustic signal transmitter acts as an acknowledge tone or alarm signaling. The KNX rotary sensor is available in numerous materials and colours in JUNG design.

***Contact:*** *www.jung.de*

Jung

**KNX Smart-Control**

The new Smart-Control is part of the JUNG Smart Display family. It offers a convenient control of KNX functions via a touch screen and sensory control buttons. The colour-touchscreen offers an intuitive user interface. The structure of the pages is logically oriented either to favorites, functions or rooms. The selection is carried out by scrolling and browsing. To extend the functionality a combination with a speaker-module or a push-button extension module is possible. In conjunction with the frames of the LS-design and the FD-design the Smart-Control appears in an elegant way.

***Contact:*** *www.jung.de*

LOYTEC electronics GmbH

**L-INX Automation Server**

LOYTEC offers freely programmable automation stations with I/O expandability. The high-performance L-INX Automation Servers provide gateway functions for the simultaneous integration of KNX/IP and Modbus as well as CEA-709 and/or BACnet. Either KNX TP1, M-Bus or ZigBee PRO can be integrated optionally. The combination of free programmability (IEC 61131-3), an integrated OPC server, an integrated SCADA system (HMI), gateway functions, scheduling, alarm monitoring, trend logging and e-mail notification opens multiple uses for building automation.

***Contact:*** *www.loytec.com*

MDT technologies GmbH

**SCN-DALI64.01 DALI Gateway with Webserver**

The MDT Gateway in six units allows control of 16 Dali groups. Also the individual control of up to 64 ECGs is possible. For example, two dali groups each with 16 lights and 32 additional lights can be individually switched or dimmed. It detects lamp and ECG error, and sends alarms depending on the settings. The commissioning and assignment of the groups can also be done without KNX bus. Alternatively via control buttons and LCD display, built-in Webserver using WLAN or the MDT software tool. Additionally the gateway has two inputs for connecting push buttons or presence detectors.

***Contact:*** *www.mdt.de*

LOYTEC electronics GmbH

**LGATE-950 Universal Gateway**

The new LGATE-950 allows an easy data exchange between KNX/IP networks and other systems! KNX TP1 devices, M-Bus devices or even ZigBee PRO wireless nodes are integrated by the use of optional expansion modules. All data points are automatically mapped to OPC data points and are available through the integrated OPC XML-DA server. LGATE-950 offers AST functions for local time scheduling, alarm management, data collection and e-mail notification. An integrated web server provides access to all device parameters and appliance-based data points. Information is also available via the integrated LCD display. LGATE-950 is fully integrated in the L-WEB System.

***Contact:*** *www.loytec.com*

MDT technologies GmbH

**AKS-2016.02 20 channel Switch Actuator**

The new generation of MDT switch actuators saves space in the power distribution board with 20 outputs at only 12 units. The floating outputs with bistable relay switch up to 140µF and C-Load with16A. All outputs have LEDs and can be operated via switches. The extensive application provides logical functions, status feedback, lock and time functions such as on / off delays and retriggerable staircase function. The positions of the relays can be programmed individually for bus voltage failure and recovery. The new series is available with 12 channel in eight units and eight channel in six units.

***Contact:*** *www.mdt.de*

Nanjing Tiansu Automation Control System Co. Ltd.

**TSView Monitoring Software**

The TSView monitoring system software is a set of intelligent control system visualization monitoring software based on KNX and EnOcean wireless sensor technology. It collects and processes the real-time status and data of areas, lines and equipment at all connected levels of the KNX network, to achieve centralized visual management of the KNX system. TSView runs on a PC with Windows platform and mainly achieves automatic monitoring of systems such as lighting, shutter control, HVAC, security, video intercom, background music and other subsystems of airports, exhibition venues, shopping malls, schools, sports venues, hospitals, railway stations, hotels, clubs, home etc.

***Contact:*** *www.tiansu-china.com/english/*

Nanjing Tiansu Automation Control System Co. Ltd.

### TSLC-A Line/Backbone Coupler

TSLC-A can be used as a line/backbone coupler or as a repeater. Used as a line coupler, it links a line to a main line. Used as a backbone coupler, it links a main line to the backbone line. At the same time telegrams can be filtered. In this way only telegrams are passed on, which are intended for the other respective line. The device uses a high-performance embedded processor, data ports on both sides share a buffer, able to buffer up to 400 KNX standard data frame telegrams to minimize data loss. TSLC-A provides a data connection between two separate KNX bus lines and also isolates the bus lines from each other in order to limit bus line interference.

***Contact:*** *www.tiansu-china.com/english/*

Nechi Ingenieria s.l.p.

### ARizone

This powerful development can recognize devices in real time to obtain additional information that helps by the selection and implementation of KNX devices at your facility. Nechi Group are pioneers in the introduction of techniques of Augmented Reality in the construction and building automation. ARIzone works on Tablet PC or smart phone and enables the user to recognize the installed device and to display it in three dimensions, to check the electrical diagram, to find technical specifications and to request further information from the manufacturer.

***Contact:*** *www.nechiingeniera.com*

NETxAutomation Software GmbH

### NETx Global Visualization

Modern building management system for ideal central control and visualization for the largest projects.
- Extended OPC Server
- Easy connection of external systems
- Module for energy consumption
- Including Smart Clients for iPad and Web
- One editor for all visualization clients
- Free creation of design of visualization
- Comfortable designing with drag and drop
- Large libraries
- Built in Button Designer
- Data archiving for measuring and consumption in SQL database

***Contact:*** *www.netxautomation.com*

NanoSense

### KNX Multi sensor Air Quality probe

The new E4000 air quality probe provides the best tradeoff between health, comfort and energy saving. This probe measures CO2, VOC (Volatile Organic Compound like Formaldehyde..), absolute/relative humidity and controls ventilation accordingly. This probe also controls temperature or felt t° (Vs humidity) with an auto adaptive PID. Heater and or cooler can be controlled. This is useful when the building manager wants to lock the t° set point as set by ETS. The probe determines at which temperature the contained water in air will condensate to moderate cooling. Moreover, an optional EnOcean RF module can be plugged in to perform a gateway with all wireless EnOcean devices in the room.

***Contact:*** *www.nano-sense.com*

NWC – Network Concept

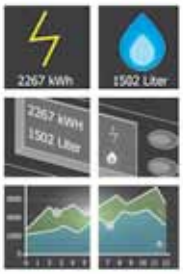
### iSimplex Home Server LX

iSimplex Home Server LX simplifies residential automation, allowing the realization of a comforable home, increasing the quality of life of the inhabitant. The home becomes one's ideal partner. Home automation, access control, alarm systems, video surveillance, energy management, VoIP, door video intercom and multi-room ambient sound control are no longer isolated elements in your home (house or apartment). With iSimplex, they now are a network that offers you great benefits: a significant cost-reduction, new services and a centralized control of the entire platform are just a few examples.

***Contact:*** *www.isimplex.com*

NETxAutomation Software GmbH

### NETx MaRS 2.0




The new software system from NETxAutomation grants a comfortable energy management for different building dimensions.
- Management of any resource
- Rates can be defined freely
- Flexible cost calculations
- Free-to-define project structure
- Easy creation of cost groups
- Use of any types of meters
- Interface for SQL database
- Separate report generator
- Template editor for reports
- User friendly editor
- Data export to Excel, xml, pdf,…
- Period comparison easily to define
- Data recording for several years

***Contact:*** *www.netxautomation.com*

Normalux

### KNX compatible emergency lighting Extraplana

Normalux, a Spanish company with more than 25 years of experience in the design, manufacturing and sales of emergency lighting, launches into the market KNX compatible emergency lighting of its family EXTRAPLANA. A discrete and versatile device with reduced dimensions. It can be embedded both in the ceiling or in the wall and can also be made waterproof (IP-65) by using different accessories. There are models with one, two or three hours of operation and with LED technology for energy efficiency. The device uses the "Protector" battery system.

***Contact:*** *www.alumbradointeligente.com*

ON Semiconductor

### NCN5120 TP1-256 KNX transceiver

The NCN5120 is the first from ON Semiconductor's family of KNX transceivers, handling the transmission and reception of data on the bus. NCN5120 integrates two high efficient DC-DC converters generating a fixed 3.3V and a second regulated voltage programmable between 3.3 and 21 V. The convertors retrieve power from the bus and have 100mA drive capability each. NCN5120 additionally has a fixed 20 V integrated regulator. This KNX transceiver has been designed to reduce the bill of material while assuring safe and reliable coupling to the bus thanks to its programmable current slope, bus voltage and temperature monitoring. Available in QFN40 6x6 package, NCN5120 supports both SPI and UART interface to the host microcontroller.

***Contact:*** *www.onsemi.com*

Philips

### LightMaster DALI Multimaster Actuator

The PDBC120-DALI KNX actuator is designed for cost-effective control of DALI ballasts providing a full universe as well as communication to Philips DALI multifunction sensors and dry contact interfaces installed on the DALI bus – this reduces in-field cabling requirements substantially. It has an integral DALI bus power supply making switchboard wiring easier and saving space by having less devices. Direct DALI to KNX mapping means that DALI imposed limits, such as maximum 16 groups per universe are seamlessly overcome allowing a fully scalable network solution.

***Contact:*** *www.philips.com*

Normalux

### KNX compatible emergency Twin Spot DOPPLO

DOPPLO model is equipment with a very innovative design, useful in those buildings where the most demanding conditions should be met. It is a waterproof device (IP65) with an easy plug-in installation system, for fast mounting. Models are available with 900, 1600 and 2500 lumen output. Operation from one to three hours. DOPPLO includes the "Protector" charging battery system. Via the "Protector" charging system, DOPPLO's battery can be fully charged in 10 hours (instead of the 24 hours needed by normal devices), and the battery will only charge for the percentage lost. In this way the life of the battery is extended and the consumption of the device is reduced.

***Contact:*** *www.alumbradointeligente.com*

PEAR Automation GmbH

### 21-fold switching actuator

The "professional switch" from PEAR Automation delivers 21 potential free 16A outputs for 230VAC and C-load 200µF. The actuator has optimal wiring comfort because of connections on both sides on a width of only 12TE. The powerful ETS-product database offers numerous adjustment possibilities next to the following main functions:

- behaviour on power breakdown / return
- two free linkable central functions
- disable function, forced guidance
- staircase lighting function or ON-/OFF delay
- five storable 8-Bit scenes per channel
- channel-dependent logic functions
- four innovative channel-independent logic functions

***Contact:*** *www.pear-automation.at*

Philips

### LightMaster Structure Cabling Dimmer Actuator

This range of dimmer actuators is designed for direct installation within ceiling cavities with power and communications connections via a structured cabling solution allowing fast installation without the use of tools. Each control output supports DALI, 1-10v and DSI protocols. The device is readily integrated with a BMS via the KNX control network, making it ideally suitable for Office installations where a cost effective solution is required. It is available with either three or four pole power wiring and two pole communication wiring systems from Wieland. There is an optional HD – heavy duty relay version for applications where high in-rush currents occur.

***Contact:*** *www.philips.com*

preussen automation GmbH

## Motion 360 KNX

preussen automation´s newest KNX product is the multifunctional sensor Motion 360 KNX. The sensor is suitable for indoor ceiling mount. With its 360° detection angle, it is applicable as motion detector, luxmeter as well as temperature sensor. Starting from February 2012, the sensor will be available.

***Contact:*** *www.preussen-automation.eu*

Schneider Electric

## KNX DALI-Gateway

With a compact gateway, DALI lighting technology can be conveniently integrated into KNX systems around the world thanks to a wide voltage range from AC/DC 100 ~ 240 V, 50/60 Hz. Up to 64 digital electronic ballasts can be named individually and thus easily distinguished from each other and also controlled individually or in 16 groups or light scenes. Various modes, such as normal, night or panic, as well 16 controlled effects further expand the range of uses. Emergency tests and a burn-in function complete its advantages. An hour counter and detailed failure reports make maintenance easier. DALI commissioning is conducted via an IP connection on a PC, smart phone, or directly on the integrated display.

***Contact:*** *www.schneider-electric.com*

Siemens AG

## New GAMMA room temperature controllers

The GAMMA room temperature controllers UP237K and UP254K are available in different design variations to match the DELTA line. These controllers offer user-friendly visualization and improved operating safety as well as energy-saving features designed to help make buildings more sustainable. One outstanding feature is the logically arranged LED displays which indicate operating and error states. Room users are able to see not only that a room is not being operated within the optimal temperature range, but also the reason why.

***Contact:*** *www.siemens.de/gamma*

Radiocrafts AS

## KNX RF Multi – 5 channels

KNX Multi can use up to 5 RF channels, respectively the fast channels F1, F2, F3 and the slow channels S1 and S2. The scanning sequences are handled by the RC1180 KNX radio module:

- three fast channels intended to be used with human controlled applications i.e. lights, shutters, etc.
- two slow channels intended to be used with NPRM devices for automatic applications like sensors, heat control, etc. NPRM devices sleep when not scanning for KNX packets. In that way they are intended for battery operation. PRM devices should be mains powered, since they are always scanning for KNX frames, even when not receiving or transmitting.

The reception and scanning sequences depends on the receiver capabilities.

***Contact:*** *www.radiocrafts.com*

Schneider Electric

## Uniq

For building management simple planning, energy efficient use, and flexible expansion options are required. Uniq provides a comprehensive solution for each building from one source. A standardised user interface allows you to intuitively control all devices, including remote access via PC and smart phone. As a central control unit with a VoIP-telephone system, the Uniq server can integrate KNX and IP components as well as other devices such as cameras, TVs or beamers - even during continuous operations. The visualised energy consumption, monitoring and evaluation functions increase efficiency, and installation is easy thanks to the mounting box and plug-and-play.

***Contact:*** *www.schneider-electric.com*

Siemens AG

## RoomControlBox

These new space-saving installation boxes by Siemens are suited for mounting under floors or inserted ceilings. They offer space for up to eight sensor or actor devices with their own KNX connection. The RoomControlBoxes cover following disciplines: lighting (switching, dimming), shading and electro installations. Thanks to the installation within the room axis, the cabling effort is reduced. All the actors can randomly switch one of the three phases. This reduces large variations in network load.

***Contact:*** *www.siemens.de/gamma*

Siemens Schweiz AG

## Communications-enabled damper actuators

The networked GxB air volume controllers recently introduced by Siemens can be used together with the communications-enabled RDx room thermostats and the revised Synco 700 RMU universal controllers to create an innovative and flexible system solution for variable air volume systems. This system solution covers all requirements for climate control in buildings, ranging from heating and cooling to primary air handling. Building operators using this KNX based solution to benefit from increased comfort, high energy efficiency, and lower costs.

***Contact:*** *www.siemens.com/bt/de/openair*

SINAPSI S.r.l.

## PV plants O&M solutions with eSolar

eSolar is a system for monitoring and managing locally or remotely maintening photovoltaic systems. eSolar includes a home automation engine, using the KNX communication protocol. eSolar is able to communicate with most of the photovoltaic inverters, energy meters, string controllers available in the market through its RS-485 and ETHERNET interfaces and pulse output so at to obtain the measured quantities. eSolar can interact with a KNX installation, allowing remote control. Through the KNX bus it is able to integrate various types of sensors on the market and make actuations on the PV field.

***Contact:*** *www.sinapsitech.com*

T2M2

## KNX Touch PC 10.2“/15.6/21.5“ Dual-/Multitouch

Pure aluminum and glass! The new touch series with multi-touch sensor is available as widescreen 10.2 ", 15.6" and 21.5 " display. Equipped with an Intel ATOM processor and the latest LED displays the power consumption is kept to a minimum. Dual- (10.2 "and 15.6") or multi-finger operation (21.5 ") possible by the dual- and multi touch sensor. The connection to the KNX Bus is solved by an optional integrated USB interface or can be done via an IP KNX interface. All major KNX Visualizations that run on Windows XP/7 can be used. All Touch panels are fanless. Speaker and micro integrated.

***Contact:*** *www.easyKNX.de*

Siemens Schweiz AG

## HomeControl for Room Automation

Whether at home or on the go, the new Siemens HomeControl app provides you with constant access to the HVAC regulator product lines Synco living, Synco 700, Sigmagyr and Albatros. At a glance, you can see whether the system at home or your vacation home is working without interruption. If adjustments are required, the user friendly navigation enables access to the most important information and settings. The app is available in the following five languages: English, German, French, Italian and Spanish.

***Contact:*** *www. siemens.com/app-homecontrol*

Somfy

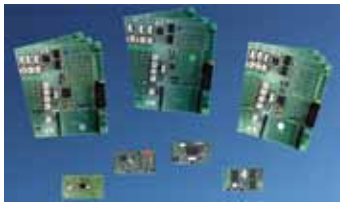
## Motor Controller now also for Wieland plug-in connectors

The new animeo KNX 4 AC Motor Controller by Somfy can now be integrated with Wieland plug-in connectors. The Motor Controller is suitable for on-wall installation and can control four individually parameterable motors. Eight local push-button inputs can be used as KNX binary inputs, thus enabling universal functions such as ´Venetian blinds´, ´switch´, ´dim´, or ´send value´. In addition, with the KNX radio receiver, the room brightness can be set exactly with a scroll wheel, e.g. switching and dimming according to individual user wishes. The Motor Controller can also be easily combined with with the new Somfy sun protection central control, animeo KNX Master Control.

***Contact:*** *www.somfy-objekte.de*

TAPKO Technologies GmbH

## KAIstack Evaluation Boards



The new evaluation boards for the product KAIstack - the main software component of KAI (KNX advanced interface) that provides the complete functionality needed for KNX devices – enable efficient product development with a diversity of microprocessors from many manufacturers (TI, STM, ATMEL). Different media such as KNX TP, KNX RF and KNX IP as well as several interface modules like KAIphys, TP-UART(2), ELMOS E981.03 for TP respectively SEMTECH SX1211 for RF are supported. Through push buttons, LEDs and all on pin header connected portpins you will get an excellent test hardware and the development work will be facilitated.

***Contact:*** *www.tapko.de*

TAPKO Technologies GmbH

### The new line coupler from Tapko

The new line coupler from Tapko is the first line coupler for telegrams up to 250 bytes and the ability to disable the filtering of messages temporarily by pressing a button which makes the commissioning of the system easier. The temporary access to other lines is possible without complex download from ETS. In addition, a faulty communication on the bus is indicated through LEDs at the device. The line-/ backbone coupler provides a data connection between two separate KNX bus lines and also galvanically isolates the bus lines from each other. It can be used as line coupler, backbone coupler or repeater in any KNX network. Also available as OEM version.

***Contact:*** *www.tapko.de*

TCI GmbH

### Easy and comfortable: building automation with multitouch

The touch panel PC 10Wmura of tci convinces with a simple elegance. An outstanding feature is the continuous and absolutely plain glass surface. This provides together (in conjunction) with the projective capacitive multi-touch sensor an excellent ease of operation as it is known for smartphones. The intuitive navigation with multi finger operation and gesture recognition enables easy to understand operating concepts for building automation. Even in ultra-flat design, the touch panels with a low-power Intel Atom CPU are fully fledged PCs with Ethernet, USB and KNX interface. The power supply via PoE (Power-over-Ethernet) is optionally available.

***Contact:*** *www.ambiento.de*

Tokka Sp. z o.o.

### KNX Power Supplies

KNX Power supply 640 mA can work separately or with an emergency power supply module with external battery. Status indicators can be used for control, visualization or maintenance purposes indicating availability of mains power. Device LEDs show the working status in the installation. The family of KNX power supplies will consist of 160, 320 and 640 mA versions, of which two types will be available. One type without and one type with LCD display indicating current consumption of all bus devices connected to the line of the operating power supply.

***Contact:*** *www.tokka.pl*

TCI GmbH

### Industrial quality meets Android: touch panel for wall mounting

tci presents with the amena70 a touch panel for the Android software platform. The touch panels offer the same ease of use as the Android smartphones. The 7" multitouch display has a flat and continuous glass surface. As a wall-mounting device in industry quality the amena70 is designed for a long life cycle. Spare parts and service are available long term. Therefore, the touch panels are the ideal basis for reliable building control systems. Without fan and hard drive the power saving ARM9 system is maintenance-free and silent. The amena70 can be individually extended with the variety of available Android apps.

***Contact:*** *www.ambiento.de*

Theben AG

### 8-channel KNX annual timer with Astro programs

The new 8-channel TR 648 top2 RC KNX annual timer from Theben can be used universally. The quartz clock can also be synchronized via a DCF77 or GPS antenna. It is programmed via the keyboard or with OBELISK top2 PC software. Data is transmitted via the bus or the insertable memory card. In addition to the basic weekly program, there are 14 different weekly programs with priority levels set via 800 memory locations. Pulse, cycle and hour counters extend the range of applications. The location for the Astro program is determined via the integrated location database or GPS.

***Contact:*** *www.theben.de*

Tokka Sp. z o.o.

### KNX USB interface

The KNX USB interface is designed as a snap on version for programing bus devices with ETS. Two LEDs indicate connection to the PC and connection to the bus, indicating bus traffic.

***Contact:*** *www.tokka.pl*

trivum technologies GmbH

**trivum TouchPad**

At light&building 2012, trivum will exhibit their newly designed TouchPad. From the basis of a high contrast display with 480x272 pixels and a capacitive touchscreen, a contemporary design has emerged that combines elegance with functionality. The strength of the intuitive menu lies in its simplicity: all main functions can be accessed immediately, e.g. there is no need to navigate through the menu in order to listen to the radio, change stations, adjust the volume or turn on the TV. Thanks to KNX backing, every TouchPad is itself an intelligent KNX switch with the ability to control lights, blinds and temperature.

***Contact:*** *www.trivum.com*

Guangzhou Video-Star Electronics Co. Ltd.

**GVS 4 ch Shutter actuator**

GVS Shutter actuator for 230V AC drives. The following functions can be set in the application program:
1. movement UP/DOWN; 2. stop / louvre adjustment; 3.move into preset position (up to two preset positions); 4. set preset position (modification of the preset position during operation); 5. move to position 0…100%; 6. adjustment louvre to position 0…100% (only blind working mode); 7. scenes; 8. automatic sun protection; 9. monitoring of wind, rain and frost protection (cyclical); 10. block; 11. forced operation; 12. status display of the current position, status display of the current operating mode; 13. LED display; 14. two operation modes, Venetian blind and shutter.

***Contact:*** *www.video-star.com.cn*

Vity

**Tactum 4NTR**

The TACTUM 4NTR is the new VITY touch panel for residential and professional environment management. Equipped with an IP port, it is directly connected to the network to control Vity IP equipment directly or simply access to the Internet. Its KNX integrated port allows to directly link up to the KNX Bus to drive the electric equipment. Through IP or KNX, this clever remote control is able to analyze and display the energetic consumption of the house and use this information to launch a command to the piece of equipment concerned to reduce consumption. The TACTUM 4NTR can be supplied with power through the RJ-45 thanks to power over Ethernet. The design of the buttons is customizable.

***Contact:*** *www.vity.com*

Guangzhou Video-Star Electronics Co. Ltd.

**GVS Push Switch sensor series**

GVS Push Switch sensor series includes: 1fold, 2fold, 3fold, the material and color of panel and frame can be customized.
The main functions are:
1. programmable RGB LED;
2. switching sequence;
3. scene with storage function;
4. switching,dimming;
5. short-long operation;
6. multiple operation;
7. blinds and shutters, value sender;
8. RTC operation.

***Contact:*** *www.video-star.com.cn*

Vimar SpA

**Made-to-measure energy**

With Eikon Evo German standard cover plates, Vimar KNX devices find a new dimension of beauty marked by an all-Italian style. Two-zone thermostats for intelligent climate management, infrared detectors that automatically control the lights if there is someone in the room, with integrated dusk/dawn sensor, four independent, interchangeable led-fitted buttons to control lighting, shutters and home automation, can all be matched to eight different precious materials to create control switches which reflect the latest interior design trends.

***Contact:*** *www.vimar.com*

Warema Renkhoff SE

**WAREMA climatronic®**

The new WAREMA climatronic® with KNX connection is pre-configured for sun shading systems, windows, and lighting up to 32 channels. It will be operated by multifunctional dial and glass sensor keys. All settings can easily be seen at the TFT display. The parameters can be set either at the control panel or at the PC. Furthermore they can be saved on a SD card. Useful functions like slat tracking are also taken into consideration. In order to save energy it is very important that the façade, the sun shading systems and eventually further crafts work together perfectly. The WAREMA climatronic® is here the best solution.

***Contact:*** *www.warema.com*

Weinzierl Engineering GmbH

## KNX USB Interface 311

The KNX USB interface 311 is the compact successor to the KNX USB Interface 310. This interface enables a bidirectional connection between a PC and the KNX bus. The USB connector has a galvanic separation from the KNX bus. The interface is compatible with ETS and is supported by many visualization programs. To integrate the interface in own software a free SDK for different platforms (eg Windows, Linux) is available. The width is one unit (18mm).

***Contact:*** *www.weinzierl.de*

Woertz AG

## Woertz MultiRoom-Controller 4

The MultiRoom-Controller is an interface which allows the temperature of different rooms to be regulated by only one Fan coil unit. After the different temperature set values have been entered, the MRC calculates the temperature having to be reached by the air supply. Based on the reference values the input of air to the rooms is regulated in accordance to the fan speed. With four channels several rooms can be cooled by the air supply. The MRC can be connected to analog devices as well as $CO^2$ sensors. With the use of a MRC up to three Fan Coil aggregates can be replaced. Thereby the energy consumption, maintenance and investment costs will be reduced.

***Contact:*** *www.woertz.ch*

Zennio Avance y Tecnología s.l.

## Z41 - Color Capacitive Touch Panel

InZennio Z41 is a 4.1" portrait capacitive color display touch panel. Minimalist aesthetics lead to a timeless design that facilitates integration within working and living environments. Customized appearance is possible by means of theme selection. Home pages with configurable controls and indicators will ease the management of the main functionality in KNX installations, whereas more specific HVAC, Scenes, Alarms and Timer functionalities are accessed through its Menu. The internal temperature probe and thermostats are additional features. Z41 also includes an internal clock with battery, USB and IP ports for firmware updates. IP functionality is an optional feature.

***Contact:*** *www.zennio.com*

Weinzierl Engineering GmbH

## KNX Modul BAOS 822

The module KNX BAOS 822 is a serial interface (TTL) to the KNX bus, which also provides the supply voltage for the entire device from the bus. The module includes a complete KNX stack and serves as an interface to the bus on telegram level as well as to the data point level. Thus, various devices can be connected to the bus. It can be configured up to 250 objects in the ETS. Individual ETS entries can be created with the ETS manufacturer tool. Module Size: 30x25 mm.

***Contact:*** *www.weinzierl.de*

Zennio Avance y Tecnología s.l

## KES. KNX Energy Saver

KNX Energy Saver (KES) is Zennio's contribution to reducing energy consumption in smart homes and buildings. Split current transformers, placed around the circuit wires, allow the measurement of instantaneous electric power and energy consumption of up to three different single-phase circuits or a single three-phase circuit of up to 75A current each. In addition, KES provides information about the corresponding $CO_2$ emissions and cost of energy in the desired currency. The monitoring of instantaneous electric power limits and the powerful logic modules are added features that make KES a useful tool for the KNX partner to optimize energy efficiency in homes and buildings.

***Contact:*** *www.zennio.com*

# National Groups

## Interview with the 1000th Belgian KNX Partner

Mr. Ivan Mermans, from Schilde (Belgium) recently became the 1.000th KNX partner, after his successful participation to a KNX basic course, at the KNX Certified Training Centre of Domotechnology.

Why have you become a KNX Partner? I am in the process of renovating a house, in which KNX is going to be installed. Because I have an engineering degree and also need to cut some costs, I thought it would be interesting to do the configuration of the KNX system myself. How was your experience in the KNX course? The training was very professional, in a pleasant atmosphere. The most important part of the training was the hands-on sessions. The training has also made me realise, that the possibilities of KNX go far beyond that of only controlling lighting and shutters. Would you recommend the KNX course? I would certainly recommend it, not only to installers and integrators, but also to private persons, which would enable them to configure their new KNX system or to modify their existing system.

*Mr. Ivan Mermans, the 1000th Belgian KNX Partner*

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***Web:*** *www.knx.be*

## Great Achievements of KNX China at the 5th Shanghai International Intelligent Building Exhibition 2011

KNX China was very successful at the 5th Shanghai International Intelligent Building Exhibition 2011. The members of the Chinese National Group, attracted many visitors, by showing real applications about lighting, access control, air-conditioning, etc. The great charm of KNX made the booth always busy. Lots of domestic companies have shown their interest in KNX and consider starting development of KNX products and some of them have already decided to join KNX China.
Simultaneously, KNX China held a workshop on 20th September, with the participation of Mr Heinz Lux, Director of KNX Association. Mr Lux presented the advantages of KNX and introduced the KNX Standard, technology, solutions and KNX applications.
In the evening of the same day, the 3rd Board Member meeting was held and the draft work plan of 2012 was discussed. The meeting further focused on the establishment and operation of the Test Lab and Training Center of KNX China.

*KNX booth at the 5th Shanghai Exhibition and the KNX Workshop on the 20th September.*

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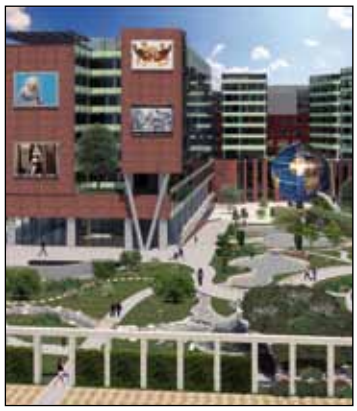
## KNX Croatia Focused on Green

The new activities of KNX Croatia have generally been focused on a common goal: the establishment of KNX as the energy efficiency standard.
In accordance with the above, KNX Croatia plays an active part in the educational programme GB Pro, consisting of 12 modules, of which the module about automation control will be based on the KNX protocol as worldwide standard. This programme, in which KNX Croatia takes part, is organized by the Green Building Council Croatia.
Moreover, the amount of KNX projects integrating lighting, A/V, security, HVAC control and facility management have risen radically in the past months. Proof of this is: a 42 floors energy efficient business building, a Green Gold shopping and business center, a set of high-end luxury villas in Vabriga near Pore, etc.



*New KNX projects in Croatia.*

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## KNX Day 2011

The most significant event of the Danish Group was the successful KNX DAY 2011. All 260 delegates showed a very high interest and involvement in the event. The key topic being energy efficiency, during their presentations the speakers covered subjects such as: the political environment regarding $CO_2$, energy efficiency with KNX… Further seminars were offered by all member companies of KNX Denmark. The event closed with a guided tour in the Opera in Copenhagen, as a nice example of combined technique and culture. The purpose of the KNX DAY, according to the President of the KNX National Group Denmark, Mogens Brusgaard, was to give the participants a greater knowledge of how KNX can be used for building automation, an insight into which suppliers are active with KNX, and present solutions that participants can apply afterwards.

*Mr Mogens Brusgaard, President of KNX Denmark, at the opening of the KNX Day.*

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***Web:*** *www.knxdenmark.dk*

## KNX Rewards the Talent in Building Automation in Jyväskylä

In February 2012, the Finnish KNX Award was handed out at the opening ceremony of the Telecommunications, Light and Audio Visual 2012 Fair, in Jyväskylä. The fair was attended by more than 800 invited guests.
This time the KNX Award was granted to the Helsinki Music Centre. This project is the largest (with more than 1500 KNX devices) and most significant KNX installation in Finland. Johan Stigzelius, President of KNX Finland commented: "We wanted to reward a diverse and challenging project, which required a large integration of different applications. The high degree of integration of applications such as lighting control, HVAC, A/V and others was therefore a key selection criterium". The award was received by the builder Senaattikiinteistöt, electrical contractor Sähkö-Aro Ltd and design office Lausamo Engineers Ltd.

*The auditorium of the Finnish fair moments before the start.*

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## KNX France in Montpellier and Rennes

KNX France participated at the Rexel Fairs of Montpellier and Rennes in 2011. KNX France participated together with the KNX Members Eelectron, The University of Rennes, ABB France, Schneider Electric, Hager... and hundreds of visitors were welcomed.
KNX France introduced the new improved functionalities of ETS4, as well as highlighted the energy efficiency added value of the KNX technology.
KNX France, together with KNX Association International, supported the events by providing information material: brochures, panels, demo products, promotional items, etc. The organizer, Rexel, presented its solutions for Energy Management and Building Management based on the KNX standard. Powerful and scalable KNX solutions were presented to the visitors, interested in Home and building automation.

*Application panel showed at the exhibitions by KNX France.*

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## Successful Colloquium

***Experts discuss the future of KNX***

KNX Partners, members and system integrators as well as scientists met in Frankfurt on 28th October. Over 100 visitors – nearly twice as many as the year before – attended the second technical colloquium of KNX Germany. Apart from lectures on the latest developments, a panel discussion around the topic of "building automation with KNX – concepts for the future" was organised. The Panel members saw great potential for the technology in the Smart Building and energy efficiency applications. Participants came to the conclusion that KNX is heading for a bright future. "Sales figures for ETS licences are rising, so is the number of KNX partners and member companies: this means the KNX technology is accepted by more and more experts worldwide."

*More than 100 interested visitors attended the German KNX colloquium in Frankfurt this year. The venue was at the ZVEI (German Electrical and Electronic Manufacturers' Association).*

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## ETS4 Revealed

On December 9, KNX Partners from all over Greece, gathered together in order to participate at the first ETS4 Workshop organized by KNX Hellas Association. KNX Association and KNX User Club Greece were also invited to present their facts and figures and their forthcoming projects. During the first part, the President, Mr. Vassilopoulos, informed about the action plan of KNX Greece in 2012. This presentation was followed by a delegate from KNX International, presenting the latest facts and figures of KNX Association to the audience of the workshop. Finally, Mr. Lourdas ended the first session of the day by giving the status of the Greek KNX Userclub. During the second part, Mr. Lazos, coordinator of KNX Greece, highlighted the hidden features of ETS4 and together with the participants, developed step-by-step a KNX project, assisting all participants with their questions and comments.

*The President of Greek National Group, , Mr. Vassilopoulos presenting their future actions to the delegates.*

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## KNX: The Key to the Future

*The board members of KNX Italy.*

In the afternoon of the 15th December, KNX Italy took the opportunity to organize a large scale event in Milan for its members, KNX Italian Partners, media and friends. The Italian Association offered to all delegates a sightseeing tour of the most attractive areas of Milan in the customized KNX-tram, where all visitors could enjoy the city, whilst having a drink and listening to music. Right after the tram excursion and during a gala dinner, the ceremony for the 1st KNX Italia Award was held, with more than 100 participants. Three KNX Projects won the desired KNX Trophy: the best KNX Italian Project in energy efficiency with KNX went to Scuola Primaria Romarzollo from Arco (TN); the best KNX installation for disabled people to Mrs. Dorella Marcolla's house from Vigo di Tol (TN); and the best KNX National project to Hotel Excelsior from Limone Piemonte (Cuneo). The great success of the event is a confirmation of the potential for KNX in the Italian market.

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## The Foundation of KNX National Group Korea

*Members of the new KNX National Group Korea*

The KNX Association is proud to announce the foundation of KNX National Group Korea. For this, the KNX National Group Korea organized "The 2nd Korean Forum of KNX Technology and Application for Home and Building Control – Create a Green, Comfortable and Energy Saving Environment for Modern City Life". More than 100 participants witnessed the official foundation of the KNX National Group Korea and listened to presentations by KNX Members and KNX Partners in Korea. The first participation of the KNX National Group Korea at a fair is also already planned at the "Automation World Fair", the biggest fair for building automation in Korea.

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## Happy Faces at KNX Luxembourg

***First participation in the international autumn fair***

*Members of KNX Luxembourg and visitors at the KNX Booth*

Over 400 exhibitors from Luxembourg and neighbouring regions presented their work to the approximately 43000 visitors during the nine days of the "DESIGN AND DECORATION, CONSTRUCTION AND RENOVATION" fair at the LUXEXPO.
As a novice exhibitor, KNX Luxembourg was located within the 8000 sqm pavilion of the Luxembourg Chamber of Crafts and Trades. Many of the visitors appreciated talking to the experts of KNX Luxembourg about suggestions concerning the design of future-proof electrical installations.
A KNX quiz was held, which attracted many participants. 55 happy winners took home an ETS4 Lite licence. They had answered the tricky questions of the ETS4 online quiz. Three expert participants even won new ETS4 Pro software. Many members and friends of KNX Luxembourg used the opportunity to exchange ideas and to party at an "after work exchange".

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## KNX Profiles itself Prominently at Home Automation Event

During the annual trade fair Home Automation & Smart Living, which took place in November at the Evoluon in Eindhoven, the presence of KNX was very much felt. The complete second storey at this event was rechristened "the KNX Ring". This consisted of one area with more than 30 stands staffed by members of KNX Netherlands and the Dutch KNX Professionals. Manufacturers, suppliers, installers and system integrators stood side by side to receive the more than 3,000 visitors during this two-day event. The central message communicated to these visitors was: Choose KNX for a guarantee of future-proof home and building automation.

*Visitors around the KNX booths in Eindhoven.*

In addition to the above, KNX Netherlands also held lectures, as well as celebrated the KNX Professionals Award 2011. The visitors to this event were primarily representatives of housing corporations, project developers, the care sector, governmental bodies, advisers and architects.

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## ETS4-Seminar in Norwegen

The Norwegian KNX National Group saw some changes in 2011. Trond Hoyem, a certified KNX Tutor, became the new secretary of the national association. Mr. Hoyem will not only be active in KNX Norway but also be involved in KNX courses offered in Norway. The first joint action was the organization of the 1st ETS4 Workshop, with more than 60 KNX experts attending. During the seminar, all participants received a detailed introduction and were shown the essential differences and improvements compared to ETS3, as well as tips and tricks for the transition from ETS3 to the new tool ETS4. The first ETS4 workshop was successful, not only for the attendees, but also for the members of KNX Norway. In view of the great enthusiasm shown, it is clear to KNX Norway that more workshops and other actions also have to be held in 2012.

*Trond Hoyem, certified KNX Tutor, at the ETS4 Seminar.*

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## Endiel 2011 in Porto, Portugal

In 2011, for the first time the two most important trade fairs for professionals (Concreta and Endiel) were simultaneously held. The Portuguese National Group had the opportunity to approach a wide target group at one event: planners, architects, electricians, system integrators and investors. It was undoubtedly the best event of the professional installers craft industry in Portugal and very innovating ideas and applications for residential, commercial and hotel buildings were shown.

*Rui Carneiro, secretary of KNX Portugal, at the Portuguese KNX Booth.*

In Portugal, the association that promotes KNX as an International Standard for "home & building automation" exists since 1997, previously as EIBA and today as KNX Association Portugal. At the KNX booth, the new ETS4 software tool was shown, together with applications such as: energy efficiency, smart metering, visualization and remote control.

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## The Polish KNX Competition: Quality and High Level Entries

The Polish National Group organized a contest, putting high emphasis on the quality of the applications as well as on prizes to be won. 15 candidates handed in their papers for the competition. Only five nominees had a chance to get to the final round and eventually the contest was won by the student Mr Christopher Sowinski and his mentor, Dr. Ing. Mariusz Greek, from the University of Lodz for the project "Smart House, a microprocessor based control system design". The research was focused on new KNX equipment, with a new design, in which the bus coupling unit and the application module is integrated into one common unit. The Award Ceremony took place at the Energetab fair where Mr Sasin, President of KNX Poland, handed out an ETS4 Pro license and a laptop to the winner.

*Mr Sasin, president of KNX Poland, and Mr Christopher Sowinski, winner of the Polish KNX Competition.*

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## KNX Russia Continues its Successful Growth

The Hi-Tech Building Exhibition is a unique exhibition for house & building automation in Russia including lighting technologies, energy saving solutions, electrical installations, etc. The Russian KNX Association, together with its Members, participated at the exhibition with an own stand. The stand served as meeting point for visitors interested to learn more about KNX.

*Participants at the KNX Workshop in Russia and the Russian KNX Booth of the HTB Fair.*

In parallel to the fair, a KNX Workshop was organized by KNX Russia. This event was attended by more than 100 participants and constituted a good channel for the exchange of experiences among KNX-experts and the audience about energy savings with KNX.
As result of the positive outcome, KNX Russia will again be present at the exhibition in 2012!

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## The Year of Energy Efficiency in Serbia

2011 was declared the "Year of Energy Efficiency in Serbia" by the local government. The innovation center at the KNX Scientific Partner, the Faculty of Mechanical Engineering of the University of Belgrade, started teaching the graduate course „Intelligent buildings", based on the worldwide recognized standard KNX.
The lectures are complemented by a KNX Laboratory for Intelligent Buildings, offering KNX working stations, with KNX components from different manufacturers, for practical exercises.
This offer is currently unique.

*Students at the KNX Scientific Partner the Faculty of Mechanical Engineering (Innovation Centre of Mechanical Engineering Faculty, University of Belgrade).*

Consequently, KNX Members in Serbia support the initiative in order to enhance KNX' future in Serbia. The course will provide new perspectives and new opportunities to the future professionals interested in making comfortable and energy saving, sustainable solutions.

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***Web:*** *www.knx.org/rs*

## KNX National Group Singapore Founded

In order to promote the KNX Standard in Singapore, which is blessed by its "golden location in the middle of Asia", the KNX Association was present at "Build Eco Expo", better known as "Bex Asia". The performance of the KNX Association was the top talking point at Bex Asia. The KNX Association took also the opportunity to set up a new KNX National Group. With already seven members, the KNX National Group Singapore has a very good basis in order to be success full. That this basis is built on solid ground has been already proven by the KNX National Group Singapore's first activity, the participation at the "Environment & Sustainability Technology Days 2011" at the Republic Polytechnic. This event is targeting the younger generation and is a first step, to bring KNX closer to the "Future of KNX".

*KNX National Group Singapore Foundation.*

***Contact:*** *info@knx.org*
***Web:*** *www.knx.org/sg*

## Successful KNX Congress in the Basque Country

The national KNX congress was held on the 9th and 10th November 2011 in the Basque village of Santurtzi near Bilbao. After successful similar events in Madrid and Malaga this one was again a mixture of exhibition and expert lectures. High-level politicians, industry executives and representatives of organisations attended the event; however, most of the visitors were professionals dealing with all aspects of building automation and using the opportunity to talk about latest developments and to exchange ideas. The first day was reserved for expert talks directed to architects, planning offices and similar decision-makers. The second day was aimed at installers, system integrators and other similar specialists. The exhibition was open to visitors on both days, offering the opportunity to catch up on the latest products, solutions and services. About 350 persons attended the event, many more than expected. This encouraged the organisers to continue in the same way next year.

*From left to right: Mr José Ignacio Angulo (director of the technical college San Jorge hosting the event), Mr Xabier Garmendia (vice minister of Industry and Energy in the Basque government), Mr Ricardo Ituarte (mayor of Santurtzi), Ms Izaskun Artetxe (director of the provincial government in Biskaya) and Mr Antonio Moreno (president of the Spanish KNX association.*

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## Fairs and KNX Award

Since the end of 2011, the Swedish National Group has been mainly active at trade fairs.
KNX Sweden set up a booth at the Hem och Villa event, where real applications were shown, dedicated to the kitchen area and living room. The Swedish System Integrators described products and functionalities to the visitors attending the event, which took place in Stockholm and Gothenburg.

*The Swedish KNX Award winner 2011.*

In addition, KNX Sweden participated to the easyFairs, oriented to professional installers in Stockholm. This event saw lots of activities, the most significant being the yearly KNX Award Ceremony. This year, the Award went to the system integrator Mr Lars Jägerhed from the company Skanska Electro. His KNX project "SIB Kvarn" constitutes a small town of about 40 buildings, all controlled with KNX.

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## Swiss Quality Team for KNX Projects and KNX App

The Swiss KNX organisation has started up a KNX Project Quality Team, consisting of manufacturers, system integrators and planners, in all 20 participants. Team members are expected to develop guidelines for the realisation of KNX projects by March 2012. Their intention is to create a requirements specification as well as check lists and standardised reports for system integrators, in order to ease communication between planners, installers and customers.
More KNX Professionals already having completed a basic course are to be trained, in order to broaden their knowledge of KNX.
The KNX app launched in September during the Ineltec by KNX Switzerland has already been downloaded a 1000 times. Based on this success the app is going to be adapted for Android.

*The Swiss app has been downloaded more than 1000 times.*

***Contact:*** *knx@knx.ch*
***Web:*** *www.knx.ch*

## Rising Power on the Bosphorus

Turkey has always been a major player in terms of number of realized KNX projects. Since 2009, three local Turkish companies joined the KNX Association, currently Turkey already has 3 KNX certified training centres and the number of KNX partners has grown considerably in the last few years.
Considering the above, it was not more than obvious that a National Group was founded in Turkey. The first steps towards the establishment of the KNX National Group in Turkey were taken in the course of 2011. Companies that have been active in Turkey for already several years (e.g. Siemens, Schneider Electric, ABB, Berker, Wago, Gewiss) together with the before-mentioned local Turkish KNX members and other prominent KNX system integrators joined forces to set up the National Group "Türkiye". This will again boost KNX activities in the Turkish market.

*The members of KNX Turkey.*

***Contact:*** *info@knx.org*
***Web:*** *www.knxturkiye.com*

## KNX UK Technical Workshop Success

In 2011, KNX International together with its national groups continued the organization of KNX technical workshops for potential or dormant members, to introduce to them the various available system components for a reduced time to market.
After a presentation of the advantages of the KNX system compared to competing systems, KNX UK informed about its activities in their country and a KNX UK delegate presented the KNX technology in a nutshell. Subsequently, delegates from the providers of KNX certified system components and stacks from such companies as Weinzierl, Tapko and Opternus presented their solutions to demonstrate the different available options for KNX product development. A delegate from the Spanish KNX member EGI was invited to inform the audience about their experiences during the development of their KNX enabled audio control system. Mr Demarest presented the state of affairs in international standardization on home and building control and the KNX certification procedure.

*A delegate from KNX UK at the KNX Technical Workshop in UK.*

***Contact:*** *admin@knxuk.org*
***Web:*** *www.knxuk.org*

# Interview with the 200th KNX certified training centre

***KNX Journal:*** *are the 200th training centre in the world. How do you feel about this?*
***Erkan Yalim:*** Becoming a KNX training centre was not only important to us, it fills us with lots of pride to become the 200th one in the list!

***KNX Journal:*** *Why did you decide to found a KNX certified Training Centre?*
***Erkan Yalim:*** The interest for KNX here in Turkey is growing and market players are wishing to be informed about the system. By the set-up of this training centre, Schneider Electric Turkey aims to speed up the growth of the KNX market by increasing the number of certified professionals. We moreover believe that we will increase our service quality by certifying our system integrators and our KNX team.

***KNX Journal:*** *To whom will you offer the certified KNX basic course?*
***Erkan Yalim:*** We will offer KNX training to our KNX Automation Sales Engineers, our System Integrators and also to anyone interested to start working with KNX.

***KNX Journal:*** *Will you also offer other type of courses?*
***Erkan Yalim:*** As a first step, only basic courses will be offered, however in case of demand, also the organisation of Advanced and tutor courses could be contemplated.

***KNX Journal:*** *Energy Efficiency is regarded as an important topic these days. What's your training centre's role in this?*
***Erkan Yalim:*** During courses, trainees will experience energy efficiency solutions based on KNX. As Schneider Electric Turkey, one of our prime goals is increasing awareness for Energy Efficiency in buildings. KNX is a way to achieve this. Couse attendants will also be informed about our See Tool software, allowing calculating energy efficiency and carbon emission decrease in buildings by the use of a selection of KNX solution packages.

*Mr Erkan Yalim, KNX Automation Product Manager, Schneider Electric, Turkey*

# KNX Online-Training: Amaisys

The Amaisys KNX Training Lab is the first KNX online training with real KNX devices. The KNX certified Training Centre is an innovative learning service for professionals and newcomers, who want to improve their KNX automation skills but are unable to visit a training center or do not have equipment to practice.
The Amaisys KNX Training Lab is the first online training that enables students to interact remotely with real KNX devices at low-cost, without having their own equipment during the learning sessions.
Only an internet connection is required to enter into the Lab and obtain full access to a technical environment with theoretical content and real equipment.
During the practical sessions, the students obtain remote access to a real KNX installation situated in our center. The students can program the devices, do the commissioning and test the results directly at any time, using an online-stream camera that shows the results of the actions performed in the installation.
The students can manipulate all functions of the ETS 4.0 software using real KNX devices and can check the installation in real time with the InVendi Learning Platform.

***Contact:***
*Héctor Colado -*
*hcolado@amaisys.com*

***Link:***
*http://www.amaisys-training.com/content/en/*

***Languages:***
*English, Spanish and Russian*

Praktischer Unterricht per Fernsteuerung

Theoretische Lerninhalte

Ansicht einer KNX Trainingskabine

# KNX Online-Training: FUNDACIÓN METAL ASTURIAS

FUNDACIÓNMETAL ASTURIAS

FUNDACIÓN METAL ASTURIAS, the first KNX ISO 9001 Training Center Certified in Spain since 1997, and the first in launching KNX Certified Blended Training Worldwide (start 2007), releases a new KNX&ETS4 Online Training System.

The system is based on a new multimedia & interactive web platform, in which the student is able to participate online and cover the theoretical topics of the KNX basic course and the basic handling of ETS4. The online training consists of 30 hours (over 4 weeks). After this, the student must still attend the obligatory 20 hours of training at a KNX certified TC, to complete the practical part and the KNX exams.

Since its launch in 2007, more than 300 people have been trained with a remarkable success rate of 98 %. This clearly shows that the Online Training System allows the students to get to understand the basic concepts of the KNX system, in a secure, easy and progressive manner.

The online student can attend the practical training at any other KNX Certified Training Center anywhere. For this, FMA has concluded cooperation agreements with other Training Centers, and is open to cooperate with any other KNX TC interested.

In 2012 FMA also plans to release the English version of the platform, the system will then be made available worldwide. In parallel, the platform will be extended with other courses and webinars related to KNX and Building Automation (Near Zero Energy Buildings, ISO 50001 Energy Management Systems, Smart Metering, Energy Manager Certification). The Online Training System opens up a whole range of new opportunities.

***Contact:***
*Julio Díaz García - juliodi@fundacionmetal.org*

***Link:***
*Fehler! Hyperlink ungültig.*

***Languages:***
*English, Spanish*

# KNX Online-Training Tekniska Byrån

Tekniska Byrån

It is now possible to attend the KNX basic course online in Sweden. This makes it easy, fast, cost effective and more convenient to acquire KNX knowledge and this in a modern way via the web.

The interface has been updated and is very stable thanks to the experience of many years of online training. The students have access to a tutor via the web interface and can ask questions. Each chapter is finalized with an own test. This ensures that the student has reached the necessary knowledge level after the course. The progress can be supervised to ensure that each student finishes in time.

Normal course period can be 1-6 months, but can of course be done faster.

The platform is also open for other Training centers. By sending the student to this course (theoretical part) – the student returns to the local training center ready to complete the last days (50%) practical training and examination.

Both professionals such as electrical contractors, consultants, HVAC system integrators but also those not working regularly with KNX, such as buyers, decision-makers etc. can attend the course, as one can opt to only complete the theoretical part.

***Contact:***
*Mr. Mats Nordahl - info@tekniskabyran.se*

***Link:***
*www.knxcourse.com*

***Languages:***
*English, Swedish*

# KNX Online-Training: SEAS, Estudios Superiores Abiertos

SEAS, Estudios Superiores Abiertos is the only institute in Aragon offering online KNX training based on the official documentation permanently updated by the KNX Association. The degree qualifies students to design, install and maintain smart house facilities with KNX, the only open standard in the world for home and building control, representing 80% of the number of devices sold in Europe.

Students can find the study materials in the Virtual Learning Environment (VLE), which can be entered via the webpage www.seas.es. The VLE includes all tools the student may need as well as access to the academic record, virtual secretary and the mail server to keep in touch with the teaching staff, composed of three people to guide the student: coordinator, tutor and expert teacher. In the VLE, the student can find the didactic units, exercises advised by the teacher and self-assessment tests, as well as suggestions and appendixes recommended by the teacher to get him acquainted to the world of smart building. Once the student has completed his/her studies, he/she may try and take the official exam to obtain the KNX Partner qualification. To do that, classroom based seminars are held in our facilities at Fundación San Valero in Zaragoza.

***Contact:***
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***Link:***
*www.seas.es*

***Languages:***
*Spanish*

# New Training Centres

## NORWAY
### ABB Norway training center

As one of the founders of KNX, ABB has had experience with KNX for over 20 years in Norway. ABB Norway has decided to start its own KNX certified center to spread KNX knowledge to installers, planners, engineers, system integrators. Involved in the electrical field, ABB offers a one day training course for programming, and certified basic KNX courses. ABB NO also offers the option of customized training, with the objective that the client can successfully bring KNX-technology into practice. By attending the different training courses, customers can achieve the KNX partner certification and obtain an optimal mix of theoretical and practical instruments to propose, plan and commission a KNX installation in any application field for residential, commercial or industrial buildings.

***Contact:*** *www.abb.no/knx*

## GERMANY
### Berker

Berker is a design-oriented switch manufacturer with a long tradition and recognized system provider for KNX products. As a developer and manufacturer of KNX products Berker has been working actively with the bodies of KNX. Since 2010, Berker is part of the Hager Group. At the training center in Sauerland Ottfingen the company offers seminars about KNX products and KNX combined courses. In the one-week lessons participating installers gain valuable knowledge about KNX. After passing the exam, participants receive certification; they are entitled to both the planning and commissioning of KNX projects. In the Berker training centre, the participants are supervised by experienced electrical professionals.

***Contact:*** *www.berker.de*

## GERMANY
### Vocational training centre Döbeln

At the vocational training center Döbeln electricians specializing in energy and building are trained. The KNX technology has long been part of the curriculum for this training. With the KNX certification, they offer students the opportunity to acquire the KNX Basic Course certificate as part of their training. Furthermore, they plan to train other educational institutions, for example via a cooperative learning center, giving the possibility to obtain the KNX Basic Course Certificate as part of their training at the vocational training center Döbeln. The KNX certification also offers the opportunity to plan and perform KNX training courses in collaboration with the consultants of the federal state of Saxony and the Saxon Education Institute to train teachers at the vocational training center Döbeln.

***Contact:*** *www.bsz-doebeln.de*

## ARGENTINA
### Centro Tecnologico de Formacion

Centro Tecnologico de Formacion (CTF) is a place for knowledge exchange based on innovation concepts and aiming at technological business professionals. Their educational offer includes certified KNX basic courses, with the highest standard of certification, tutors and the latest KNX-technologies. Their main objective is to train new KNX Partners in Latin America in order to enhance the presence of KNX on the continent and establish the KNX Standard as the principal protocol in building automation. All these objectives, plus a strict quality policy, including an annual audit of their training centres, ensure the excellence of the CTF training courses. They are committed.

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## FRANCE
### Domotic-Xperience

Through close cooperation with all major KNX hardware manufacturers, Domotic-Xperience is developing optimized solutions to customer needs and requirements, with high added value in security, comfort, energy metering and efficiency. Thanks to its KNX Training Center certification, Domotic-Xperience is well prepared to convey KNX skills to students in the South-West of France, and especially help local and regional electrical installers bring this technology into practice.

***Contact:***
*formation@domotic-xperience.com*

## CROATIA
### Elektrotehnicka skola

The School of Electrotechnics Zagreb is Croatia's leading school for electrical engineering and computer science. It offers four-year schooling in the areas of computing, computer networks, Internet technologies, electronics, power electronics, automation and electrical machinery with excellent teaching equipment that allows students to easily master the specific vocational content. It is a school with international success and experience, whose quality is recognized and funded by the European Union through a series of successful projects such as: Cards 2003, Leonardo Da Vinci, Comenius. In 2011 it became a KNX certified training center offering KNX basic courses. For this purpose its lab is equipped with devices including push buttons, measuring sensors and different kinds of actuators. Seminars cover the design and programming of the system.

***Contact:*** *www.eltehskola-zg.hr*

## SINGAPORE
### Jung Asia Pte LTD

As a direct subsidiary of JUNG in the Asian Pacific, Jung Asia is the regional headquarter for sales, marketing, logistics, training and product support to all clients, business partners and subsidiary companies. Jung Asia provides, on a regular basis, product seminars, team building meetings, technical training and previews of new products. It also organizes product orientation programs for its customers and technicians, as well as performs integration and experiments with business partners and even competitors in the same industry.

***Contact:*** *KeithLeong@sg.jungasia.com*

## ITALY
### Meridionale Engineering Training Center

Southern Engineering is the first authorized KNX training center in Central or Southern Italy. It boasts a highly qualified staff of five people and offers mobile KNX partner training at the customer's premises.

***Contact:*** *www.meridionaleengineering.it*

## MALAYSIA
### Pulsation Technology Center

With fast expansion of KNX projects in Malaysia, Pulsation Technology Center Sdn. Bhd., Malaysia's first KNX certified training centre was established in order to offer local training for existing and future KNX Partners. Trainings are conducted by KNX tutors having more than 10 years of KNX experience and more than 20 years in electrical automation fields. This centre also values neutrality, as participants are able to experience products of multiple KNX manufactures during hands on session, including ABB, BERKER, GVS, JUNG, MERTEN, THEBEN , to name just a few.

***Contact:*** *www.gpchand@ptc.com.my*

## FINLAND
### Schneider Electric Finnlan

To answer the increasing demand for KNX training, and due to the growing KNX market in Finland, Schneider Electric has now started a certified KNX training, in the Schneider Electric Training Centre in Espoo. Here it also offers KNX introduction courses and product courses for more experienced users. The Training Centre is situated in the Helsinki region and is easy to reach from all over southern Finland, thanks to the good transport connection. For 2012 it plans to organize four certification training sessions. The training center can accommodate a maximum number of 6 students.

***Contact:*** *www.schneider-electric.com/fi*

## TURKEY
### Schneider Electric Turkey

KNX is becoming more important in Turkey and market actors are wishing to be informed about it. Schneider Electric Turkey focuses on Energy Efficiency in buildings, so KNX is one of the key points in this sector. Because of this, Schneider has established an Energy University giving information to anyone wanting to be trained in energy efficient solutions. As a training center, Schneider Electric Turkey plans to certify and inform system integrators, contractors, architects, project offices and end users, to increase the number of professionals in the market, knowing the system and knowing how to use its possibilities. Through this training center, Schneider Electric Turkey aims to fasten the growth of the KNX market by increasing the number of certified professionals.

***Contact:***
*TR-Hotline@Schneider-electric.com*

## BRAZIL
### STRUXI

STRUXI is a Brazilian company founded by professionals with over 25 years of experience in the commercial and residential building market. Its main activities are the development of KNX technical support, sales and distribution of KNX related products in the Brazilian market. In September 2011, DanilloBettoni (STRUXI training manager) acquired the KNX tutor certificate, a major step to become the first certified training center in Brazil. The STRUXI facilities include a complete training center equipped with KNX certified JUNG devices in compliance with the KNX requirements for training for basic and advanced courses. The main objective of the certified training center is the training of system integrators, architects, engineers and designers in solutions based on the KNX protocol.

***Contact:*** *www.struxi.com.br*

## CZECH REPUBLIC
### Tomas Bata University

The KNX training centre is located at Tomas Bata University in Zlin. Tomas Bata University offers a wide range of courses. Their aim, based on the Bata philosophy, is to educate graduates in order to acquire the essential skills they need to develop successful careers in an international environment. This means that Bata puts great emphasis not only on professional competences of graduates but also on their international communication skills. The Faculty of Applied Informatics has a fully equipped laboratory for courses on intelligent buildings control including KNX. The courses are offered to students but the laboratory could also serve as training centre for KNX professional users.

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## CHINA
### Video-Star Electronics Co. Ltd.

The South China KNX training centre was established in December 2011. The centre is organised by Guangzhou Video-Star Electronics Co., Ltd. and the China Guangzhou Panyu district government. The target group of the training centre is people engaged in intelligent building engineering design, construction, supervision and other related management or technical staff. Tutors have been trained and certified by KNX International. Four training sessions per year are planned, with concluding exam.

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# New Scientific Partners

## GERMANY
### Carl von Ossietzky University Oldenburg

The basic research interest of the department of environmental computer science at the University of Oldenburg is to support a healthy environment in the long term development and the efficient use of resources with the help of software tools. Applications are currently mainly energy supply systems under the aspect of optimizing the use of renewable energy sources. As part of the one-year student project group „Smart Energy Agents @ Home“ currently with eleven participants and three supervisors, the scenario of „electrically self-sufficient house“ will be investigated. This is a self-organization process for the coordination of intelligent devices in the home designed to adapt their consumption to fluctuating supplies. The KNX technology serves as a communication medium for intelligent devices.

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## PORTUGAL
### Castelo Branco Polytechnic Institute

The School of Engineering is part of Castelo Branco Polytechnic Institute. Since 2010, the school is offering a course in electronics and electrical installations, where students are trained to perform tasks related to installation, operation and maintenance of electrical installations, autonomously and according to technical specifications. One of the programs provides practical training in the area of intelligent buildings and home automation, where the most representative technologies, protocols and system architectures are addressed, together with their impact in terms of comfort, safety and energy consumption.

***Contact:*** *rdionisio@ipcb.pt*

## AUSTRALIA
### Edith-Cowan-University

The School of Engineering at ECU is the fastest growing engineering school in Australia with an annual growth of more than 30% for the last 4 years. It offers a diverse range of engineering courses which have been specifically designed to meet the needs of Australian and Western Australian industries. Courses are offered across a wide range of engineering discipline areas including civil, mechanical, electrical power, mechatronics, automation and control, electronics and communications, computer systems, maritime, maintenance engineering, and aeronautics. This year a group of 15 bachelor and master students are collectively developing a KNX based Home Area Network system. Each year a new KNX based system will be designed, developed and implemented using the latest available technology and eventually presented to the School staff.

***Contact:*** *a.osseiran@zcu.edu.au*

## PORTUGAL
### Guarda Polytechnic Institute

The Guarda Polytechnic Institute is an institution of higher education, responsible for education, R&D, and technical services, as well as cultural, scientific and technical exchange. The Polytechnic Institute has four schools: School of Health Sciences, School of Education, School of Tourism and the School of Technology and Management. The latter is responsible for the Master's degree in Mobile Computing, which was the first course in Portugal to focus on mobility and ubiquity of computer systems. As result, has been developed I&D for ubiquitous computing in the areas of smart devices, mobile services and mobile networks. Through partnership with KNX, the Guarda Polytechnic Institute looks forward to improving the development of ubiquitous computing for buildings automation systems in areas of user interface, monitoring, and control systems, as well as energy management applications.

***Contact:*** *director-estg@ipg.pt*

## BELGIUM
## KATHO

KATHO, a university college in Flanders, Belgium has over 8500 students all studying to become professional bachelors in one of 6 study areas: Industrial Sciences, Business Studies, Teacher Training, Social Sciences, Healthcare, Biotechnology. VHTI, the department for Industrial Sciences houses amongst others the Professional Bachelor of Energy Technology. As part of their training, students learn about lighting and domotics based on KNX. Every year several students implement the techniques of KNX in their end of year work. An example of this is a thesis project, where students built a dynamic management system that measures and analyses the use of energy based on KNX. KATHO becomes a scientific partner to ensure that students can use the KNX documentation and tools for their projects.

***Contact:*** *vhti@katho.be*

## ITALY
## Politecnico di Bari

Current research activity of the institute includes the study and experimentation of novel methods and protocols able to support a semantic-enhanced resource discovery in mobile and pervasive environments. Current technologies for Building Automation basically require an explicit interaction with the user and allow a static set of operational scenarios defined during system implementation. Novel HBA solutions should enable so-called ambient intelligence, deriving from a flexible and automatic control of appliances and subsystems. The research proposes backward-compatible improvements to the KNX standard able to support advanced, knowledge-based and context-aware functionalities, grounded on the semantic annotation of both user profiles and device capabilities. Such approach enables novel resource discovery, matchmaking and decision support in HBA.

***Contact:*** *m.ruta@poliba.it*

## SINGAPORE
## Republic Polytechnic

NEXTspace lab is the flagship lab of the Republic Polytechnic, School of Engineering, Grade in Digital Entertainment Electronics. The KNX Standard is used in the home automation control of the lab, which includes the control of lights, cooling, blinds, power supply socket and home appliances.

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## URUGUAY
## Universidad ORT Uruguay

Since 1996 the School of Engineering of Universidad ORT Uruguay offers undergraduate programs in Electronics, Telecommunication and Software Engineering. Within these programs, a number of capstone design projects tutored by teachers of the Digital Systems and Signal Processing area are related to domotics. Presently a team of software engineering students are working on a prototype web server to remotely access KNX installations. In 2010 the Uruguayan government started to promote investment in alternative energy sources and energy efficiency as part of the master redesign of its energy matrix. At the same time Universidad ORT Uruguay hosts various activities on the KNX standard with attendance of visitors from abroad. The institute herewith becomes the first KNX Scientific Partner in (South) America.

***Contact:*** *Fernandez_m@ort.edu.uy*

## SWEDEN
## Växjö Yrkeshögskola

Växjö Yrkeshögskola has made KNX part of its vocational course "control of intelligent houses". Basic and Advanced training is organized together with preparations for the exam, of which the success rate is expected to be high. Exercises include control of advanced systems such as heating-, ventilation-, security- and management supervision. The students are studying for two years and will leave the faculty well skilled. The centre cooperates with Tekniska Byrån, which is also providing expert competence, development, training and guidance to the institute. As the first and only Scientific Partner in Sweden it will lay a strong focus on KNX and wants to further develop KNX in Sweden. Great emphasis is also put on KNX development , e.g. by having student projects focusing on hardware development.

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## Last meeting of the year

The KNX Professionals met in Kassel (Germany), capital of the Brothers Grimm fairyland, for their last meeting of the year. The organisers had prepared a very busy agenda, containing presentations from a number of qualified specialists. Marcel Kellermann presented several products, like the LUXOMAT presence detector from his company B.E.G. Dipl.-Ing. Otto gave a presentation about the stability of KNX installations, this engineer working as an independent expert explained facts about the topic „What to do when the bus goes crazy?“. Frank Lenders of BMS-Building Management Solutions introduced at the end of the first day, the members to his company's new „Quadra“ weather station. Sunday evening was reserved for a general meeting of the organisation. New members were introduced and confirmed at the beginning of the meeting. Marcel Kellermann (beg), Andreas Hettler (tci) and Guy Heulens from Belgium (Domotica Optimus) are now added to the list of KNX Professionals. This list counts from 31.12.2011 onwards, 104 members. Chairman Dirk Müller reported about the executive committee's work in 2011 and about the evolution of membership numbers. Afterwards, a discussion about the events in 2011 and the presence of KNX Professionals at various trade fairs took place. Members discussed the program for 2012 and also decided about locations and responsibilities, concerning event organisation. Frank Hujer gave an overview of the development and improvements of the website. Last but not least, treasurer Jost Raschka gave a report about the association's financial evolution in 2011. Matthias Oloth and Falk Beger performed the cash audit for 2010 and 2011, and requested to formally approve the treasurer's actions. This request was accepted by the assembly.

*During the presentation „What to do when the bus goes crazy?“.*

***Contact:*** *www.knx-professionals.de*

## The First KNX Seminar in Thessaloniki

Last February, the members of KNX Userclub Greece organized an event, the main goal of which was the introduction of KNX to the audience. Topics such as the main advantages of KNX, facts and figures of KNX and an explanation about the mission of the KNX Userclub were given to the participants.
Participants to the event held in Thessaloniki were members of the Greek Userclub as well as the President of SEHBE (Contractor Electricians Partnership of Northern Greece). In total, more than 40 people attended.
This event gave a clear sign to the market: the Userclub activities are a good complement to the National Group activites, opening the door to electricians and other representatives, interested in the use of the KNX technology in Greece.

*The audience at the fist KNX Userclub Meeting*

***Contact:*** *info@knx-userclub.gr*

## Launch of KNX Userclub Hungary

In the beginning of 2012, the Hungarian KNX Userclub was launched. At its start, the group already counts seven members: Mr György Baté (spokesman), Mr Zoltán László, Mr Zsolt Bende, Mr Mihály Tóth, Mr István Nyeste, Mr Gulyás András and Mr György Tárkonyi
Last February, the first meeting/seminar took place in Szeged (South-Hungary) with the following main topics: how to design the topology of a KNX installation with the transmission medium KNX twisted pair, description of the KNX bus installation and a basic introduction to the KNX unique tool software: ETS4
Other meetings and actions are already planned such as seminars on visualisation and remote control with KNX and participation at the largest exhibition in Hungary, Construma.

*The members of KNX Userclub Hungary in Szeged.*

***Contact:***
*bate.gyorgy@termicont.hu*

## KNX Professionals as ambassadors in the building industry

The number of installers and system integrators joining the KNX Professionals in the Netherlands is steadily growing. In November, the number of 300 was reached. For KNX Netherlands, the KNX Professionals are the ambassadors promoting this international standard in the building and construction sector. For this reason, KNX Netherlands wants to ensure that they can profile themselves in the market, with sufficient knowledge and stock-in-trade.
For 2012 KNX has already planned two theme days: on March 8, KNX Netherlands plans a theme meeting on KNX RF (Radio Frequency); and another meeting is planned for the June 7, where KNX Professionals can attend a theme day on KNX and security systems. The meetings are free of charge for members. The theme days are characterised by the exchange of knowledge via lectures, presentations, speed dates with manufacturers and in some cases also workshops on ETS aspects.
You can find more information about these meetings on the website of the KNX Professionals.

*Members of the Dutch KNX Professional Association preparing the event.*

***Contact:***
*www.knx-professionals.nl*

## Partnership with KNX Professionals Spain

On January the 19th, a cooperation agreement was signed between the two associations that promote the KNX standard in the Spanish market: the KNX National Group Spain and the KNX Professionals Spain. It is now clear that both associations have decided to join forces and take advantage of this synergy to achieve their objectives together.

One of the most important arrangements is the joint participation in activities, such as the organization of technical days, seminars and so on. The intention is also to increase the exchange of information between all KNX partners from both entities and the common promotion of events organized in the Spanish market.

*Antonio Moreno (President of KNX NG Spain) and Francisco Javier Exposito (President of KNX Professionals Spain) at the signing of the agreement.*

This partnership will result in the better promotion of the KNX standard and a stronger awareness for KNX.

***Contact:***
*info@knxprofessionals.es*


**In thirteen languages!**

## Handbook for Home and Building Control

The KNX handbook has been already translated into Chinese, Croatian, Dutch, Englisch, Finnish, French, German, Italian, Norwegian, Perisan, Russian, Swedish and Spanish.
The handbook introduces the reader into the KNX system and common applications.
This edition (5th edition 2006) addresses beginners as well as professionals who already have a basic knowledge of home and building control based on KNX.
You can order the book at the price 24,90 € plus shipping from:

**KNX Association**
De Kleetlaan 5 Bus 11
B - 1831 Diegem-Brüssel
Belgium

**For order: http://onlineshop.knx.org**

# KNX at International Conferences / Fairs

*Beijing (China)*

## ITEI KNX Accreditation

At the end of 2007, the translated version of the ISO 14543-3 standard documenting the KNX protocol and KNX media, became a listed pre-standard in the P.R. China as GB/Z 20965.
Last year, the process was started to update the standard to the GB/T level, amongst others by the inclusion of a description of the KNXnet/IP protocol description. Next to the prerequisite that the standard must be locally used, it is also required that at least a local test lab is available for the manufacturers developing products complying with the standard. As a result, the Instrumentation Technology & Economy Institute (ITEI) in Beijing, already operating as the Secretariat of the local KNX national group and having a nationally accredited test lab, took the necessary steps to qualify itself as a KNX accredited test house for interworking/functionality tests as well as lower layer testing of KNX devices. The KNX Audit team made a first assessment round at the test lab in August and made a final and successful follow-up audit in the month of November. This makes ITEI not only the first Chinese KNX accredited test lab but also the first one outside Europe.

*KNX test set-ups at ITEI*

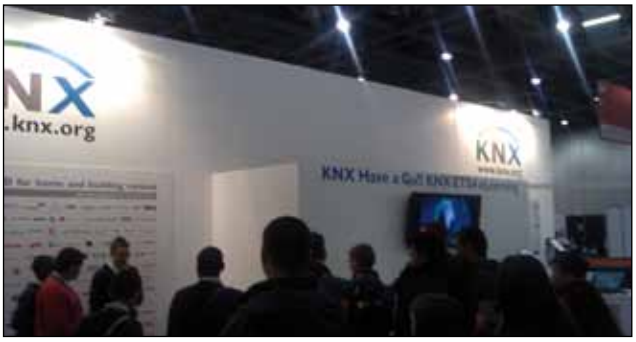
***Contact:*** *wlk@tc124.com*

*London (UK)*

## Generation KNX at WorldSkills 2011 in London

The WorldSkills 2011 event in London, 8-11 October 2011, proved to be a highly successful event for the KNX Association. Not only was KNX used as the protocol of choice for the very first time in the Electrical Installation category, but also hundreds of students took the opportunity to visit the KNX stand to see why KNX represents the future of intelligent building technology.
35 competitors in the Electrical Installation category used KNX as the platform for their work, to demonstrate their remarkable craftsmanship and practical electrical engineering skills. The selection of KNX reflected the global trend in home and building technology, where KNX is the worldwide standardised bus technology. Michael Hourihan, WorldSkills Chief Expert for the Electrical Installations category, said: "We have to move on and make sure our skills are up to date with modern technology. So an important step for us was the inclusion of KNX"
All competitors achieved extremely high standards of craftsmanship, with the eventual worthy winners being Benjamin Houghton of Australia (Gold Medal), Gian-Andrea Casaulta of Switzerland (Gold Medal) and Kieran Doherty of Ireland (Gold Medal); Bernt Erlend of Norway (Bronze Medal) and Seon Jung Hwang of Korea (Bronze Medal).
The KNX Association also had a major presence at WorldSkills 2011 through its exhibition stand that attracted eager students and school children throughout the four day event.
Heinz Lux, Director of the KNX Association commented: "WorldSkills 2011 was an excellent event, not just for KNX but for a whole

*The Winners of the Worldskills London 2011 Competition (Electrical Installations category).*




*KNX Stand at the International Competition: Wolrdskills London 2011*

generation of young people, who were given a great insight into the opportunities open to them in the world of electrical installations in the future."
Full details of KNX at WorldSkills 2011 can be seen at the following link.

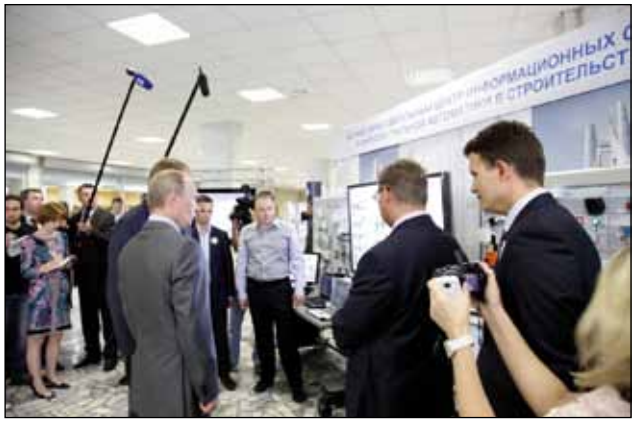
***Link:*** *www.knx.org > Downloads > 09 Various > Movies KNX_At_Worldskills2011*

*KNX hostess at the exhibition Worldskills London 2011*

*Moscow (Russia)*

## The Russian Prime Minister Visits KNX Russia

On the 24th of August, the Prime Minister of Russia, Mr Vladimir Putin, visited the Moscow State University of Civil Engineering (MSUCE), where KNX Russia has its headquarters. The main purpose of the visit was to inform about the new initiatives launched by Mr Putin. After the meeting, the President of KNX Russia, Mr Andrey Golovin, took the opportunity to show off the latest trends in building automation with KNX to Mr Putin, Mr Fursenko (Minister of Education of Russia) and Mr Andrey Volkov (Rector of the MSUCE). They all were very impressed by what can be achieved with KNX.



*The Russian Prime Minister staring at the KNX installation.*

***Contact:***
*golovin@konnex-russia.ru*

*Kuala Lumpur (Malaysia)*

## The first KNX Training Centre in Malaysia

Recognizing the possibilities of KNX, the Training Centre "Pulsation Technologies" decided to adopt certified KNX Training to their portfolio. As a result of the Malaysian participants having successfully passed the Tutor Exam, the KNX Association is proud to announce the opening of the first certified KNX Training Centre in Kuala Lumpur, the capital of Malaysia.
Since KNX Training is the basis for further activities, the KNX Association will put strong focus on this region. Upcoming activities for example "The First Malaysian KNX Forum", is already planned and will be organized within this year.

*KNX Tutor Course in Malaysia*

***Contact:*** *gpchand@me.com*

*Seoul (Korea)*

## U City World Forum Incheon Korea

On invitation of the European Chamber of Commerce in Korea (EUCCK), in October 2011 KNX was invited to participate as a panel member at the Ubiquitous City World Forum at the Songdo Convensia at Incheon near Seoul (Korea). Under the guidance of the moderator from the local subsidiary of Schneider Electric, KNX together with delegates from Korea Telecom, ETSI and the Korean Yonsei University exchanged views and answered questions from the audience on which information technologies would be required for the realization of smart cities and what role standardization would need to play. KNX naturally brought in its expertise on open protocols for home and building control to realize homes and buildings with equipment that is truly interoperable.

**Contact:** *info@knx.org*

*Taipei (Taiwan)*

## Taipei International Building, Construction & Decoration Exhibition

In December KNX, as invited as a speaker to the Smart Green Architecture and Ecological Environment Forum, held at the 22nd Taipei International Building, Construction & Decoration Exhibition in Taiwan. This fair mostly attracts architects, building designer, engineers, construction builders and material/device suppliers. At the Forum KNX highlighted the advantages of the KNX system compared to conventional installation techniques and competing systems.

*General view of the event Taipei International Building, Construction & Decoration Exhibition*

**Contact:** *info@knx.org*

*Guangzhou (China)*

## KNX Tutor Crash Courses in Asia

One of the main requirements for the certification of a training center, is that it has at least one KNX certified tutor. A well-qualified tutor is an indispensable element in providing good training: well-trained installers make well commissioned projects, in turn bringing satisfied customers, the best possible publicity for the system. However, in new markets, candidate training centers have difficulties getting persons qualified as a KNX tutor, either because there is no training center providing certification for tutors or because the nearest one is at great distances from the candidate training center, an additional cost factor. Since a number of years, KNX therefore offers KNX crash courses for such candidate tutors, either at the premises of the candidate training centers or directly in the KNX head offices. In 2011, KNX organized in total 11 such courses, amongst others also in Asia, where 4 candidate tutors attended a course held in Seoul (Korea), 20 in Guangzhou (P.R. China), 3 in Singapore (in the beginning of 2012) and 5 in Malaysia.

*Participants attending the KNX tutor Course in Guangzhou (China)*

**Contact:** *info@knx.org*

*Buenos Aires (Argentina)*

## KNX Arrives in Argentina

Taking the opportunity of the biggest event in Latin America at regards of home and building automation, a representative of KNX flew to Buenos Aires in November 2011.
For the first time, KNX Association took the opportunity to set up a booth in conjunction with the 2 official KNX Training Centres in the country: CTF Training Centre and THI s.a.i.c. All visitors and guests had the chance to discuss with members of KNX Association, as well as the opportunity to meet with other KNX partners from Argentina and the neighbouring countries.

*Large number of visitors attending the KNX booth in Argentina.*

In addition, KNX also had the chance to introduce the KNX technology to more than 160 participants at the Annual Conference of the Local Installers Association in Argentina.
The presence of KNX in Argentina has established the best start for all Latin American countries. Therefore, KNX will continue such actions in this region of the World.

***Contact:*** *info@knx.org*

*Cairo (Egypt)*

## Cairo, the Largest City in the Arab World and Africa, Influenced by KNX

Egypt has experienced an exponential growth of the KNX partners in the last year,thanks to the ABB certified KNX Training Centre in the region. Last year, the KNX centre organized 2 KNX basic courses getting new engineers and system integrators to become official KNX partners.
In addition , a KNX booth was set up at the 9th Construction Exhibition from the 15th to 18th September in Ghana. More than 300 visitors (consultants, and end users) visited the KNX stand. Moreover, the Minister of Development and Construction stayed at the KNX stand, impressed by the possibilities of home and building control with KNX.

*Minister of Development and Construction stayed at KNX stand*

In terms of KNX projects, Egypt is also very active andthe new Cairo Festival City project (CFC), which will use the KNX technology and is a large project hosting more than 13.000 residents in villas and apartments, deserves to be mentioned.

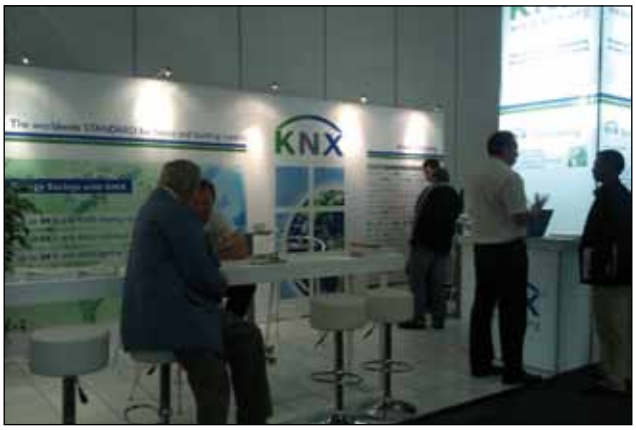
***Contact:***
*tamer.hamdy@eg.abb.com*

*Students during the KNX basic course at the premises of ABB KNX TC in Egypt.*

*Cape Town (South Africa)*

## South Africa Goes Green with KNX

On October the 26th 2011, KNX unveiled its booth at the Green Building Expo in Cape Town. Hosted by the Green Building Council of South Africa, the annual 3-day Expo welcomes speakers and delegates from around the world, sharing information on standardized and sustainable building practices. As a result, many decision-makers learned of the benefits of KNX.
In collaboration with the official KNX Training Centres based and a number of KNX Partners, KNX Association was able to show clear interest in the region. The effort showed not only practical applications but also the solidarity of the KNX community. Now it is clear: South Africa is taking note of the worldwide standard for home and building control - KNX!



*The KNX booth at the Green Building Council Convention.*

***Contact:*** *info@knx.org*

*Amsterdam (The Netherlands)*

## KNX Multi-room Systems at ISE2012

For the fourth time, KNX Association participated together with KNX Members, at the international event ISE 2012 in Amsterdam. At the fair, KNX members showed solutions for so-called „multi-room systems“ , which are becoming increasingly simple and convenient for a green home and building automation. This year KNX placed a fantastic booth, in collaboration with several KNX Manufacturers (Divus, Empure and Tci), demonstrating that audio and video applications can be fully integrated in houses and building, thanks to KNX.

*Joint KNX Association and KNX Members booth at ISE2012.*

***Contact:*** *info@knx.org*

*Amsterdam (The Netherlands)*

## KNX Solves the Needs of the Connected Home

From October 4 to 6, the RAI congress centre in Amsterdam hosted the second Smart Homes conference and – exhibition. 5 000 participants and exhibitors represented utilities, telecoms, appliance manufacturers and solution providers. The co-location with the Metering Europe Conference, points to the shift of perspective: the Smart Home evolves from only being an end point for various metering - and load management, towards a delivery point for new services by telcos and utilities (security, healthcare, energy control etc.) As strong player in the HA-market, KNX Association participated to the panel discussion, explaining the need and success of full openness and – standardisation, in the interest of the customer, the installer and the industry.

*Mr Steven De Bruyne, System Manager, at the Smart Homes Conference*

***Contact:*** *info@knx.org*

*Brussels (Belgium)*

## AIE Conference

At the annual conference of the Association of Electrical Installers at the end of November 2011 in Brussels, KNX was invited as a keynote speaker to inform the national associations of electrical installers on the efforts KNX invests in the young generation, ranging from standardized KNX training courses, the KNX scientific partnership for universities and their various projects based on KNX run by students, the national, European and worldwide competitions for young electricians based on KNX, the KNX Award Category 'Young Generation', etc.

*The audience at the Strategic Forum for Europeans Electrical Contractors.*

***Contact:*** *info@knx.org*

*Eindhoven (The Netherlands)*

## CATiq Eindhoven

CATiq is the abbreviation for Cordless Advanced Technology Internet Quality and is the successor technology to DECT, a wireless technology for cordless telephony. On the CATiq Conference held in September 2011 in Eindhoven/the Netherlands, KNX was invited as a speaker to share its more than 20 years of experience in home and building control with the DECT community. DECT is currently contemplating an extension to its technology to also realize smart home applications: a possibility could be to tunnel KNX telegrams across a DECT network, thus combing the strengths of an ETSI and a CENELEC standard.

CATiq CORDLESS ADVANCED TECHNOLOGY

*CATiq logo (Cordless Advanced Technology Internet Quality).*

***Contact:*** *info@knx.org*

*Lisbon and Porto (Portugal)*

## Porto and Lisbon Show the New Features of ETS4

The Portuguese KNX Association organized two ETS4 seminars. The chosen location for the seminars was the official KNX Training Centre ATEC in Porto (the 20th September) and in Lisbon (the 21st September). In total, more than 60 delegates attended the one day seminar, to hear presentations from the delegates of KNX Association and the members of ATEC, responsible for the practical part of the sessions.
During the practical part of the seminar, the participants had the chance to create their own installation or to follow the directions from Mr Paulo J. Martins, the official KNX tutor working at ATEC. The clear interest from the participants gave a good sign of the awareness of ETS, and also of KNX. Hence, KNX Portugal decided to support the good motivation of the Portuguese KNX community by preparing already new events for 2011.

*Mr Paulo J. Martins, official KNX tutor working at ATEC, during the ETS4 seminar in Lisbon.*

***Contact:*** *paulo.peixoto@atec.pt*

*Montluel (France)*

## Second ETS4 Workshop in France

KNX Association Brussels and KNX France have organized the second ETS4 workshop ETS4.
While the first workshop had as target an expert audience, the second was dedicated to beginners and was attended by thirty participants at ABB in France near Montluel.
While attendees were novices, however, they seemed very interested as many relevant questions were asked and a high interest was shown throughout the day. It is clear that the new ETS4 version has been convincing and will certainly bring many (new) users to work with it soon.

*The audience of the French workshop during the first session of the seminar.*

***Contact:*** *info@knx.org*

*KNX Association*

## Generation KNX Video Contest

In October 2011, KNX Association launched the Generation KNX Video Contest. The goal of this web-based platform was to see how an individual would explain what KNX means to them personally..
To win one of the prizes (12 prizes comprising a total value of 15,000EUR), there was no need to create a professional video, or been a professional actor. Everyone had the chance to participate! The requirements were to create an approximately 60 second video, and explain what KNX meant to them personally.
Participants perfectly understood the message, and as a result we have receive plenty of different ideas about how to define what KNX is for the KNX Community. Some videos use ideas such as: the life of two young people living in a KNX house, a comparison about the automotive sector and the home and building automation as next step, the assisted living of a house for disable people, etc. In total KNX Association has collected more than 80 videos from different countries.
Additionally to the above, the videos have been promoted via our KNX-YouTube account and also via more than 2,000 registered users (so-called Sharers in our Generation KNX Video Contest) in the Social Media, giving an exposure of more than 50,000 unique viewers around the world.
The next issue of the KNX Journal will give a detailed explanation of the winners contest. In the meantime you can watch all videos on the Generation KNX Video Contest webpage.

*Screenshot of the Generation KNX Video Contest homepage.*

***Link:*** *http://contest.knx.org/*

*Madrid (Spain)*

## New Spanish Journal now Online!

During the 2nd KNX Congress organized in the North of Spain, KNX Spain took the opportunity to publish and distribute the Spanish KNX Journal 2011. This issue summarizes all the best actions of 2011. As well as highlighting national and international KNX projects, the Journal also featured the new products of the Spanish KNX members and the most important facts and figures of the first KNX Congress organized by KNX Spain in March 2011. Now the Spanish KNX Journal is also available online, please see below the details.

*Cover of the Spanish Journal 2011*

***Download:*** *www.knx.org – News and Press – KNX Journal*

*Paris (France)*

## The First French KNX Journal now Online!

At the end of 2011, KNX Association, in collaboration with KNX France, decided to create and publish the first KNX Journal dedicated to the French market. The first edition is now available online and highlights several national and international projects. The journal also presents new French products proposed by several KNX members, important events that took place in 2011 and schools which have signed a scientific partnership with KNX Association. See the online edition!

*Cover of the French journal 2012*

***Download:*** *www.knx.org – News and Press – KNX Journal*

*KNX Association*

## KNX Online Shop in Finnish

Very good news for our Finnish customers! The KNX Online Shop has been fully translated in their Nordic language and is already available. From now on, the Finnish users will be able to purchase any products, check their important information in their own language and much more. Visit our KNX Online shop and shift to Finnish if you are interested. Welcome Finland!

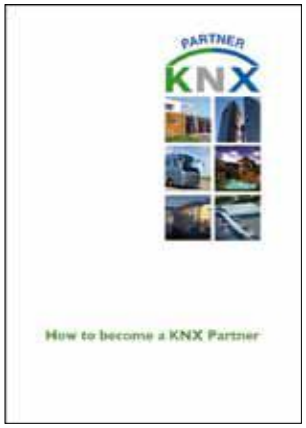
*The Finnish homepage of KNX Online Shop.*

***Link:***
*https://onlineshop.knx.org/login*

*KNX Association*

## The New Flyers KNX Introduction & Partner

KNX Association has a new flyer, the KNX Partner Flyer and it has also restyled the KNX Introduction Flyer. The flyers brief the main advantages in becoming a KNX Partner, as well as the main concepts of KNX such as the KNX Standard and KNX Certification. The flyers are currently available in different languages. If you are interested in these documents, please go to our download area and read them.




*Cover of the new flyer How to Become KNX Partner.*

***Download:***
*www.knx.org – downloads*

## ETS Apps and KNX city: Two new flyers for KNX

Two new KNX flyers are now available. On the one hand the ETS Apps flyer, informing you about the future ETS Apps you can buy in the KNX online shop. On the other hand the KNX city flyer, which informs you about the prerequisite for achieving sustainable cities, i.e. sustainable buildings. Smart cities call for interdisciplinary solutions spanning over buildings, mobility, energy, infrastructure and communication, each of the elements equally needed. This is referred to as a systems approach.

The flyers are already available in two languages: English and German.

**You can order the brochure for free at:**

**KNX Association**
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B- 1831 Diegem-Brüssel
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**www.knx.org**

## KNX Conferences / Fair Schedule

### 2012

**EL & TEKNIK 2012**
8. – 10. 5. 2012
Odense (Denmark)
Exhibition for electrical distribution, electrical equipment, lighting and ICT
*http://www.danskenergi.dk/AndreSider/El_Og_Teknik_2012.aspx*

**CEDIA 2012**
9. – 11. 5. 2012
Brisbane (Australia)
Dedicated and focused event for the custom electronic systems industry
*http://www.cediaexpo.com.au*

**Renexpo 2012**
10. – 12. 5. 2012
Budapest (Hungary)
Platform for innovative products and technologies in the field of renewable energy and energy efficiency
*http://renexpo-budapest.com*

**BCI Awards 2012**
12. 5. 2012
London (UK)
British Construction Industry Awards
*http://www.emapawards.com/bciawards2011*

**ECA Electrical Industry Conference 2012**
19. – 26. 5. 2012
Paphos (Cyprus)
Annual conference for engineering and building services
*http://www.eca-electrical-industry-conference.co.uk/2011/2012.php*

**Eliaden 2012**
4. – 7. 6. 2012
Oslo (Norway)
The industrial event where the entire electrical engineering industry will meet up
*http://www.eliaden.no*

**Electrical Building Technology Guangzhou**
9. – 12. 6. 2012
Guangzhou (China)
The biggest lighting exhibition in Asia
*http://www.messefrankfurt.com.hk/fair_homepage.aspx?fair_id=15&exhibition_id=16&hdnLang=en*

**The 6th Shanghai International Intelligent Building Exhibition**
20. – 22. 9. 2012
Schanghai (China)
The exhibition aims at brand-building & makes great efforts to invite professional buyers
*http://www.biztradeshows.com/trade-events/sibe.html*

**PREDIALTEC 2012**
7. - 9. 8. 2012
Sao Paulo (Brazil)
The bigest Brazilian trade show focus on audio and video control as well as home and building automation
*http://www.predialtec.com/sp/*

**IBS 2012**
20. - 21. 9. 2012
Paris (France)
Intelligent Building Systems Exposition focused on Smart Systems for Building Performance
*http://www.ibs-event.com*

**Euroskills 2012**
4. - 6. 10. 2012 (Belgium)
Europe's largest international skills competition
*http://www.euroskills.org*

**ELECTROtec 2012**
4. - 7. 10. 2012
Athens (Greece)
The biennial exhibition for electronics developments and lighting design
*http://www.electrotec.gr*

**Hem & Villa**
11. - 14. 10. 2012
Stockholm (Sweden)
The largest do it yourself trade fair
*http://stockholm.hemochvilla.se*

**Smart Homes 2012**
9. - 11. 10. 2012
Amsterdam
(The Netherlands)
Exhibition and conference that focuses on the world of the connected home
*http://smarthomes2012.com/*

**Build Eco Xpo 2012**
10. - 12. 10. 2012
Singapore
Building exposition in South-East Asia focused on green building
*http://www.bex-asia.com*

**KNX National Group Conference**
15. - 17. 10. 2012
Istanbul (Turkey)
Yearly conference for all KNX National Groups
*http://www.knx.org*

**CEP Expo**
17. - 18. 10. 2012
Budapest (Hungary)
International Exhibition and Conference for Energy Efficient and Intelligent Building
*http://www.cep-expo.hu*

**Belektro**
17. - 19. 10. 2012
Berlin (Germany)
Trade fair for electrical engineering, electronics, and lighting
*http://www.belektro.de*

**MATELEC 2012**
Madrid (Spain)
23. - 26. 10. 2012
An ideal platform to present the new developments related to HBS and telecommunications
*http://www.ifema.es/ferias/matelec/default.html*

**HI-Tech Building 2012**
30.10 - 01. 11. 2012
Moscow (Russia)
This exhibition presents intelligent building technologies for building operation and management
*http://www.hitechbuilding.ru*

**KNX Scientific Conference 2012**
1. - 2. 11. 2012
Gran Canaria (Spain)
Bi-yearly event where KNX Scientifcs and KNX Members meet
*http://www.knx.org/knx-partners/scientific/scientific-events/*

**National Domotics & Smart Living Fair**
21. - 22. 11. 2012
Eindhoven
(The Netherlands)
Trade show mainly based on home and building electronic systems
*http://www.beursdomoticaenslimwonen.nl*


## Imprint

**KNX Journal international**
The KNX Journal is the international magazine for home and building control based on KNX technology. Experts, practitioners and professionals show the way in applying and developing the KNX standard – from home and building control trends to devices and application projects; from the KNX members and partners to useful information on event stand and publications. Special attention is given to members and activities of the KNX Association international and their national groups.

**Distribution**
This bi-annual and bi-lingual Journal (English/German) can be ordered free of charge by all members, partners (installers, scientific, training centres, associated, national groups) and by media representatives of KNX Association international. Order the KNX Journal by Email from knx-journal@knx.org.

**Online Distribution**
The KNX Journal international is posted as a Portable Document Format (PDF)-File to www.knx.org/news-press/knx-journal/.

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URL: www.knx.org/news-press/knx-journal/

**Print edition:**
60,000 copies

**Picture credits:**
KNX Association cvba, editorial office and specified companies (Cover page 2 pictures by fotolia)



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**Mr.**
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