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ETS5 Supplementary	150,00 €	For Notebooks, maximal 2 licenses, only together with ETS5 Professional
ETS5 Lite	200,00 €	maximal 20 products possible
ETS Apps	see KNX Online Shop	
Upgrade licenses		
ETS4 Professional > ETS5 Professional	350,00 €	
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Power Supply

Communication
Cabinet

Hardware
Specification
and Installation

*IT Systems
Stable IT system for
businesses Large and Small*

With Start@KNX on Pole Position

Heinz Lux
CEO, KNX Association

Sportsmen know that the start is often the crucial phase of the entire competition. Whatever the case may be, short or long distance, running, swimming, cycling, canoeing or car racing. The start is important for later proceedings. It is the initial point of a purposeful beginning and a continuous insistence that will finally lead to the goal. Not only sportsmen but also thinkers dealt with the start, with the beginning. Some think the word was in the beginning, while others put the action at the beginning. Thus the Swiss philosopher Emil Angehrn consequently defines the start as the opening of creative freedom and the release of possibilities.

A good start opens up the creative freedom and possibilities for installers offered by the innovative business idea KNX. The object is to specialise oneself and to grow with the market and the challenging building technology. Why not start right away from pole position? With Start@KNX it is really simple. Start@KNX offers to installers a quick and uncomplicated entry into KNX. Start@KNX stops the prejudice that KNX is complicated and a high level of effort is needed to acquire the necessary know-how.

Start@KNX offers creative freedom, numerous opportunities and materials to adopt the KNX know-how in a quick, intensive and sustainable way, to deepen the knowledge and to use the existing teaching and learning materials effectively. Training on-site, online-training, specialised literature – the whole tool set that is required for a good, effective and target-oriented start into success, for a purposeful beginning and for continuously ongoing efforts.

It is your decision to put word or action at the beginning. Start@KNX points you the way to modern home and building control by word and action. Or as Aristotle said: "For the things we have to learn before we can do them, we learn by doing them."

Thus: Start with Start@KNX on pole position.

> **For the things we have to learn before we can do them, we learn by doing them.**

General Assembly elects new KNX Executive Board

The new KEB will have a strong focus on KNX IoT and on expanding the scale of applications shared by KNX technology
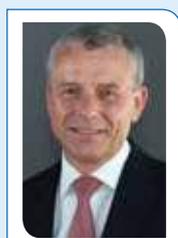
Harald Horst
ABB Stotz-Kontakt GmbH

Martin Herms
Albrecht Jung GmbH & Co. KG

Adalbert Neumann
Busch-Jaeger Elektro GmbH

Dr. Matthias Bölke
Feller AG

Dirk Giersiepen
GIRA Giersiepen GmbH & Co. KG

Johannes Hauck
HAGER Group

Dr. Herbert Schliffke
Insta Elektro GmbH

Martin Lindemann
Merten GmbH

Dr. Klaus Orth
Osram GmbH

Thomas Röhrl
Qundis GmbH

Jean-Christophe Krieger
Schneider Electric Industries S.A.

Hans-Joachim Langels
Siemens AG

Franz Kammerl
Siemens Switzerland Ltd.

Thomas Sell
Theben AG

KNX Association has announced its new Board and President following elections which took place at its recent General Assembly in Frankfurt (Germany). The Assembly has voted for Franz Kammerl (Siemens Switzerland Ltd) to serve as President for a second consecutive five-year term with Dr. Herbert Schliffke (Insta Elektro Gmbh) as Vice President.

The new KNX Executive Board (KEB) will represent the KNX organisation and serve all members, helping to promote the continued growth and adoption of the KNX standard in home and building control applications across the globe. As part of its international strategy, and under the leadership of Franz Kammerl, the Board will focus on KNX IoT, KNX Secure and expanding the scale of applications shared by KNX technology.

The 14-strong KNX Executive Board brings together an impressive range of KNX expertise and know-how across diverse fields and applications in the complete home and building automation sector. The new Board comprises Harald Horst (ABB Stotz-Kontakt GmbH), Martin Herms (Albrecht Jung GmbH & Co. KG), Adalbert M. Neumann (Busch-Jaeger Elektro GmbH), Dr. Matthias Bölke (Feller AG), Dirk Giersiepen (GIRA Giersiepen GmbH & Co. KG), Johannes Hauck (HAGER Group), Dr. Herbert Schliffke (Insta Elektro GmbH), Martin Lindemann (Merten GmbH), Dr. Klaus Orth (Osram GmbH), Thomas Röhrl (Qundis GmbH), Jean-Christophe Krieger (Schneider Electric Industries S.A.), Hans-Joachim Langels (Siemens AG), Franz Kammerl (Siemens Switzerland Ltd) and Thomas Sell (Theben AG).

"I am delighted to welcome all members to this new KNX Executive Board," says Franz Kammerl. "The strength of the Board across all KNX disciplines is very impressive, especially with the addition of the lighting and metering expertise that Osram and Qundis representatives will provide. We are well placed to lead the global strategic direction of the KNX Association and grow its adoption in the years ahead. We are also looking forward to the opportunities presented by the development of KNX IoT and the further evolution of KNX Secure," adds Franz Kammerl. "These are important application areas that will help members increase deployment of KNX technology, meet customer expectations and expand their business in KNX."

KNX Internet of Things

KNX and the Internet of Things –
simple Integration by KNX Web Services (KNX IoT 1.0)

The "Internet of Things" is a buzzword in the world of information technology. What still has to become part of the general knowledge is already a long known term in expert groups for a new development boost. Everyday objects become intelligent and communicate via the internet. According to visionaries, 50 billion of these objects will communicate via the Internet by 2020. However, the Internet of Things is not still up in the air, but has already become a reality today. The KNX Standard has long formed a part of this global IoT world. By the introduction of the KNX Web Services, KNX underlines its leading position and opens up new paths in the operation and visualisation of KNX systems.

For a long time the Internet of Things (IoT) has found its way into nearly all areas of life – even in building automation. Global players like Google or Apple have penetrated into this market of the future and try to emphasize their philosophy of intelligent buildings by networkable products like smoke detectors, radiator thermostats, movement detectors and switchable socket outlets. When trying to find a suitable solution amongst the vast number of systems a solution suited for him the user gets more problems than answers. For instance the hardwired window contact of system A is not capable of communicate with the wireless valve drive of manufacturer B.

In addition to these incompatibilities, resulting from different protocols and transmission media, a further fact proves to be a major disadvantage: proprietary automation solutions usually require a central server for the exchange of data between the installed components, which cannot communicate directly with each other, as is possible in case of KNX. This can be a small computer, a smartphone or even a cloud based solution. It is an ad-

KNX Web Service Gateway

KNX Device #1

KNX Device #2
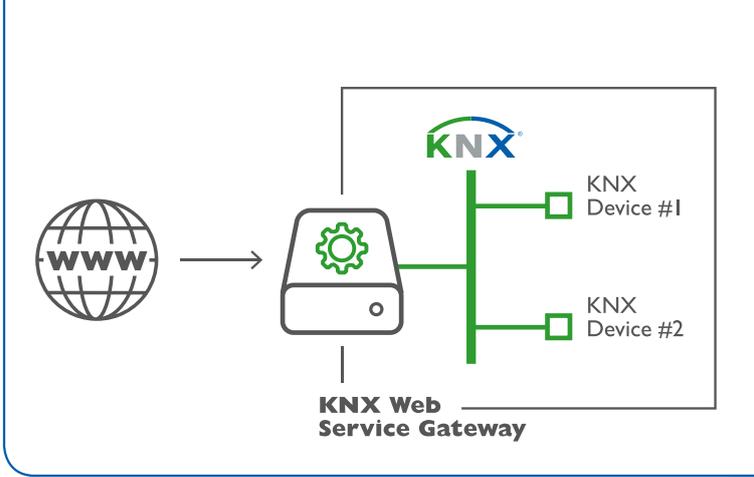
vantage of this approach, that the data are available at any place by means via websites, yet on the other hand it is the Achilles heel of the network. If the server fails, the building control fails, too.

KNX is a Network of "Things"

What does the term "Internet of Things" really mean? Wikipedia defines it roughly as follows: It describes the connection of clearly identifiable physical objects with the virtual world of the internet. For that purpose the "devices" contain electronics, software, sensors and the related network connectivity. Each thing has a clearly identifiable address and is able to receive, collect, evaluate and send data.

Since the beginnings of the technology KNX has had all the IoT features at its disposal. KNX devices can be seen as physical objects, which are clearly identifiable and able to exchange data. The media TP, RF, PL and IP take care of the network connectivity. KNX itself is an "Internet of Things". Amongst others the main features of this decentrally organized bus system are the compatibility of the devices and the possibility to communicate with each other. This ensures for the installations e.g. a high degree of availability.

KNX is a "Thing" in the Internet since long time

Is a KNX installation itself also a "Thing" in the internet? For more than ten years, KNX IP enables the communication of KNX applications via IP-based networks. For this a KNX IP router ensuring two important functionalities is required. On the one hand, it allows the interconnection of any remote KNX installations or parts thereof via an IP network (routing), on the other hand it enables the IP based access of a terminal device to a KNX installation (tunneling). Thus, KNX tunneling is the technique used by web clients, visualization computers and smartphones to communicate with KNX devices and finally to realize an attractive operation possibility for the end user.

KNX communication and internet since long have been the state of the art. However: It requires the technical expertise of KNX installers combined with the effort for the parameterization. That is, as a general rule, no problem for KNX installers but in fact already for IT experts. Standardization does not exist. If one tries to access from the world of internet to the KNX "Thing" i. e. the building automation from the Internet world in a simpler way, new routes have to be opened up.

Web Services and Building Automation

The situation is different from the point of view of the internet: Many different subsystems have to be integrated and KNX is one of them. Building automation is an unknown terrain for IT experts. The ideal solution for this sector would be a translator connecting both worlds without the need for each party to learn the strings of the other side.

KNX Association has recognized this current trend of the times and developed the corresponding solution "KNX Web Services" (KNX WS). It orientates itself towards the existing realized web services like oBIX, OPC UA and BACnet-WS. Web services are self-contained, modular software components that can be described, published and activated via the web. Usually they are employed by applications and not by persons. Thus, a simple and multi-faceted communication between web services and systems of building automation is possible.

A Gateway maps the KNX Project

The solution KNX IoT is realised via gateways between the KNX network and the world of internet. On one side operation panels, building management, smartphone and others communicate via web services with the gateway. Thus, the app of a web client is able to search data in the web service gateway with unified text telegrams and to transfer them. On the other side the accustomed KNX protocol has to be found. However, in order to recognise from the side of the IP infrastructure the parameters of the KNX system the ETS project has to be exported into the KNX WS-Gateway. For this purpose the new ETS App Web Services Exporter is available. The KNX installer has the option to export all project data or only parts of it. When doing so the parameters have to be clearly marked. Also supplementary data can be transferred.

More Benefits by open Data Exchange

With KNX IoT, the building automation or the smart home comes closer to the virtual world of the Internet. It becomes simpler to use data thereof for automated functions, to present values and states of a KNX installation via the internet and to evaluate them. Just think of sensor values and consumption data of energy usage, which can help to optimize the energy management. The open data exchange between IT systems and building automation systems enables improved applications with high multiple benefits.

Winners of KNX Award 2016

11th Award Ceremony reflects the international character of KNX

International – Europe

Hevac Controls (Netherlands) –
Castle Bilijoen

International – Asia

Hangzhou D-Haus Technology co. ltd (China) –
Alibaba Beijing Office Block

International – Africa, America, Australia

Sagar Smart Homes (Australia) –
Melbourne Super House

Publicity

TROnik (Mexico) –
Samsung Showroom in Mexico

Winners and nominees in front of 1500 guests from 80 countries at the KNX Award in Frankfurt, the 15th of March 2016.

You'll find the projects of the winners honoured with a KNX Award during Light+Building 2016, illustrated in detail on the following pages.

Links: http://www.knx.org/ knx-en/knx-awards/2016/ index.php

http://www.youtube.com/ knxAssociation

Special
Bering AG (Switzerland) –
Feuerwehrstützpunkt Forsthaus West in Bern

Energy Efficiency
Total Automation (United Arab Emirates) –
La Verda Suites and Villas (Dubai Marina)

Young
Asociaţia Solar Decatlon Bucureşti (Romania) –
EFdeN

People's Choice
Soltris Gebäudesystemtechnik GmbH (Switzerland) –
Werkhof TBGN

Castle Biljoen (Watercastle) built in 1530 –
stands between Veluwe and IJssel
near the Dutch municipality of Rheden.

IN THE CASTLE THE BUS IS IN THE AIR

KNX RF enables intelligent building technology in the historical Castle Biljoen

Even castle ghosts would enjoy this project: At the last refurbishment in 2015 the Castle Biljoen from the 16th century was equipped with an electrical installation based on KNX. Over the centuries the moated castle with its four dominant corner towers has had a lot of owners and inhabitants. At present it is managed and let by the foundation "Friends of Gelderland Landscape and Castles" ("Het Geldersch Landschap & Kasteelen").

Living like a king has its challenges. Thus the technical equipment needs to be adequate for an up-to-date, modern building and provide comfort, safety and energy efficiency. Yet, the integration of the relevant functions in the historical, listed masonry is problematic. The ideal solution was the KNX bus system, which allowed the implementation of the required functions with wireless RF components in combination with TP devices. The system integrator Hevac Controls, Eindhoven, The Netherlands, received the KNX Award International Europe for the real artistry to equip the historical ambiance with modern technology while avoiding the destruction of walls and ceilings.

Intelligent Porcelain Switches

415 KNX RF devices out of 555 overall installed bus devices show the complexity of the wireless solution in this project. Due to the products of Hager/Berker the room automation could easily be solved with decentralised sensors, actuators, binary inputs in combination with RF/TP media couplers. Behind stylish porcelain switches are hidden intelligent RF binary inputs which – by means of their radio signals – can trigger simple switching actions or even complete light scenes. For an energy

The historic ambience is skillfully combined with modern technology

Display on mobile devices for the control and operation

Winner KNX Award 2016
Category International Europe

Hevac Controls,
Eindhoven (Netherlands)

BENEFITS OF KNX IN THIS PROJECT
- *Due to KNX RF the requests for up-to-date comfort, security and efficient energy applications could be fulfilled*
- *No disruptive installations with maximum conservation of the building*
- *Energy efficient controls*
- *Visualisation*
- *Mobile operation via smartphone and tablet*

TECHNICAL HIGHLIGHTS
- *Versatile solutions with KNX RF*
- *Monitoring of outdoor facilities, main gate, water detectors and elevator control*
- *Nostalgic switches combined with RF binary inputs activate light scenes*

TRADES/APPLICATIONS
- *Lighting, Sun protection, Heating/air conditioning, Alarm management, Monitoring, Visualisation,*
- *Interfaces to: air-conditioning, heating, video surveillance*

COMPONENTS – EXTRACT
- *Number:* 555
- *Brand:*
  Lighting: Hager/Berker KNX RF actuators, sensors, coupler
  Sun protection: Hager KNX RF actuators
  Heating: Arcus EDS temperature and humidity sensor
  Air condition system: Theben CO_2-Sensor
  Visualisation: HC Living

COMPANIES INVOLVED
- *Architect:*
  Architectural Office Prent, AH Oosterbeek
- *Planner:*
  Wim Bosman, Vorden,
  www.installatiebedrijfwimbosman.nl
- *System integrator:*
  Hevac Controls, Eindhoven
  www.hevac.nl

saving room heating the existing radiators have been equipped with KNX drives. Arcus EDS room temperature controller provides them with the set points. Humidity and CO_2 sensors control the air quality. The use of tablets and smartphones for mobile control and operation shows how harmoniously classical and baroque interior can be combined with information technology. As soon as the iPad is put in the magnetic holder the visualisation "HC Living", an in-house development of "Hevac Controls", allows the rapid checking of status functions and shows the current trends of temperature profiles, air quality, current consumption etc.

Smartphone and Tablet are Guardians

Last but not least KNX replaces the guardians of the castle guards: IP camera systems monitor the grounds. Their video sequences and alarm messages are visualized via "HC Living". The control system for secured access in combination with smartphone or tablet allows controlling the access road and the gate drives. Finally the graphic user interface of HC living can control the functions of the whirlpool, display the images of video cameras hidden behind paintings and installed in the pool area of the annexe and visualise sensor values like e. g. water detectors for preventing water damages. Even princely porcelain is transported from the kitchen to the dining hall with a lift controlled by KNX.

5000 SMARTPHONES INSTEAD OF PUSH BUTTONS

Optimal Office Organisation in Alibaba Tower, Peking

The project "Alibaba Beijing Office Block" in Beijing proves the importance that KNX has meanwhile gained in Asia. The office building of the biggest Chinese online retailer located in the Chaoyang district was completed in 2015. The tower with its 500,000 m² floor space accommodates besides open-plan offices as well as exhibition rooms, computer centre, lobby, club and conference rooms as well as in the top floor the management.

Some 8,000 people are working in this building. It is quite characteristically for the KNX installation that the staff members control the room functions at their work places, i. e. lighting, blinds, air conditioning etc., directly with their smartphones. Only a few push buttons are installed, but more than 5,000 mobile controls with D-Controls plus apps can communicate with the KNX installation.

Coupling with the Enterprise Resource Planning

A further superlative: 5,100 KNX bus devices comply with the enormous demands on the reliability of the building technology. Absolute highlight is the intelligent coupling with the enterprise resource planning (ERP) and office automation system (OA). This means optimised office organisation, comfort and maximal energy efficiency. The automation with KNX is based on data from the temperature sensors, weather stations, presence detectors, humidity sensors, energy meters etc. Thus the lightings on the one hand can be controlled manually for switching and dimming, but on the other hand are automated in such a way, that maximal energy efficiency is achieved. The shutters are controlled automatically, but via the smartphone the height and the slat position can be adjusted. The mobile controls are also used for the setting of the room temperature and the adjustment of the ventilation. The automation adapts the set points and operation modes to the actual usage of the offices.

KNX controls provide optimal climate at the workplace, office organisation and energy efficiency

The indoor climate can be controlled via smartphone

Winner KNX Award 2016
Category International Asia

Hangzhou D-Haus Tech. Co., Ltd
(China)

Future proof Installation Base

Monitoring information, like e. g. from the fire alarm system, data on current consumptions, IP video system and meeting system, are centrally visualised by the software "Winswitch" as well as by the mobile monitors (iPad) of the service technicians. Due to the integration of the office automation system the staff can book a conference room simply via smartphone and use it immediately after the confirmation.

Last but not least, the decision was made for KNX, because it creates a flexible, easily to modify and thus a future-proof installation base. Alibaba wants to achieve a lot: The enterprise – founded in 1999 under the leadership of Jack Ma – has the vision to play an important role in the global market for at least 102 years i.e. until the 22nd century.

The indoor climate can be individually adjusted via corresponding desired values and mode settings.

BENEFITS OF KNX IN THIS PROJECT
- Large installation
- Decentralised system with widespread use
- Integration of other trades
- Comfort and security at the workplace
- Energy efficient room automation
- Mobile operation via Android Smartphone, iPhone and iPad
- Remote control and maintenance

TECHNICAL HIGHLIGHTS
- Integration of enterprise resource planning and office automation
- Each person can control its rooms function via mobile device

TRADES/APPLICATIONS
- Lighting, Sun protection, Heating/ventilation/ air condition, Alarm management, Monitoring, Visualisation
- Interfaces: Meeting system, BMS system, OA and ERP system

COMPONENTS – EXTRACT
- **Number:** 5200
- **Brand:**
  Schneider: switch actuators, multi-sensors, weather station, presence detectors, dimming actuators, fan coil actuators
  D-Controls: Remote Control Apps, Remote Cloud Server
  D-Control Gateways: KNX IP, KNX-RS458, KNX-RS232, OA/ERP System i. a.
  Visualisation: Winswitch

COMPANIES INVOLVED
- **Constructor:**
  Alibaba Group,
  www.alibabagroup.com
- **System integration:**
  Hangzhou D-Haus Tech. Co., Ltd,
  www.d-controls.com

CONTROL PLATFORM
AT A HIGH LEVEL

For a perfect feel-good atmosphere at the pool, enchanting KNX lightscenes can be created in the evening via KNX RGB control

Melbourne Super Luxury Villa holistically automated with KNX

The award-winning project "Melbourne Super House" in Australia proves what creative work with KNX can achieve. The single family house, located in an exclusive suburb, impresses due to its vast living space, living rooms with high ceilings, completely glassed-in fronts, library, high-tech kitchens, dining rooms, spacious guest rooms in the upper floor, a suite for special guests in the attic and in the basement the most wonderful non-essentials in the world, including a wellness area and wine cellar. Swimming pool, tennis court and palm garden form part of the spacious outdoor area.

A photovoltaic system is installed on the roof proving an autonomous power supply. The comprehensive range of high-level equipment clearly shows the challenges for the system integration in order to create a consistent and versatile control platform based on KNX. The building automation has to support the owners' high expectations on comfort, safety, security and energy efficiency as well as on the usage of the building.

Technical monitoring alerts the service technician

For automation, light scenes and monitoring purposes most of the lighting is realised with KNX. Highlights are lighting control depending on presence and daytime as well as RGB lighting control for tennis court and pool. For sun protection, KNX controls individually more than eighty motorised drives. Optimum conditions for shading and transparency are achieved, partially using rotating louvres. Even in the afternoon sun, the view on the garden is assured. The underfloor heating as well as for example the cooling of the wine cellar is controlled by KNX. The numerous domestic appliances are monitored for current consumption and automatically switched off by relay circuits if not in use. KNX controls the door drives and arms the alarm system. When entering the house biometric access control activates simultaneously personalised light scenes. Amongst others, 28 pumps, rainwater utilisation system, garden irrigation and photovoltaic system are monitored and in the event of a fault, both the owner and service technician will be alerted.

The flexibility of KNX and the expertise of the system integrator comply with the technical requirements of the owners of "Melbourne Super House"

Everything under control from the London office

All functions are visualised by means of the Gira Homeserver. The residents have the full control of all functions at any time. The user interface serves for operating the system and displays as well the values of weather station, the fuel level, the quality of the pool water and of many other sensors. Also the video images of the CCTV cameras, installed round the property, can be retrieved. If the owners are absent, for instance in their London office, the remote surveillance based on a VPN access shows its invaluable advantage: From anywhere in the world they are able to control their building technology and to have a look on their video surveillance.

BENEFITS OF KNX IN THIS PROJECT
- *Holistic control platform*
- *Seamless integration of all systems*
- *Efficient use of energy and building*
- *Visualisation with consistent user interface*
- *Remote monitoring*

TECHNICAL HIGHLIGHTS
- *Monitoring of photovoltaic system and solar batteries*
- *Door control with access and security management*
- *RGB control for LED lighting*

TRADES/APPLICATIONS
- *Lighting, Sun protection, Air conditioning, Door control, Access control, Video surveillance, Technical monitoring, Visualisation, Interfaces*

COMPONENTS – EXTRACT
- *Number:* 354
- *Brand:*
  Gira Homeserver: Visualisation Homeserver
  Basalte: Push buttons
  Gira: Switch-, dimming-, shutter- and analogue
  Theben: Heating actuator, weather station
  Arcus: Sensors
  BEG: Presence detectors
  Intesis: Gateways

COMPANIES INVOLVED
- *Architects:*
  Ilario Cortese Architects,
  www.cortesearchitects.com/au
- *System integration:*
  Sagar Smart Homes, London,
  www.sagarsmarthomes.co.uk

ECOLOGICALLY CERTIFIED BUILDING IN MEXICO

When visiting the Samsung International Showroom, automatic KNX light scenes present the exhibition areas.

Winner KNX Award 2016 Category Publicity

TROnik Edificios Inteligentes SA de CV (Mexico)

Smart Home Feeling in Samsung's Showroom Mexico City

Mexico City is the political, economic, social and cultural center of the country. Also in this Latin-American metropolis the demands and requests for functional home and building automation are increasing. Thus it is just the right moment for this world of experience. It is located in the new Samsung International Showroom and provides a very realistic smart home feeling.

While the visitors make their way through the 480 m² presentation area and experience the audio visual products of the international electronics company, the KNX installation works in the background. It controls event scenes and audio / video presentations, but also functions such as indoor climate, shutters, domestic appliances and energy usage. A Samsung tablet which simultaneously guides the visitors through the exhibition serves as a user interface between man and technology as well as the touch wall and smartphone.

Automatic lighting for the presentation

In the exhibition room the lighting is dimmed down to 5 percent. As soon as persons enter the different exhibition zones, the lighting dims up to 80 percent. Presence detectors automatically highlight the product presentations. Via tablet spectacular music and light effects can be activated. During video projections the lighting dims down automatically and the shutters are closing. In total, KNX controls 20 shutter drives. They are activated automatically by sensors depending on the usage of the room and can be activated as well manually by tablet, touch wall or push button sensor. A radio-controlled, minisplit air conditioner is in addition controlled by KNX temperature sensors. The exposed domestic appliances such as the washing machine, refrigerator or even loudspeakers are integrated via KNX IP and can be operated via KNX app.

Energy management supports LEED

The visitors of the showroom can also find out, how KNX stands for energy efficiency in a smart home: tablets show the actual consumptions in the rooms in comparison to conventional energy usage. This also shows that it is a high-performing, ecological LEED (Leadership in Energy and Environmental Design) certified building, wherefore the energy saving KNX automation makes a significant contribution. Finally, the impressive showroom experience becomes possible because KNX integrates the external protocols and systems like IP, IR, SNMTP, DMX, BACnet and other electronic components. Due to KNX apps the operation via tablets and smartphones is a child's play.

BENEFITS OF KNX IN THIS PROJECT
- *Integration of different systems and protocols*
- *Integration of Samsung technology*
- *Zone-oriented light scenes*
- *Flexibility for modifications*
- *Comfortable mobile operation*
- *Smart-home-feeling for visitors*

TECHNICAL HIGHLIGHTS
- *Interoperability between different electronic components and protocols due to KNX*
- *Man-machine interface between Samsung devices and tablets (smartphone) due to KNX Apps*

TRADES/APPLICATIONS
Lighting, Sun protection, Air conditioning, Media technology, Visualisation, Interfaces

COMPONENTS – EXTRACT
- ***Number:*** *75*
- ***Brand:*** *All Jung branded products KNX IP-Gateway, KNX/DMX-Interface, KNX/IR-Interface, Room thermostat, Binary inputs, Dimming actuators, Presence detectors, LED actuators, Shutter actuators*

COMPANIES INVOLVED
- ***Planner:*** *Samsung*
- ***Constructor:*** *Escato*
- ***System integration:*** *TROnik Edificios Inteligentes SA de CV*

KNX SUPPORTS RAPID RESCUE OPERATIONS

*Winner KNX Award 2016
Category Special*

*Bering AG,
Bern (Schweiz)*

In the event of an alarm, KNX automatically opens the doors of the fire station Forsthaus West-Bern to ensure a rapid deployment.

Automated operating sequences for lighting, doors and signals in the event of a fire alarm

If the fire brigade goes into action in the Swiss federal city of Bern, KNX has already done some good preparatory work. In the new fire station Forsthaus West-Bern an alarm automatically triggers switching operations, which support a rapid deployment of the fire brigade: corridors, bed and recreation rooms switch automatically to alarm light, KNX push buttons flash red, loudspeakers provide information about the operation, the doors of the vehicle hall open automatically and the traffic lights of the main street switch on red.

The approximately 140,000 citizens of Bern can rely on their fire brigade. In the event of a fire alarm the firemen should be – according to the instructions – in any city district within ten minutes. The professional fire brigade moved into the new fire station in 2015. It offers a traffic-favourable position and a technically sophisticated and modernly equipped infrastructure for rescue missions. The fire station equally serves as a common room, training centre, workshop and storage facility. Central element of the building complex is the logistics building with it's big vehicle depot, operations centre and the office, sleeping quarters and recreation rooms for the firemen.

Interconnection with the Operations Control System

The electrical installation is equipped with 620 KNX bus devices. They control the complete lighting on 12,400 m^2 of floor space and make use of the advantages of the DALI lighting control with the possibilities of dimming and monitoring of the lamps. In addition the bus system controls the shading in summer as well as in winter and forwards the fault messages. A special advantage is the interconnection of KNX with the operations control system: In case of an alarm the head of operations determines the fire truck to be used and enters the information in the operations control system. This is forwarded to the KNX server and a predefined sequence of functions is started. For example, every second lamp in the corridors and recreation rooms is dimmed as an alarm signal and in the sleeping quarters, one lighting group is switched on in a dimmed state. But KNX is also responsible for other alarm functions. As a central interface, KNX integrates the public address system, telephone system, car park management and access control system.

Double Security by KNX Emergency Operation

While inspection works of the operations control system are carried out KNX can be used as alternative operation system for alarming. The visualisation can trigger test alarms and records the data exchange between the systems. In the process delay times can be adapted to the chain. Also a double layer of security has been taken into consideration. If the KNX server or the operations control system fails, a KNX emergency operation based on logic modules is still operational. Simplified alarm lighting can be activated, the doors opened and the traffic lights switched to red.

This special application for the safety sector impressed the jury to the extent that the planner and system integrator Bering AG, Bern, received the Special-Award.

Perfect light for the "heart" of the control center

The KNX bus devices control all lights on the 12,400 m^2 – the benefits of DALI lighting control to be used with dimming and lighting control

Corridor, sleeping quarters and lounges automatically switch to alarm light

BENEFITS OF KNX IN THIS PROJECT

- *Lighting control*
- *Automatic shading control*
- *Forwarding of fault messages*
- *Light scenes used for alarming*
- *Interconnection with the operations control system*
- *Visualisation*
- *Central interface*

TECHNICAL HIGHLIGHTS

- *Predefined sequence of functions in case of alarm*
- *Emergency operation by KNX*
- *Car park surveillance*

TRADES/APPLICATIONS

*Lighting, Sun protection, Alarm management,
Media technology, Surveillance, Visualisation, Interfaces*

COMPONENTS – EXTRACT

- *Number:* 620
- *Brand:*
  Visualisation: Feller Facility Server
  Operating units: Feller
  Rail-mounted devices: ABB
  Motion detectors: Züblin
  Flush-mounted actuators: Siemens
  DALI Gateway: Siemens
  Shutter actuators: Schenker Storen

COMPANIES INVOLVED

- *Constructor:*
  Hochbau Stadt Bern
- *Architects:*
  Itten-Brechbühl AG,
  www.ittenbrechbuehl.ch
- *Electrical installation:*
  Cablex AG,
  www.cablex.ch
- *Planning and system integration:*
  Bering AG,
  www.bering.ch

If you have a room in the tower or luxury villa in La Verda located at Dubai Marina, KNX control contributes to you having a convenient hotel stay.

EFFICIENT
5-STAR LUXURY HOTEL

In Dubai KNX supports international Green Building Standard

"La Verda Suits and Villas Dubai Marina" – a 5-Star luxury hotel on 120,000 m² – is located in the middle of the skyscraper skyline and the artificial landscapes of Dubai. Business travellers and tourists find there the highest level of comfortable living either in convenient rooms in the tower, or in spacious villas at the Marina Channel or at the very top in a penthouse with a breathtaking view. Restaurants, cafés, conference rooms and wellness area complete the hotel's facilities.

Pleasant indoor climate, lighting atmospheres and entertainment media contribute to the pleasant accommodation. KNX as well as the hotel organisation and the requirements of the International Green Building Standards for the building – completed in 2015 – have contributed to this.

6,500 KNX devices control 150,000 points for lighting, shutters and HVAC in such an efficient way that energy savings of 30 to 40 percent in comparison to a conventional energy use are to be expected.

The Logic of Energy Management

For an efficient energy use the lighting in each area is controlled depending on parameters like presence, time schedule, booking plan and brightness. Thus unnecessary energy consumption is prevented. But artificial light also means comfort. For the guests atmospheric light scenes are available. The optimal shading provided by the central automated sun protection systems minimises the required cooling capacity. Nevertheless the guests are able to control individually the blinds in their area. The same applies to the control of the indoor climate where the set point automatically switches to "standby" in the event of absence. Lighting, shading, and indoor climate are basically controlled in such a way that high energy efficiency is achieved. Intelligent energy meters and switching actuators with current metering provide the input data for the logic of the energy management. In order to optimise the energy usage the data are displayed on the graphical user interface of the central server.

Hotel Software generates guest-specific Functions

One of the special features is the integration of other protocols: KNX implements the hotel management software as well as the car park management and thus generates guest-specific functions and access rights. The information on occupancy and presence helps to flexibility organise the room service. Coupling with the fire alarm system increases the safety. In the event of a fire, the emergency lighting is activated automatically, ventilation is shut off and exit doors are opened.

A DMX interface implements the audio video system and the media control in the event and conference rooms. The complete project is visualised. Thus monitors allow displaying all functions, sensor values, service requests, occupancy status etc. for each floor and for each room. In the event of a failure, a message is sent to the service team via remote monitoring.

*Winner KNX Award 2016
Category Energy Efficiency*

*Total Automation Co LLC,
Dubai (UAE)*

BENEFITS OF KNX IN THIS PROJECT
- *Automation of the complex building technology*
- *Energy efficient control of lighting, air conditioning and sun protection*
- *Energy savings of 30 up to 40 percent*
- *High room comfort for hotel guests*
- *Visualisation for central control and remote monitoring*

TECHNICAL HIGHLIGHTS
- *Energy management supports Green Building Standard*
- *Flexible hotel organisation by coupling with the management system*
- *Coupling with audio video system and with media control*

TRADES/APPLICATIONS
- *Lighting, Air conditioning, Sun protection, Alarm management, Monitoring, Media technology, Visualisation*
- *Interfaces: Hotel management system, Access control, Fire alarm, Audio video system, Car park management*

COMPONENTS – EXTRACT
- *Number:* 6532
- *Brand:*
  Schneider: KNX/DALI Gateway, switch-, shutter- and dimming actuators, presence detectors
  Arcus: Touchpad
  ASIN: KNX/FCU controller
  MDT: Temperature controller
  Ipas: Visualization
  Gateways: Modbus, BACnet, DMX, KNX/IP, RS232

COMPANIES INVOLVED
- *Constructor:*
  ARJ Group,
  www.laverdadubaimarina.com
- *Architect:*
  WS Atkins, www.atkinsglobal.com
- *Planner:*
  ARJ Technik,
  www.arjgroup.com
- *System integration:*
  Total Automation Co LLC, Dubai,
  www.tacdubai.com

STUDENTS
HAVE BUILT A HOUSE OF THE FUTURE

KNX is the first choice for automation of ventilation, heating and energy management

The Young Award appreciates experimental projects of young people who in doing so develop strategies for learning concepts and unconventional KNX applications. This time the students of the Romanian Initiative "EFdeN", Bucharest, can be proud of this award. In cooperation with professors, companies and public partners they designed and built a sustainable and intelligent house. The building with its 130 m² is said to be the prototype for future urban developments. The strategy for more energy efficiency comprises active elements like the thermal solar system, heat pump, control technology and photovoltaic system as well as passive strategies like natural ventilations and PCMs (Phase Change Material). The core component of the unpretentious construction is a greenhouse, which is not only used for the vegetable garden, but also for the use of the fresh air which is warmed up or cooled down behind the glass. The students made their decision for KNX

because the modular, decentralised and intelligent system complied with their ideas of a home automation. According to their judgement "the perfect bus system integrates the different trades and is easily to implement". They placed great emphasis on the possibility to visualise data such as the status of functions, temperatures, humidity, CO_2 values, energy consumption etc. and to use them for further research purposes.

*Winner KNX Award 2016
Category Young*

*Initiative EFdeN,
Bukareşti (Romania)*

*The "greenhouse" providing warmed or cooled air plays a central
role for the KNX controlled indoor air conditioning*

Greenhouse and the Logic of Ventilation

The project is a challenge for KNX: The ventilation control is based on the data of temperature, humidity and CO_2 sensors. The logic decides, if the fresh air is taken from outside or from the greenhouse. The ventilation of each room is controlled individually and demand-driven by KNX actuators. KNX controlled radiant panels contribute further to the thermal comfort. As heat source are used solar panels and the combination of heat pump connected with a buffer tank and a heat recovery unit for heat recovery. With more than 30 installed KNX components, the young inventors also control the cleaning system for the photovoltaic system as well as the irrigation. Via the Internet Service Gateway and KNX IP of homeLYnk® also the parameters of the heat pump are accessible.

Solar Protection saves Energy for Heating

KNX also automates the lighting: The outside brightness measured by daylight sensors determines the dimming values of the luminaires in such a way that the brightness in the rooms is kept constant. For energy saving presence detectors switch the lights in the corridor, bath and utility room. The sun protection is controlled via the parameters solar radiation, sun position and outside temperature. Thus even in summer the rooms stay cool, on sunny winter days solar heat can be harvested and in case of night frost, lowered shutters reduce the thermal loss. So the shading saves 600 kWh heating energy per year. Further functions – which the team achieved trough KNX – are alarm management, energy management, media and of course man / machine interface. Via homeLYnk webserver, KNX functions can be remotely controlled by smartphones.

BENEFITS OF KNX IN THIS PROJECT
- *Modular, decentralised and intelligent automation system*
- *Integration of systems from different manufacturers*
- *Automation lighting control, energy management and HVAC*
- *Simple implementation, commissioning and maintenance*
- *Energy efficient control facilities*
- *Energy saving shutter and blind control*
- *Mobile operation and remote maintenance*

TECHNICAL HIGHLIGHTS
- *Integration and control of the air-water heat pump, solar system with vacuum tube collectors, radiant plates and heat recovery unit*
- *Energy management with smart metering*
- *Cleaning system for photovoltaic panels*
- *Greenhouse irrigation*

TRADES/APPLICATIONS
Lighting, Sun protection, Heating by heat pump, Ventilation with heat recovery, Photo voltaic system, Visualisation, Remote monitoring, Interfaces

COMPONENTS – EXTRACT
- ***Number:** 35*
- ***Brand:** Schneider*
  CO_2-, temperature, air humidity and brightness sensors, presence detectors, push buttons, binary inputs, actuators, weather station, homeLYnk visualisation

COMPANIES INVOLVED
***Constructor, architect, planner
and KNX system integration:***
*Asociatia Solar Decatlon Bucuresti,
www.efden.org*
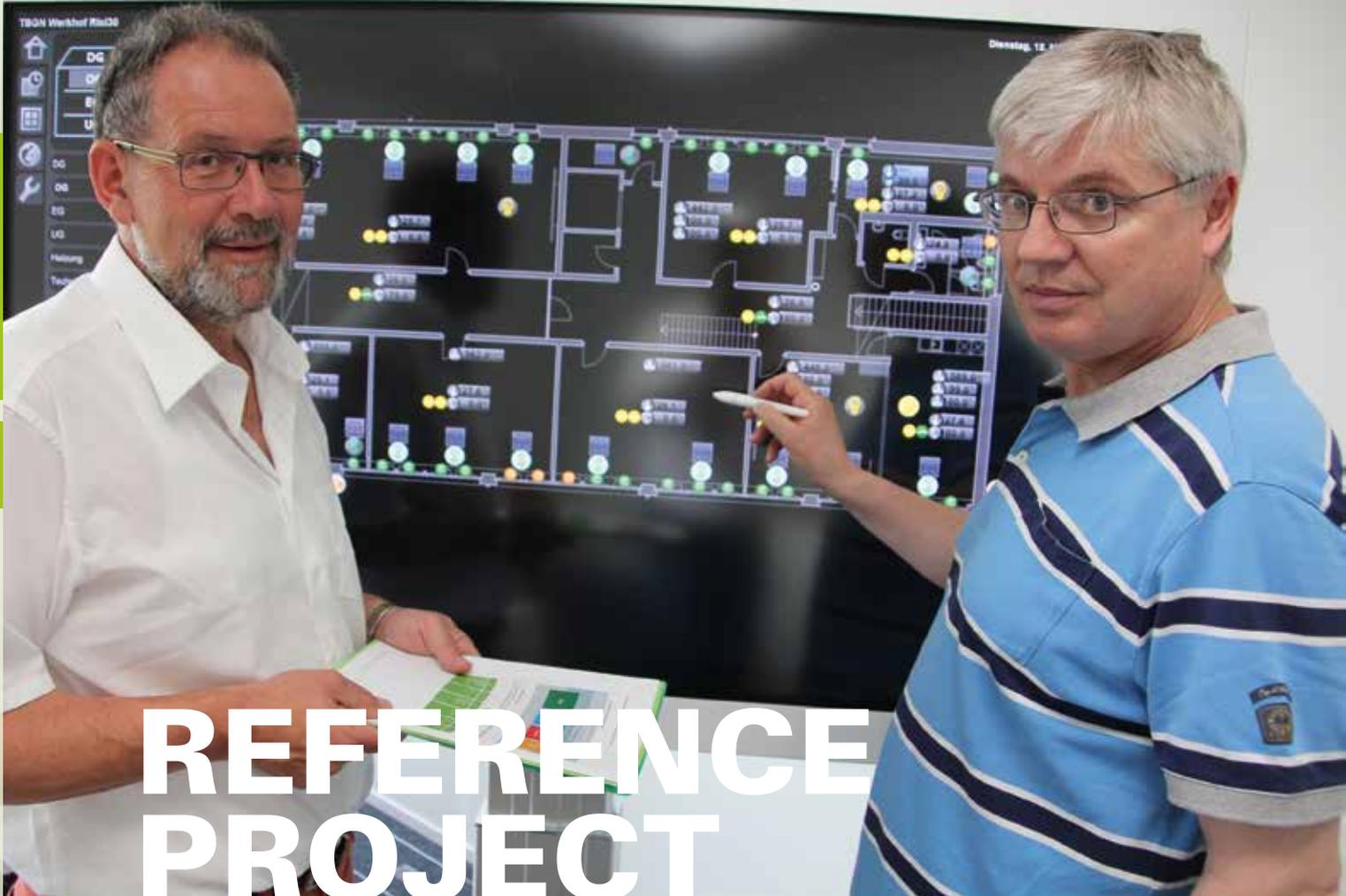
REFERENCE PROJECT

FOR THE MODERN ENERGY MARKET

Full control – visualisation with floor plans and with all the information for the technicans

KNX makes an ordinary office building of a traditional hydroelectric power stations efficient

Hydroelectric power has its tradition in Glarnerland, being part of Eastern Switzerland. The streams and rivers of this mountain region are full of energy which has already been used for 200 years, at first directly and mechanically for the industrial production, later on for the electricity generation. The cantonal assembly of Glarus decided to reduce the number of municipalities to three communities in order to be better positioned in the future. As a consequence the company "Technische Betriebe Glarus Nord" (TBGN) was founded. The institution under public law covers the energy demand of 17,000 inhabitants. Recently another floor has been added to the work yard and as such its business unit for electricity and data networks received a new office floor. KNX had been chosen for the electrical installation for two reasons: on the one hand KNX provides the functionality for an ideal working environment and on the other hand the institution can present itself as modern and energy-efficient company. Such the customer service of TBGN thus has a convincing reference project. All implemented trades comply with energy efficiency class EN 15232.

Complete integration of all trades including the lighting with constant light control and presence detection.

"Minergie-Modul Raumkomfort" controls the indoor Climate

Characteristic for this KNX project is the complete integration of all trades. Of course, this also includes the lighting with constant light control and presence detection. Radio controlled, free-standing luminaires serve as workplace lighting. A weather station provides a comfortable, secure and energy-saving shading due to sun tracking, frost and wind protection. KNX also controls heating, cooling and ventilation. The waste heat of the generator respectively the turbine water of the nearby power station is used as heating respectively cooling source. The "Minergie-Modul Raumkomfort" of ABB, which is used here for the first time in a functional building, controls the room temperature depending on the set point, presence and status of the window contacts. CO_2 KNX sensors control the ventilation. KNX makes itself useful also in the area of safety: it monitors windows, controls doors and gates, activates emergency scenarios in case of a fire and opens the main gate in case of power failure.

Operation via the Workplace PC

A visualisation is accessible on two levels: At their workplace all staff members have access to the information and functions which are necessary for them. This is realised per widget. It allows a fast communication with the video door intercom system. If there is a call at the door, a live picture of the visitor is displayed on the PC screen. A button allows you to open the door.

The technical service of the property has access to a visualisation with floor plans and with all the information for monitoring functional states and values as well as for the operation itself. Also remote access to the visualisation is possible for the technicians.

Compliance with energy efficiency classes: KNX integrates all trades in the office of the department networks which is located in the new work yard

*Winner KNX Award 2016
Category People's Choice*

Soltris Gebäudesystemtechnik GmbH, (Swiss)

BENEFITS OF KNX IN THIS PROJECT
- *Compliance with energy efficiency class EN15232 class A*
- *Energy efficient controls*
- *Central control and operation*
- *Reference object for customer service*
- *Low installation costs by decentralised KNX installation*
- *Flexible for changes and extensions*

TECHNICAL HIGHLIGHTS
- *Minergie-Modules control lighting, shading and heating/cooling*
- *Complete integration of all trades without any compromises*
- *Safety management*

TRADES/APPLICATIONS
Lighting, Shading, Heating/cooling/ventilation, Alarm management, Monitoring/logging, Video door phone, Visualisation, Interfaces to other systems

COMPONENTS – EXTRACT
- ***Number:*** *179*
- ***Brand:***
  Lighting: ABB KNX DALI gateways and constant light controller
  Shading: Griesser weather station and decentralised actuators
  Room temperature control: „Minergie-Modul Raumkomfort" of ABB
  Workplace lighting: Free-standing luminaires from Waldmann with PULSE TALK and EnOcean/KNX
  Gateway: Weinzierl
  District heating: Contact sensor Lingg&Janke
  Dew point monitoring: RTS Automation
  KNX/IP Integration: Enertex Bayern GmbH
  Switch actuators: Hager
  Presence detectors: Swisslux (B.E.G Luxomat)
  Visualisation: iBricks

COMPANIES INVOLVED
- ***Constructor:***
  Technische Betriebe Glarus Nord, www.tbgn.ch
- ***Architects:***
  Architekturbüro Fritz Landolt, Näfels
- ***KNX-System integrator:***
  Soltris GmbH, Näfels, www.soltris.ch

KNX IoT 1.0 – Standardised KNX Web Services

KNX has recently released a KNX Standard extension for KNX web services. The standardised application layers enable improved interoperability when general IT systems interact with the KNX system. This gives software applications on a higher abstraction level a uniform interface to interact with KNX, paving the way for further innovations in software applications on the IP network side.

Goals

Web services ease the implementation process and increase the interactions possibilities. It is expected that this will boost the availability of even more integration solutions with for example ERP systems, hotel book keeping systems, alarm systems, EV installations, smartphones, etc.

## Difference with already standardised KNXnet/IP

It is true that KNXnet/IP is fully specified and specifications are freely available: however, KNXnet/IP was created for other use cases, i. e. connecting buildings to one another, creating a fast backbone for an underlying KNX TP system and remote management. In practice, the KNXnet/IP binary protocol is also used to create visualisation software, however this requires more software effort because of the specific need to implement the protocol.

The main difference with KNXnet/IP is that the web services protocol is based on HTTP. In this way, it is easier to implement in systems outside the KNX ecosystem. The RESTful way of interacting removes the needs for applications to constantly monitor the KNX installation themselves. Web browsers can use web services directly, they are unable to directly speak KNXnet/IP.

Connectivity over the internet is more convenient with HTTP, transporting HTTP over the internet is much easier as this can be secured with less complex solutions than full VPN tunnels (e. g. with SSL reverse proxy, this can be added directly on the gateway devices by manufacturers).

IP Backbone

IP Router   IP Router

TP Area   *TP Area*

Line Coupler   Media Coupler

TP Line   868   868

End Device   End Device

CONTENT OF THE KNX WEB SERVICE SPECIFCATIONS

Information model (IM)

KNX web services provide a higher level of abstraction. The connecting application doesn't need to know how KNX operates. The IT application can interact with KNX in a RESTful way without having knowledge about KNX itself. In this way, not the entire ETS project needs to be shared with every connecting application. For example, the system can request the status of 'bedroom / night lamp' instead of having to know the group address that implements that functionality. Tags can be used to add extra metadata with key/value pairs to describe the available functionality.

Application layers

The specification foresees three web service flavours to ease the integration with existing systems: oBIX, BACnet/WS, OPC/UA. All are based on a single information system that create a uniform mapping of the information from the project. This information can then be used as the basis for the gateway to translate web services into KNXmessages.
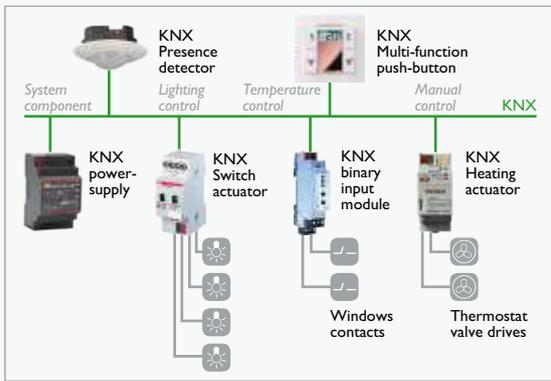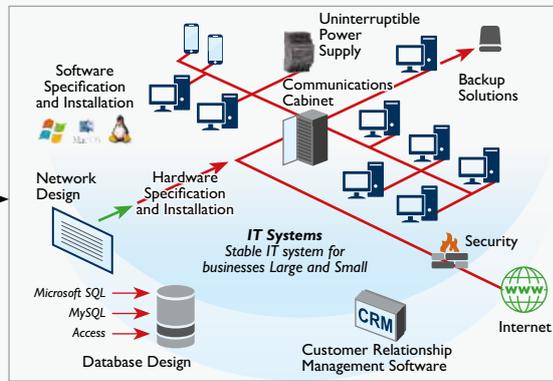
KNX manufacturers can now create gateways similar to KNXnet/IP devices, that however form a gateway from the KNX system towards HTTP. A lot of proprietary gateway devices towards HTTP already exist, now manufacturers can add the specified and standardised way for HTTP interaction to allow more services to make use of this interaction method. In this way, a more common way to access KNX installations is offered.

Principle

The technical principle of the KNX IoT solution is here briefly explained; a gateway maps the "KNX project" to the "internet". The picture adjacent shows the access to the gateway at runtime. The mapping of ETS project data into the format of the Information Model is ensured by the ETS App *Web service exporter* and is used to *configure* the Web service gateway.

On the left hand side of the picture, operation panels, building management systems, smartphone and others communicate via web services with the gateway.

In this way, the app of a web client (here represented as the internet globe) is able to search data in the web service gateway with unified text telegrams.

On the right hand side of the picture, the well known KNX protocol is depicted. In order to be able to detect from the side of the IP infrastructure the parameters of the KNX system, the ETS project needs to be exported (uploaded) into the KNX WS-Gateway.

For this purpose the new ETS App is available. The KNX installer has the possibility to export all project data or only parts of it. When doing so, the parameters have to be clearly marked. Also supplementary data can be exported.

Conclusion

Open Data Exchange is a key success factor for upcoming IoT systems – including KNX IoT – next to (seamless) interoperability.

By KNX IoT, building automation or smart home makes a tremendous step towards the virtual world of the internet. It becomes simpler to use building automation data for automated functions, to present values and states of a KNX installation via the internet and to evaluate them. Just think of sensor values and consumption data of energy usage, which can help to optimise the energy management. The open data exchange between IT systems and building automaton systems enables improved applications with considerable multiple benefits.
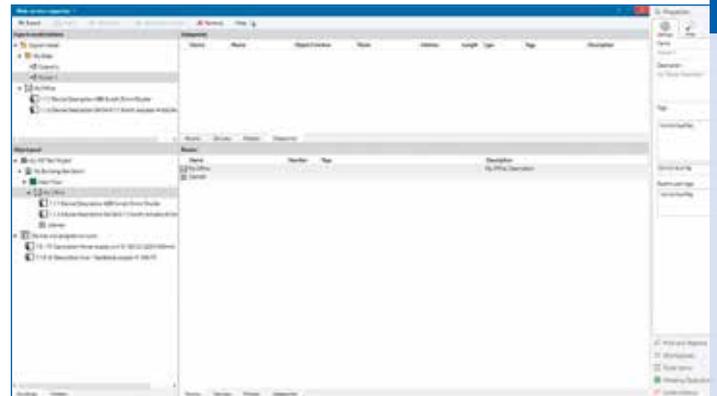
ETS App "Web service exporter"
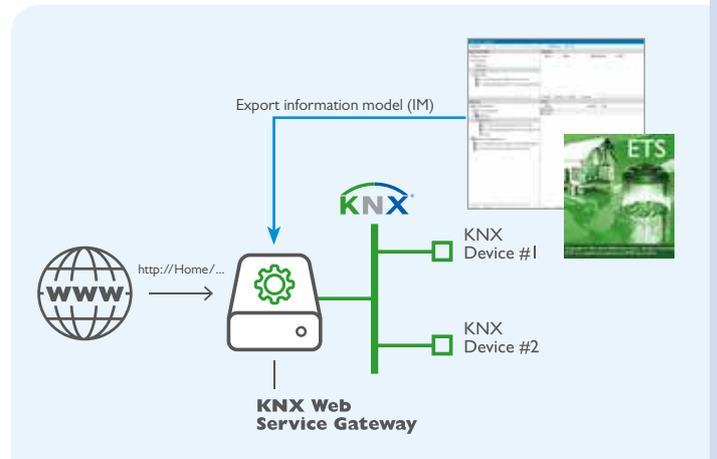
HOW TO START?

To make the specifications come alive KNX Association has created a KNX Web services gateway technology demo to demonstrate the practical usage of oBIX web services. This comes with an ETS App Web services exporter that aids in creating the information model. This demo can be used to learn more about the working of KNX web services and is available – free of charge – in the KNX online shop (https://my.knx.org/).

Please note that this gateway showcase requires significant setup work and is not an actual product. It is meant to provide more insight into the specifications by making them more concrete.

Getting Started with KNX Step by Step

Ever wondered, how to implement a KNX installation and become an expert in KNX? If so, we are happy to introduce you to the simple beginnings of KNX and explain to you how to move step by step to your success with KNX!

In high demanded and since its introduction highly appreciated – welcome to "Start@KNX", which features the best start for success in home and building control.

In order for you to be also updated about the new platform for KNX starters, we are pleased to bring you closer to the following topics of KNX:

E-Mode

You are not familiar with KNX and the ETS, but still want to put a KNX installation into practise without any prior training? No problem! Thanks to the E-Mode configuration by KNX, you can already realise installations without the need for prior training. The following article will give you a good introduction about E-Mode as well as the presented solutions

Start@KNX

You are looking at more sophisticated and bigger installations? E-Mode does not offer you all the functionality, which you need, but you do not know, where to start? In this case, you will find all necessary information in the topics about "Start@KNX".

Start@KNX offers you the best overview about training opportunities in order to get started, but also to extend your knowledge in order to become a real expert in KNX. Have a look at the two parts:
• Start@KNX – Getting Started
• Start@KNX – The next steps

Dive in and see that KNX is the perfect technology for you and your business in home and building control.

Easy Mode – The fast configuration mode for KNX

Start with KNX Easy Mode and extend the functionality with the ETS (System Mode)

ETS is the best known and by far the most used tool to design and program a KNX installation. This is called System Mode (S-Mode). KNX also offers alternatives: KNX devices can also be configured without ETS. This is called Easy Mode (E-Mode) and the devices are E-Mode devices.

There are three submodes: Controller Mode (Ctrl Mode), Push Button Mode (PB Mode) and Logical Tag Extended Mode (LTE Mode). KNX standard guarantees the compatibility and runtime interworking independently of the configuration mode by fixing elementary functions in so called functional blocks. As followed, we would like to present four solutions by KNX manufacturers:

Project Sophistication

S-mode
• For KNX certified planners
• Configuration with PC+ETS
• Large size installation

E-mode
• Limited functionality
• Simple tool required
• For medium size installation

Functionality
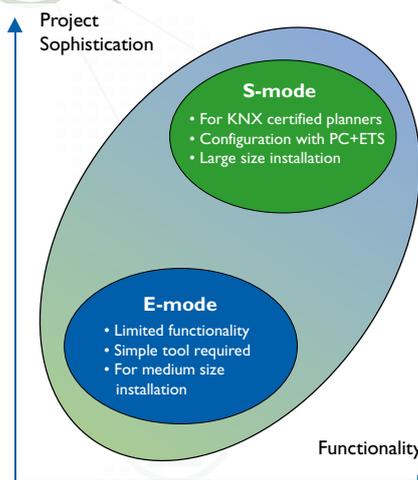
quicklink by Berker

quicklink is the easily configurable RF solution. Just a few touches of buttons are enough to configure the desired function in devices. The basis is ten insets and 16 mountable parts, which can create more than 400 functions, when well-combined. As a bidirectional RF system, even wired KNX Systems can easily be extended. This makes the future proof system ideal for new buildings as well as for retrofitting of existing installations.

The Installation and the allocation of functions and components is easily realised by touches of buttons and is based on the KNX RF standard. This guarantees the consistency of solutions, for quicklink installations to be integrated at a later stage at any given time in KNX easy or KNX ETS Installations.

Important for the integrator: Even without KNX knowledge, every integrator is now able to install powerful RF systems and control them at the touch of a button.

Contact: www.berker.com

easy by Hager

With the easy system, Hager provides the latest in simplicity for implementation of smart homes with the KNX standard. The system consists of the TXA100 commissioning case with configuration server and WLAN adapter, the free easy App, a comprehensive set of actuators and the new Berker sensors. The way it works: The server is connected via bus terminals to the KNX installation and via the WLAN adapter to a tablet, smartphone or PC. The App is then used to configure by drag and drop up to 255 Twisted Pair components - and as many KNX radio components (RF) - and to label them with clear names - the domovea visualisation is then also ready.

Contact: www.hager.com

quick by Lingg&Janke

Thanks to coding switches, small and medium-sized building control installations can be realized without the usage of a programming software. The only thing you need is a screwdriver!

The programming is done by coding switches, which can be found on every bus device. Their purpose is to create the connection between sensors and actuators via same connection numbers. Actuators have multiple connectivity possibilities for the controlling of connected consumers (1 – 9 channels). Thus, the connection numbers are compiled by a channel number and a group number.

When all coding switches of a quick-devices are set to 0, the device can be programmed by means of the ETS software, as with all other KNX components. This allows the equipment with quick functions to interact with other KNX system components at the same time, which achieves the optimum combination of flexibility and comfort. For extending the standard applications, i.e. switching, dimming and shading, smart metering solutions are also part of the product portfolio.

Contact: www.lingg-janke.de/en
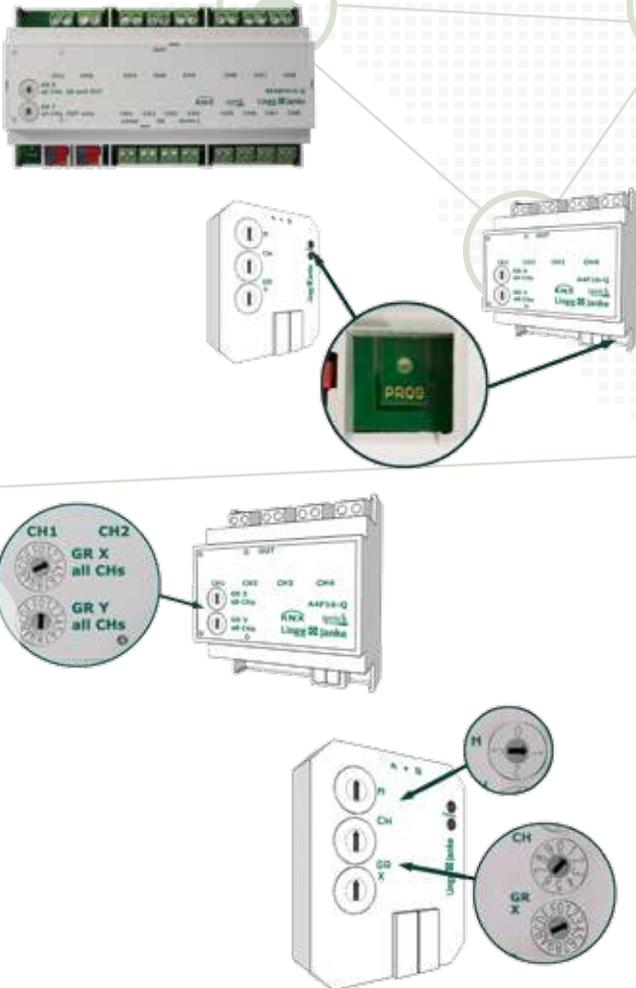
Synco by Siemens

Synco is the ideal HVAC plant and room control solution for KNX integrators. Easily integrated with KNX applications such as lighting control, it will minimise both HVAC and electrical energy in buildings; and by connecting Synco controllers to the Internet, using Siemens' OZW gateway, multiple sites can be monitored and controlled from your mobile or PC. This remote, mobile access reduces site-travel costs and opens new service opportunities. Up to 100 sites may be connected free of charge.

• Minimal HVAC knowledge needed due to pre-loaded HVAC applications
• Easy integration with other KNX applications (e. g. lighting control and presence detection).
• Fast and easy connection of buildings for multi-site control and monitoring over Google Maps
• Email notification of alarms and faults, with priority filtering
• Parameter trending and other diagnostics for remote fault correction
• New business opportunities such as Energy Services and Response Time Guarantee

Contact: www.siemens.com

Many Ways, one Target – Success with KNX!

KNX acceptance is on the way up at a rapid rate and training is an integral part of this continuing success. Regardless of whether you just immerse yourself into the world of KNX or you want to make KNX part of your business, a wide range of training possibilities exists for everyone. "Start@KNX" brings together all options.

"Start@KNX" offers an overview of the various training options, accompanying material and identifies how teaching materials and methods can effectively be used in order to increase knowledge about KNX.

Three easy ways to become an expert in KNX

On-site Training

- **KNX Basic Course**
  Getting familiar with KNX and become a certified KNX Partner
- **KNX Advance Course**
  Extend your KNX Knowledge
- **KNX Tutor Course**
  Become a KNX Trainer

Online Training

- **ETS eCampus**
  Free online training for beginners
- **KNX Webinars**
  Interactive KNX Presentations
- **Online KNX Basic Course**
  Preparation for certified Courses

Literature

- **KNX Brochures**
  Brochures about all aspects of KNX
- **KNX Books**
  Introduction books as well as official training course documentations
- **3rd Party literature**
  Various languages about further aspects of KNX by independent authors

On-site Training

Training on-site organised by certified training centres offer a possibility for newcomers and experienced KNX users to become a certified KNX Partner by:
- KNX Basic Courses: Introduction into the KNX Technology and the ETS (Engineering Tool Software)
- KNX Advanced Courses: Deepening the KNX knowledge
- KNX Tutor Courses: For all those who want to offer themselves certified trainings

Successfully completed certified KNX courses, organised by KNX certified training centres, allow to be registered as new KNX Partner. All KNX Partners receive as welcome present a voucher for a ETS Lite license and a further voucher for a discounted upgrade from ETS Lite to ETS Professional.

How do I subscribe to a course?

Go to www.knx.org, look for a training centre that complies with your expectations and login to your MyKNX account (https://my.knx.org). Under the menu item "My Account", go to "My Subscriptions" and then to "Subscribe to a KNX certified course".

Chapter 1
KNX Basics

The KNX BUS in a Nutshell

1   Test yourself – correct answers: 3/3

KNX Communication Medias

2   Test yourself – correct answers: 4/4

US Topology

st yourself – correct answers: 4/4

mple Example

Chapter 3
Working with ETS5

Create a New Project / ETS5 UI

1   Simulation:
    Test yourself – correc

Create a building struc

2   Simulation:
    Test yo   rrect answers: 3

Add devi

3   Simulation:
    Test yourself

Online Training

ETS eCampus

The ETS eCampus is a free web-based learning platform for KNX Newcomers, which introduces the KNX technology and the ETS. All participants, who successfully complete the ETS eCampus, receive a voucher for an ETS Lite license as a special bonus. The ETS eCampus can be found in your MyKNX account (https://my.knx.org).

KNX Webinars

Webinars offered free of charge by the KNX Association are an extremely efficient way to acquire a first knowledge on KNX by short online presentations. All KNX Webinars can be found on the KNX Website in the section "Training", submenu "Webinars" Go to www.knx.org and select the menu "Training". Select the desired webinar in the submenu "Webinars".

Online KNX Training

A considerable percentage of training centres offers online KNX training. Thus, access to the training courses and possible hands-on exercises is available at any place and at any time.

Where do I find KNX Online Training?

Go to www.knx.org, look for a training centre that complies with your expectations and login to your MyKNX account (https://my.knx.org). Under the menu item "My Account" go to "My Subscriptions" and then to "Subscribe to a KNX certified course". In the details of the listed courses, visible by clicking on the magnifier in front of the name of the certified KNX training centre, you will find information on the corresponding type: "Lecture type (theory)" and "Lecture type (practical)", respectively whether the course is offered online or offline (offline means on-site = in the training centre)
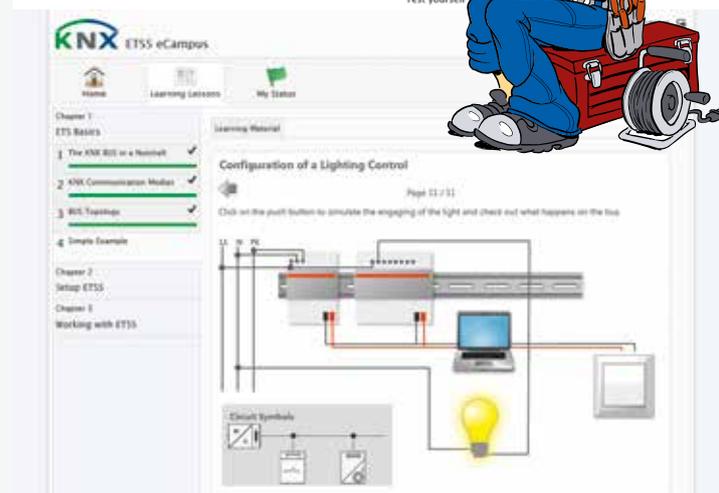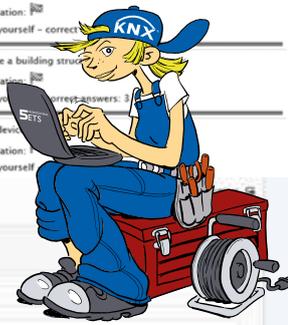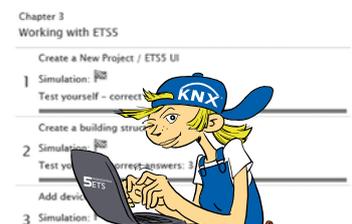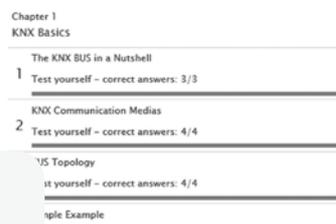
KNX Literature

KNX Association offers a vast selection of brochures and reference books, published by the KNX Association and third parties. Besides the standardised KNX training documents, used by the certified training centers, the 'KNX Handbook for Home and Building Control' is to be recommended especially for newcomers. In addition, there are numerous books on the market explaining the essentials of KNX Home and Building Control, written by independent third authors.

Where do I find KNX brochures?

All KNX brochures are available in various languages on the KNX website for a free of charge download (www.knx.org ➝ Downloads ➝ Marketing ➝ Flyers)

Where do I find KNX literature?

All publications of KNX Association can be ordered in your MyKNX account (http://my.knx.org) or on Amazon.

Where do I find KNX literature of third parties?

In special bookshops, several local and international online shops such as e.g. Amazon, bol.com, etc.

Please check also our website at: http://www.knx.org/knx-en/training/books-documentation/other-knx-books/index.php

Got Started with KNX?
Then it is Time to Become an Expert!

Learning never stops. That is also the case with KNX, so how can you extend your skills?

You have passed the ETS eCampus, participated in a certified KNX Basic Course and also commissioned your first KNX projects? Then it is time to extend your knowledge and make you an expert in KNX.

KNX Association and its partners are offering you several opportunities in order for you to become a true expert in KNX.

KNX Webinars
KNX webinars not only offer a perfect and interactive opportunity for beginners, but also for skilled integrators. Furthermore, KNX Association offers webinars about further topics, such as explanations about KNX development or new features of KNX, which can help you to be even better in your job and accordingly offer additional services to your customers. KNX webinars therefore help you to extend your knowledge and get you closer to becoming a KNX expert.

KNX Literature
KNX is a broad technology and offers a lot of literature, which helps you to extend your knowledge and also think outside of the box for certain problems, which you might encounter in your installation. KNX Association as well as third-party authors offer a large amount of material, which will deliver further expertise to you. We thoroughly recommend the standardised KNX training materials for KNX Advance and KNX Tutor Courses, which can be acquired via MyKNX or Amazon.

Certified KNX Advance Courses
If the book is not enough and you want to extend your skills with practical session, the KNX Advance Course is the next step for your success. KNX Advance Courses teach you not only the proper usage of further applica-

tions, it also helps you to extend your service portfolio with sophisticated solutions for KNX. KNX Advance Courses are the perfect supplement to existing KNX Basic knowledge and give you further advantages, such as being listed as an advanced partner in your KNX Partner entry and give you the right to participate at certified KNX Tutor Courses.

Networking with the KNX community
KNX Association, with its KNX National Group, KNX Userclubs and KNX Training Centres, are eagerly promoting KNX worldwide. This also includes the spreading and exchange of contacts, but also knowledge. These KNX events help you to extend your network and get into partnerships, which will support you on your way to becoming an expert with KNX.

Check the KNX website for any activities in your region or simply contact the KNX community in order to get more information about activities and events. But becoming a KNX expert is also possible from home or from your office. Online platforms, such as forums as well as dedicated Facebook group pages offer the best possibility to address your individual problems to a broad KNX community, which is always willing to help.

The points mentioned are only some of the many possibilities that you have in order to become a KNX expert and there are many more. However, the most important and efficient way to becoming an expert with KNX, is to stay active with KNX, get more experience by using the technology and always staying up to date with the newest developments. Because as with any other discipline in life: Skill comes with practice and practice makes perfect!

New ETS Apps

TOOLS

KNX
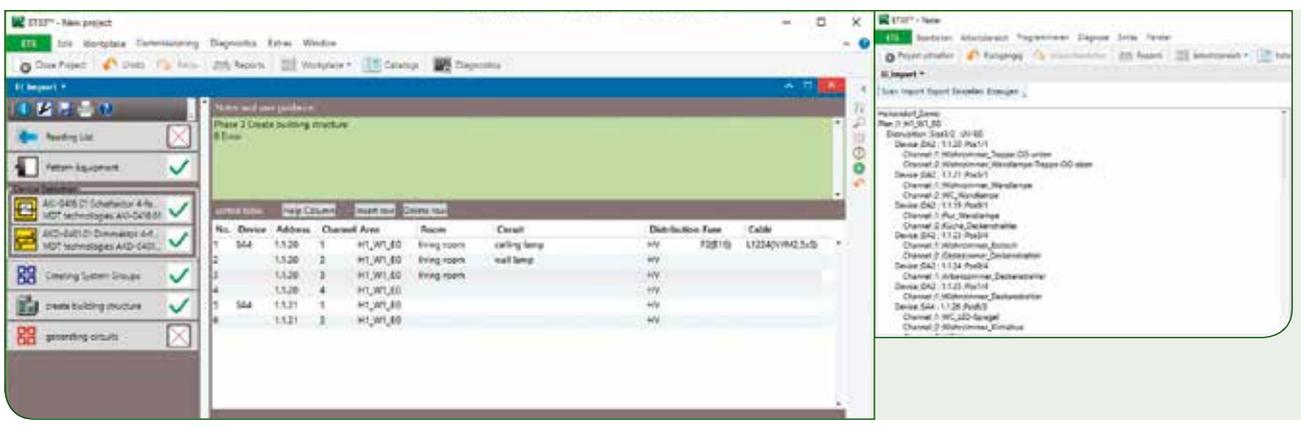
El_Import

NAUTIBUS Electrical Installation Import: El Import generates an ETS5 project from a CSV list of actuators and circuits. The list can be easily created using Excel or a text editor. The project that is generated contains all the necessary Group Addresses, the building structure and the actuators. It can be further processed with the ETS5 or Elplan5. *Contact: www.nautibus.de*

ETS5.5 now available

ETS5.5 is now available for download. This new update is free for ETS5 licensed users. The main new features are: Integration of KNX IP Secure and KNX Data Secure in ETS. The different flavors on KNX Secure plus corresponding procedures/ settings are described in detail in the ETS5 help.Introduction of restore points for automatic backup of project work when closing the ETS project. Find out all new features and improvements in the release notes here:

https://www.knx.org/knx-en/software/ets/versions/index.php
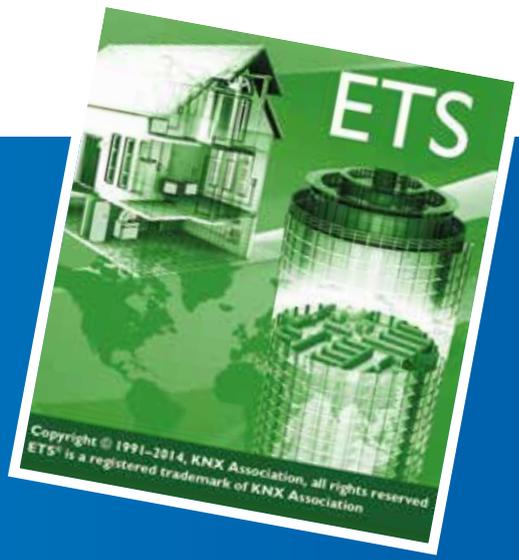
New Members

Aartesys AG

SWITZERLAND Aartesys develops products and services in the field of communications technology. It focuses on IP solutions for secure access and transfer of information in the field of IoT (Internet of Things). The latest innovation is the launch of their system Aartesys connect2control (C2C): EasyGateways®, C2C hub and a portal to allow secure remote access in worldwide installed control systems, buildings and machinery. The Easy Gateway and C2C remote programming of the KNX installation via mobile phone or DSL connection is made possible in an easy way. No VPN, no fixed IP addresses, no special firewall settings, but the end-to-end encrypted and transmitted with https protocol.

Contact: www.aartesys.ch

Acematic Intelligence Co.,Ltd

CHINA Acematic Intelligent Co.,Ltd provides all-round, high-performance, intelligent and digital network-based smart terminal solutions for different levels of demands from different types of customers. Their products include: Cloud platform, intelligent community solutions; IoT sensing devices and smart home solutions; HD audio and video solutions and building visitors management systems. Acematic Intelligent Co.,Ltd is committed to bringing customer more safe, comfortable, convenient and energy efficient intelligent lifestyle in the future with overall home, hotel and commercial building solutions.

Contact: www.acematic.com.cn

Aquametro AG

SWITZERLAND Aquametro has been developing and producing intelligent measuring systems in the fields of water supply, thermal energy, industrial liquids, diesel/fuel and marine for the global market in Switzerland since 1928. At the headquarter in Therwil/Basel more than 100 high-qualified and motivated professionals are caring about innovative, future-oriented solutions for high-precise measuring, efficient data management and smooth integration of measuring data in subordinate control and evaluation systems. Their portfolio includes the complete system technology for measuring stations, data transmission, analysis, commissioning and invoicing. The systems can be integrated in the building automation without any problems. They support several home automation systems and now also KNX. With the KNX standard they offer their customers as usual technology on highest level in the field of building automation.

Contact: www.aquametro.com

BAS-IP LP

UNITED KINGDOM Since 2005 BAS-IP has been developing and manufacturing video intercom systems based on IP technology. Until recently, the company was focused on developing its intercom system, and in 2015 drew attention towards extension of its line of equipment and expansion of its device range. KNX-based devices allow the implementation of all functions embedded in IP intercom systems and can even expand them. These days modern users do not want to be limited to minimum opportunities, but want to choose their functions and have their own wishes implemented in the management of home devices. BAS-IP listens to the customers' needs and wishes and is expanding its range with automatic modules, actuators, switches based on the KNX protocol. One of the certified factories in China will produce this product line.   *Contact:* www.bas-ip.com

BEMI Automation

FINLAND BEMI Automation is a KNX system integrator since 2005. From the start they aimed to combine lighting design with KNX, which over the years has resulted in their own logics for light scenes and how they see light. In 2010 the owner Michael Bendtsen was awarded the title KNX tutor and since then they have been educating people in KNX and lighting design. In 2013 they launched their first iBEMI iOS app for controlling the smart home. In 2016 they launched their KNX project tool which aims to help other system integrators sell KNX systems. Their future role within KNX will be to help other system integrators make more profit and create better KNX systems. As their motto states: KNX is a function based system – don't sell products!   *Contact:* www.bemi.fi

BETA CAVI

ITALY BETA CAVI designs, manufactures and sells a wide range of copper cables developed to optimise performance in terms of installation and transmission of the equipment. They are a technology and marketing partner of the most renowned companies in the world such as: BOSCH security systems, DAHUA, HIKVISION and Samsung Techwin. BETA CAVI represents the new generation benchmark in several market areas.

Contact: www.betacavi.com

BOSMER

TURKEY Bosmer was founded in 2009 in İzmir and is one of the pioneers of building automation system integration with KNX in Turkey. The company has been continuing its activities as a certified KNX Training Centre since October 2014. As a training centre they educate and prep KNX-experts. In this way they intend to ensure the continuity of quality standards in automation systems and also raise awareness about the KNX in Turkey. The new target of the company is to enter the building automation market by producing new products based on the KNX standard. Bosmer has an innovative team which provides the best solutions for building automation systems to make life easier.

Contact: www.bosmer.com

Efftronics Systems Pvt Ltd

INDIA Efftronics has 30 years experience in design and development of niche products and end-to-end smart solutions. From conception to design, manufacture and support, everything is carried out in-house with its expert R&D team and manufacturing facilities. With an objective of creating value to the customers, Efftronics is fulfilling the needs of various segments like railways, road transport, LED lighting, digital signage, energy, environment, industries etc., by providing IoT based smart solutions with design in mind. Presently, the company is serving customers in India, but likes to promote and expand worldwide. The next level of product development will show KNX compliance. By utilising the KNX standard in IoT based smart solutions for LED lighting, smart homes and smart building automation, Efftronics believes that customers and their company will gretly benefit. *Contact:* www.efftronics.com

ekey biometric systems GmbH

AUSTRIA Biometry makes our daily life easier, more comfortable and safer. Biometric access and authentication solutions are on the rise! More than one million satisfied users are the best reference! ekey biometric systems started in the year 1999 and is Europe's number one for fingerprint access solutions today. Private customers as well as leading companies and institutions, such as fire brigades or ambulances have trusted in the established ekey finger scanner for many years. The internationally active company currently employs 70 employees at its five locations Austria, Germany, Liechtenstein/Switzerland, Italy and Slovenia and exports its products to more than 70 countries. The export ratio accounts for 73 %. Main markets are, next to Austria, Germany, Switzerland, Slovenia and Italy, as well as Spain and the USA. "The finger is always with you!"

Contact: www.ekey.net

EKON GmbH

ITALY myGekko is a user-friendly product for building automation based on a control concept. myGEKKO is not programmed, but personalised by the electrician, the installer or the user directly via the display, the myGEKKO Slide. myGEKKO records, controls and monitors systems and devices centrally an therefore helps to use energy more efficiently, whenever at home, in the office or in a big network. *Contact:* www.my-gekko.com

Hangzhou D-Haus Technology Co.,Ltd.

CHINA D-Controls designs and develops interfacing solutions for building automation systems. The success is due to the reliability and performance of the products and the quality of service provided. D-Controls is a small and robust device that functions as intelligent gateway and is capable to intercommunicate KNX, and many other proprietary systems (BMS, HVAC, lighting, fire, intrusion, energy management, etc).The D-Controls Plus App (KNX) application is a universal software tool enabling users to remote control their KNX and AV environment from devices running iOS, Android OS through Cloud. *Contact:* www.d-controls.com

Heinrich Kopp GmbH

GERMANY Simply Smart – The clever KNX solution of Kopp that doesn't require complex programming. The new KNX system by Kopp named "HK Smart KNX" can be implemented in integrated home control systems quickly and easily, the comfortable home control via the KNX bus system and quick is easier than ever. Lights, blinds and heating control parameters can now also be configured without software and expenses in a quick and easy way. All you need is a screwdriver. Now it is easy to realise safety, comfort and energy efficiency in the building installation. Electrical contractors can offer their customers a value-added installation that is quick and easily accessible without PC and training.

Contact: www.kopp.eu

iRule LLC

UNITED STATES On Controls brings the convenience, luxury and security of smart home technology to the Apple and Android phones and tablets already familiar to millions of consumers. An award-winning Wi-Fi-based platform, On Controls leverages the efficiency of the Cloud; enabling integrators to deliver more connected home features and better service to their clients. From a single room to the largest residential or commercial applications, On Controls allows integrators to initialise, upgrade, troubleshoot and add new features to a client's project via our web portal from anywhere in the world. On Controls is a simple, reliable, robust, and reboot free system. On Controls is compatible with many different devices using IR, RS-232 Serial, and IP Network. On Controls is looking forward to adding KNX to our extensive device database.

Contact: www.iruleathome.com

ITK Engineering AG

GERMANY ITK Engineering AG was established in 1994 as "Ingenieurbüro für technische Kybernetik" and is an internationally operating technology company with customers in the automotive, transportation and aerospace industries as well as in medical technology and building management systems. In addition to tailored technical consulting and development services, the company offers turn-key systems in the fields of software and hardware engineering, embedded systems, model-based design and testing as well as control systems design and signal processing. With a team of over 800 employees, ITK has its headquarters in Rülzheim (Palatinate) and has eight branch offices in Germany. In addition, ITK is represented in the USA, in Japan, Spain and Austria.

Contact: www.itk-engineering.de

Lime International

JORDAN Lime International was established in 2012 and has since developed to become a leading systems integrator designing, installing and commissioning automation, building management, audio visual and security systems. Lime is a leading systems integrator of high-end automation / building management, audio visual, and security systems. Lime executes high-end commercial and residential projects using state-of-the art technologies. The company is fully accredited by leading industry authorities and has a strong reputation for quality and innovation.

Contact: www.lime-smart.com

MBN GmbH

GERMANY MBN GmbH was founded in 1988. The company headquarters is located in the Bavarian Friedberg (Germany). Their subsidiary PROLED AUSTRIA Vertriebs GmbH is responsible for the sales and support in the Austrian market. Since 2005 MBN GmbH develops and manufactures LED luminaires and controllers under the brand name PROLED® and MBNLED®. The product range covers business LED luminaires for inside and outside. In addition of the possibility to control PROLED® and MBNLED® PWM Dimmer units with DMX 512/RDM and DALI, MBN has expanded its product range with control possibility via KNX, to be able to cover the requests of their customers in project business. *Contact:* www.proled.com

Nice Spa

ITALY Founded in the early 1990s in Oderzo (TV) Italy and listed on the Italian stock exchange since 2006, Nice aims to improve the quality of life by simplifying everyday movements: functional products with an exciting design that permit people to enter and leave their home in complete freedom, with the utmost comfort, and thus enjoy their living spaces to the full. Nice offers the simplest integration, the widest range, the most advanced electronics, the finest design and the most complete and attractive automation systems. Nice designs, manufactures and markets automation systems for gates, garage doors, road barriers, awnings, blinds and shutters for residential, commercial and industrial buildings, as well as alarm and electronic control systems, combining technological innovation and design to offer products that are extremely simple to use. *Contact:* www.niceforyou.com

PEAKnx

GERMANY PEAKnx is a company focused on high-end visualisation and control products for the KNX market as well as special software solutions in combinations with smart displays. Their aim is to provide an all-in solution to control a smart facility based on the KNX standard. Flexibility and design is their focus, combined with unique software solutions and a very special and flexible design. Building a bridge between standards is what they believe in. With more than 25 years of experience in the CAN Automotive and Industrial Bus Solutions they want to close this gap for upcoming technologies. *Contact:* www.peaknx.de

Prolite Controls Limited

UNITED KINGDOM Prolite Controls Limited was formed in 2010, and was incorporated as a limited company in 2013. From a humble beginning as analogue dimmers module makers, to a profound manufacturer of highly advance automated systems. With head office in UK, and offices in UAE, India, Saudi Arabia and distributors and agents to OEM partners in several countries. They have come a long way to create and to exhibit the style of every house, to offer a multi-functional interface which speaks to the user, to communicate in safety and to intelligently manage automation, GRMS and lighting. *Contact:* www.prolitecontrols.com

Punica Systems

TURKEY Punica is a research and development company that focuses on smart buildings and energy efficiency. The company is aiming to launch new products based on KNX, and expand its product portfolio. Its dynamic and talented team intends to create outstanding products. The team is actively working on developing actuator, gateway and touch panel solutions. Additionally, as a company, Punica believes that Internet of Things (IoT) will not only make positive change in our lives, but transform our homes and buildings. With this vision, the company will work hard to contribute seamless integration of KNX into IoT and create distinctive solutions in this domain as well.

Contact: www.punicasystems.com

Qbus NV

BELGIUM Qbus is a Belgian company that has been developing technologies to make residential and commercial buildings smarter since 1999. A smart building provides more peace of mind and comfort while using less energy. Three principles are central to the development of Qbus technology: easy, flexible and future-proof. A Qbus system is easy to install and configure, can start with a limited installation, but also offers extensive possibilities and new developments remain compatible with the original products. Qbus has developed Ubie, an Internet of Things control gateway. Ubie links KNX installations with the Cloud and with other IoT devices (Sanos, Hue, ...) via an intuitive, plug and play interface. Qbus is located in Erpe-Mere and the United Arab Emirates and distributes its products both in Belgium and abroad. *Contact:* www.qbus.be

Redfish Group Pty Ltd

AUSTRALIA Redfish is a product design company with expertise in systems architecture, software design, and electronic design and manufacturing. They are committed to producing high quality products that provide the best outcomes for customers and clients. They are passionate about information security, and professional software development principles and practices. *Contact:* www.redfish.com.au

Shanghai Euchips Industrial Co.,Ltd.

CHINA China Euchips is one of the pioneers of LED controllers and dimmers, which has focused on Control and Dimming system since 2005. The core team of R&D in Euchips has engaged on the research and development of LED Control and Dimming system since 2001. Euchips was established in 2005 with the registered fund of ten million RMB. Currently, Euchips has 130 employees including over 30 R&D engineers. by the end of 2015, Euchips has owned more than 80 patents. Euchips is the member of DALI and KNX, owns DALI, 0 – 10 V / 1 –10 V, DMX, Triac LED dimming system which are compatible with systems of Crestron, Philips, Osram, Lutron,Dynalite, Clipsal, LDS, ABB, Schneider, Leviton, JUNG, Berker, Be Lichtregler,etc. Euchips's products have been applied to more than 300 five-star hotels. Euchips sold more than one million units of controllers and dimmers per year and has built good relationship with clients from more than 90 countries. *Contact:* www.euchips.com

Shanghai NewBest Intelligent Sci-tech Co., LTD

CHINA NewBest built its reputation creating smart home control systems and high-performing media systems. They have designed professional systems for many applications including hotels and auditoriums, houses of worship, retail businesses, department stores and restaurants. Now they are growing their business beyond these boundaries and will include KNX in their solutions. *Contact:* www.newbest.com.cn

Thinka B.V.

NETHERLANDS Thinka is a Dutch company based in Amsterdam. Thinka B.V. started off as a cooperation between Domoticom and Zilverline BV. Domoticom is a system integrator specialised in KNX automation. Zilverline is a software- and product company with experience in Lean development. Thinka B.V. is a daughter company of Zilverline BV, that specialises in domotics. Thinka's first product is "Thinka voor KNX". A team of developers have worked for months on the integration of KNX and HomeKit. They are proud to be the first to have successfully realised that with Thinka. Their aim is to build products that make life easier and more fun. *Contact:* www.thinka.eu

Trane B.V.B.A. – Dubai Branch

UNITED ARAB EMIRATES Trane is a global leader in the air conditioning industry. They design, manufacture, operate and service HVAC systems, including controls, for residential, commercial and industrial facilities all over the world. Nearly half the commercial buildings in the US are equipped with a Trane system and their reference list of installations in the UAE and the Middle East is extensive. In 2013, Trane celebrated 100 years of incorporation. In the Middle East, they have operated for over 30 years through their local sales offices in Egypt, Kuwait, Lebanon, Qatar, Saudi Arabia and the UAE. This presence is significantly enhanced by their extensive independent distributor network across the Middle East and Africa. Their portfolio extends to both new and existing buildings; ranging from evaluating and upgrading HVAC equipment, to integrating your system with advanced controls. *Contact:* www.trane.com

TRILUX GmbH & Co. KG

GERMANY TRILUX "Simplify your light" represents the most simple and reliable path to customised, energy-efficient and future-capable lighting solutions. In the dynamic and ever more complex lighting market, customers are provided with optimal advice, ideal orientation and perfect light. To ensure this, TRILUX offers a wide portfolio of technologies as well as high-performance partners in the TRILUX Group, and unites single components to create custom-designed complete solutions – always perfectly matched to customer requirements and specific applications. In this way, complex and extensive projects are simply and rapidly implemented from a single source. According to the principle of "Simplify your light", simple planning, installation and use is focused on for customers in addition to quality and cost efficiency. *Contact:* www.trilux.de

u::Lux GmbH

AUSTRIA u::Lux GmbH, since 2001 being very successful in the field of electronics, specialises in development and production of the u::Lux Switch – the intelligent room control unit which will be soon available also with a KNX-TP interface. Through the integrated high resolution colour graphic display with freely designable icons and four keys with RGB-LED, the u::Lux Switch allows the individual and demand-specific operation of all networked technical facilities. The flexible complete solution of u::Lux guarantees highest communication skills of all system components and a maximum of comfort and functionality for the energy efficient operation of residential and utility buildings of any type and size. Thanks to the simple and quick configuration and the rapid start-up additional costs can be saved. The modular system of u::Lux remains always variable and open for future expansions. *Contact: www.u-lux.com*

who Ingenieurgesellschaft mbH

GERMANY Since who Ingenieurgesellschaft mbH was founded in 1995, the owner-managed company has become a successful development partner for the leading European enterprises in lighting technology, building and industrial automation, medical technology, and other sectors. Covering the complete product life cycle from the initial consultation to the delivery of the product ready for use, we develop customised system solutions including hardware, software and firmware for automation components, particularly for the field and automation level with sensor/actuator solutions, applying a wide variety of bus systems such as KNX as well as custom specific protocols. The corresponding parameterisation tools, web-bases applications and apps complete our product range. Using our pioneering innovation skills they will continue contributing to Industry 4.0 and Internet of Things. *Contact: www.who-ing.de*

Würth Elektronik Stelvio Kontek

ITALY Würth Elektronik Stelvio Kontek S.p.A. is one of the leading groups in the connectors market. With a solid background in the sector, the group's innovative production facilities and vertical organisation result in high performance. Technical experts operate in their in-house R&D department and at the production sites (Italy, Hungary and Romania) to transform sketches into reality. The company designs, engineers and manufactures standardised and customised solutions using dedicated equipment and can rely on its hi-tech facilities powered up with in-house technology. The group employs 390 people worldwide and has a vertical production including R&D, design, engineering, metal stamping, galvanic treatment, plastic molding, assembling, quality, logistic, marketing and sales. Main markets are industrial electronic, energy, HVAC, lighting, automotive, home and building automation. *Contact: www.stelvio-kontek.com*

Wuhan Seetroll Intelligence Electronics Technology Co., Ltd

CHINA SEETROLL is one of the founders of the association of smart home industry in China. As the system integrator of high-end products, it owns various channels for diverse brand name products and serves as the senior smart consultant of many smart home factories. They were covered by many media, such as Chutian City Newspaper, Abuilding.cn, qianjia.com, Zhidian Economic Observation Monthly, Hubei TV, Hubei broadcasting and TV station and received praise within its industry for its design concept and products. Since it was founded, the company has carried out a lot of projects, such as smart villas, clubs, museums, exhibition halls, office buildings and smart hotels. The abundant project experience and excellent customer experience are prized above all. SEETROLL has been leading the whole industry with its overall scheme design and meticulous construction and debugging. *Contact:* www.seetroll.com

Zhejiang Fonoto Technology Co., Ltd.

CHINA ZHEJIANG FONOTO TECHNOLOGY CO., LTD is a provider of automation and intelligent control products and solutions, focusing mainly on intelligent buildings and energy-efficiency. Through intelligent control systems and core devices, they deliver operation and maintenance solutions for energy and equipment control.
Contact: www.fonoto.com.cn

Zhuhai Ltech Technology Co., Ltd.

CHINA LTECH is a front-runner in the field of LED lighting controller. As the first high-end manufacturer in China and one of the leading suppliers in the world, we have engaged in R&D of LED lighting control technology since 2001. Customer-orientation and advanced technology have brought LTECH worldwide trust and support. In quicksilver lighting market, LTECH insists on developing high-tech innovation,committing to providing first-class products and best solutions, creating more values for customers. Public company: Stock No. 832110. International, high-tech enterprise. Swiss SGS ISO:9001-2008 approved. China's first LED controller manufacturer. Since 2001, China's most powerful enterprise for LED control. *Contact:* www.ltechonline.com

New Products

ABB i-bus KNX logic controller

ABB The device uses a graphical programming interface in the ETS software environment. It comes also with a comprehensive library of functions to control all building applications. The library includes solutions for heating, ventilation and climate control. The installation of extra software is not necessary. Furthermore, the system comes with a simulator function. Using simulation the system integrator is able to make sure that the logic controller performs all commands correctly before commissioning the device on the project's site. Thus, the logic lontroller is a reliable companion for KNX system integrators to successfully implement their projects.   *Contact: www.new.abb.com*

KNX Smart Visu Server

ALBRECHT JUNG GMBH & CO. KG The Smart Visu Server is the optimum solution to visualise a KNX installation both quickly and cost-effectively. The compact device for wall or rail mounting certainly packs a punch: simply launch the integrated commissioning interface SV Control via the web browser and create the visualisation following an intuitive process. The operation is carried out via the clearly structured user interface Smart Visu Home, whereby the user can carry out their own settings or actions. The device has been conceived for mobile control via smart devices – independently of the operating system – and thus provides an added plus in terms of convenience and flexibility.

Contact: www.jung.de/en

Visual connection editor between data points

AV STUMPFL GMBH Avio Manager is a software toolkit developed by AV Stumpfl which introduces a completely new workflow for home and building automation projects: All devices, KNX group addresses and user interfaces of an installation visualise their data points in a well-organised way and can be connected with each other by dragging graphical lines between them. It doesn't even play a role between which physical entities these connections are made. On top of that it is also possible to add logical functions such as AND/OR gates, IF/ELSE clauses or timers to be used with any datapoints of the system.   *Contact: www.avstumpfl.com*

The three B.E.G. KNX versions with different functions

B.E.G. BRÜCK ELECTRONIC GMBH In order to meet almost every demand, B.E.G. offers its new KNX detector generation 6 in three different versions: Basic (BA), Standard (ST), and Deluxe (DX). Highlights of the functional improvement of the ST version are the improved light measurement thanks to two light sensors and the possibility to address every motion sensor individually using ETS. The DX version offers a lot of new features, e. g. the presence simulation. The BA detectors, being able to switch lights, offer the possibility of integrating engineering rooms or storage rooms into the KNX system cost-efficiently.   *Contact: www.beg-luxomat.com*

AUDIO MODULE with KNX connection

BAB TECHNOLOGIE GMBH The AUDIO MODULE is a premium multi-room audio player which is alternatively available with a line-out or integrated amplifier. As a DIN rail device, installed in the distribution board, it is protected against theft and manipulation. This makes it ideally suited for commercial properties such as hotels. Thanks to the direct KNX connection the AUDIO MODULE can be easily integrated into KNX installations and allows on-site control with KNX sensors as well as control through building visualisations. It can play audio from local media servers as well as stream internet radio stations and Spotify contents. The analogue audio input allows playback from external devices such as CD players. *Contact: www.bab-tec.de*

New KNX CC controller

BARTHELME LED SOLUTIONS With the new CHROMOFLEX PRO KNX CC Barthelme LED Solutions offers users a comfortable LED management with constant current as an alternative to the controller version with constant voltage. The new KNX controller can be operated with adjustable currents up to 1050 mA per channel. Maximum safety is ensured with integrated protection against short-circuits, reverse polarity, overloading and overheating. The associated ETS software enables simple and intuitive handling in a variety of applications for 1 – 4 channel light solutions. Suitable CHROMOFLEX KNX software libraries are freely available on the Barthelme website.
Contact: www.barthelme.de/content/en

VAV controller and actuators

BELIMO AUTOMATION AG The VAV-Compact is a cost-optimised unit comprising differential pressure sensor, controller and actuator, and has been setting standards in volumetric flow control in rooms and zones since 1990. The VAV-Compact KNX can be directly linked to KNX TP networks and convinces with a comprehensive range of communication objects. This allows the control of the operation of the air conditioning according to the effective demand. In addition, a sensor (0 – 10 V) or a switching contact can be connected. The KNX product range includes VAV controllers, actuators for air dampers and actuators for control valves (2-/3- and 6-way). *Contact: www.belimo.eu*

KNX Project Tool

BEMI AUTOMATION KNX Project Tool offers a unique solution to create, manage and follow up your KNX projects. On top of that, a detailed function description and actuator report to hand out to your clients is easily generated. Visually create your project by drag and drop KNX devices onto your drawing board, in the same way you can add functions you are selling to your client. The tool will automatically calculate costs and programming time.
Contact: www.knxtool.com

New BILTON KNX LED dimmer

BILTON INTERNATIONAL GMBH Smaller design, more power – that is offered by the new LED dimmer by BILTON. The name BILTON represents innovation "Made in Austria". A further proof is the new KNX LED dimmer Basic. The redesign does not only convince because of its small design – which is therefore ideal for areas with difficult access – but it also provides more power with 2.5 A per channel. In addition, the new BILTON LED dimmer also offers the option to control the device using a test button – and this without a bus connection. Additional benefits include the easy scene and sequence control, fast programming time and the selection of the dimming curve.

Contact: www.biltongroup.com/en

KNX TOUCH & IP VIDEO DOOR PHONE

BLUMOTIX Blumotix has designed a new high performance touch panel dedicated to home automation. BX-T10IP is a device born to be your Internal IP Video Door Station and your KNX Supervisor. Multi-finger capacitive touch, Android operating system supported by 1 GHz dual core microprocessor, and a Giga Ethernet network interface. New sound system based on bass reflex technology obtained from the wall mount cavity enables you to reduce noise and echo in IP Door phone application. BX-T10IP is an open device so you are free to install any available Android application. *Contact: www.blumotix.com*

KNX Touch-Display

BMS BUILDING MANAGEMENT SYSTEMS To control the complete sun shading system in a compact way – that's why BMS has developed the new KNX Touch-Display. The 3.5" colour display with touch function is mounted on a standard switch box and communicates with the Quadra weather controller directly via KNX. Both the control and the display functions were particularly designed for this purpose. Thus the user is able to observe the current weather data as well as active alarms at any time. All eight sectors of the Quadra weather controller can be operated individually and limit values can be adjusted specifically to the user. Simply touch to activate cleaning and maintenance functions or to move the complete sun shading into a preferred position.

Contact: www.bms-solutions.de

Comprehensive KNX sensor range
for functional buildings with top functionality

BUSCH-JAEGER ELEKTRO GMBH Busch-Jaeger now offers comprehensive solutions in commercial buildings including security with movement detectors; the right balance between heating and cooling with room temperature controller; fresh air from a new CO_2 air sensor; and push button connection. This complete KNX assortment consists of approved movement detectors, new room temperature controller with five gang universal input, air-quality CO_2 sensor incl. humidity and at least push button connection with integrated RGB LED per rocker switch. The entire KNX product range can be combined with ABB/Busch-Jaeger light switch ranges future® linear, Busch-axcent®, solo®, carat®, Busch-Duro 2000® SI and Reflex SI.

Contact: www.busch-jaeger-catalogue.com
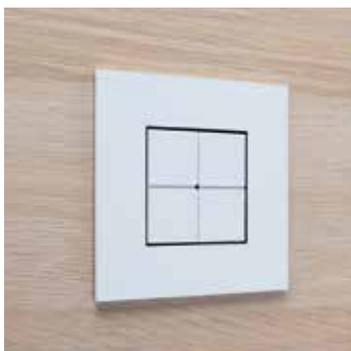
KNX collections of CJC in new flatline design

CJC SYSTEMS As the name already suggests, the 'flatline' is a very thin design of only 2 mm thickness. Two KNX collections, LARA and LOLA, are now available in this stunning unique flatline design. The LARA collection is a collection with square push buttons and the LOLA collection has small square flat push buttons (one up to eight push buttons). Each available with or without LEDs. Next to these two collections of KNX switches there is also a flatline series available for the VICTOR collection of cover plates for sockets / modules so that this flatline style can be integrated in the entire project. Like the other collections, this flatline edition is made out of aluminium and is available in more than 14 high-end finishes. *Contact: www.cjcsystems.com*

Living Emotions – KNX Glass Touch Sensor

CONTROLTRONIC GMBH Innovative technology and superior design. The unique flat touch sensor made of real glass with precisely ground edges provides innovative character in every room. A sensor detects proximity and activates the user interface. Depending on configuration up to seven touch icons light up (dimmable and coloured according to choice). Easy to understand and self-exchangeable icons (patent pending) allow purely intuitive operation and maximum flexibility. Extensive configurations can simply be carried out due to a user-friendly structured ETS product database without plug-in. The whole sensor is entirely powered via KNX connection.

Contact: www.controltronic.com

UCM/KNX2 Improved Comfort Intruder Alarm to KNX Interface

CYTECH TECHNOLOGY PTE LTD The UCM/KNX2, which connects directly to the KNX bus, is the 3rd generation KNX interface for the comfort intruder alarm/automation system. All doors, windows, motion, smoke and other sensors can be mapped to KNX objects to show real-time status. A KNX touch screen can show a virtual security keypad, which can be used to arm and disarm the security system. Intruder, fire, panic and other alarms can be mapped to KNX objects. KNX motion sensors can be used as virtual inputs for the alarm so that they can cause an alarm when the system is armed. The system includes conditional logic programming and scheduling, and allows KNX and alarm control by mobile Apps, SMS messages and telephone voice menu.

Contact: www.cytech.biz

HomeAmp4: 4-zone stereo amplifier with KNX and button control

DIALOGIC SYSTEMS A unique innovation for every smart home: this new Dialogic Systems 19-inch multiroom amplifier is directly controllable via bus and KNX systems with no ETS plug-in – as well as controllable by conventional buttons as a single amplifier. Especially handy: no external power supply required. The HomeAmp4's top features include automatic switching to the appropriate slave audio source 1 – 4 on detection of a channel signal. Plus ready-to-use plug-in software solutions for Wago, Beckhoff, HomeServer and HomeCockpit. Get in touch with the future. *Contact: www.home-cockpit.de/en*

New RGBW LED Dimmer

DINUY S.A. DINUY introduces a new four-channel, powerful dimmer designed for the control of RGBW LED strips. Suitable for LED strips with constant 12 – 24 V input. The four channels can be configured as: four independent channels, one RGBW channel or one RGB channel + one independent channel. High capacity, with 16 A per channel and a total combined output current of 32 A. Pulse Width Modulation (PWM) dimming technology. Output relay to control the power supply. Modular installation device and five modules wide. Several functions and parameters are available via ETS: dimming speed, scenes and sequences, supervision of over-current or over-temperature, minimum and maximum dimming level, soft dimming, colour mixture and much more.

Contact: www.dinuy.com/en

DIVUS System Manager

DIVUS GMBH DIVUS presents its new System Manager. The hardware-software solution is composed of a PoE+ capable managed switch and an innovative manager. Integrated into the network, it is the heart of a smart building and ensures a secure and stable connection between DIVUS devices. The software provides novel functionalities that will benefit the system integrator as well as the end-user: system-wide configuration for an easy and quick installation, system scan, system diagnostics and trouble-shooting support through automatically generated system reports, real-time monitoring and usage analytics. A first of its kind solution for a stable, secure and controlled network!

Contact: www.divus.eu

4 Channel LED dimmer– RGB / white

EELECTRON SPA The DL04A01KNX is a four-channel LED dimmer for constant voltage application at 12/24/48 V. Each channel can manage up to 70 W @ 24 V DC. Local control and signalling available on the product. DL04A01KNX can manage four channels independently or RGB / RGBW channels. Four module dimension and suitable for distribution box and DIN rail installation.

Contact: www.eelectron.com

Smoke detector with room controller

ELSNER ELEKTRONIK GMBH Salva KNX is a smoke detector tested according to DIN EN 14604:2005/AC:2008 with sensors for temperature, humidity and air pressure. Smoke is detected optically by the scattered light principle. Temperature variations are taken into account and the contamination of the chamber is monitored. Alarm is output locally/acoustically and also as bus telegram. Salva KNX can report smoke and act as a heat alarm. The unit carries out a self-test regularly and indicates faults locally and via the bus. In daily operation, Salva KNX is an ambient climate sensor which controls heating/cooling and ventilation. Other useful built-in features are, for example, the dew point calculation, logic gates and calculator modules.

Contact: www.elsner-elektronik.de
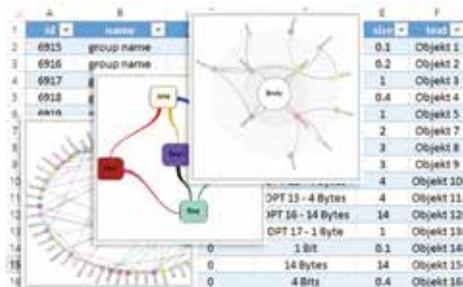
Free online ETS project tools

EMBEDDED SYSTEMS SIA Embedded Systems prepared a useful tool which can strongly extend ETS functionality and can be useful for any KNX professional. It is a free, online KNX project file parser. You can get a list of devices, their relations and visualise topology. You can also get metadata and filtering table with group addresses. This data can be exported directly into Excel via CSV or to Cloud (Microsoft Azure, AWS and others). This service will be expanded with new modules for preparing project documentation, labelling, visualisation and so on. *Contact: www.logicmachine.net*

HCM340 – Room Controller

EMT CONTROLS All-in-one room controller in compact DIN rail enclosure (just 2 MCB size) links KNX to multiple other systems. They are expandable with cascaded modules of choice (8 x 16 A + 8i, 12 x 16 A + 12 inputs, 12 x 16 A + 12 0 – 10 V outputs). Objects, group addresses and scenarios (trigger / executor) are configurable from built-in web interface. It also works as a KNX TP to IP converter or USB sniffer and comes with free iOS and Android mobile apps. HCM340 can connect to cloud systems to control your premises even when you don't have a static IP address. All functionality can be optional, to match the project budget. *Contact: www.emtcontrols.com*

Enertex® ProxyTouch KNX

ENERTEX BAYERN GMBH The ProxyTouch KNX is a capacitive touch sensor, which can be plugged behind surfaces as ceramics, wood and glass. It has three sensor panels in a plastic housing 210 x 140 x 12 mm and is impermeable to splash-water. The sensors are addressed together, individually or by wiping with double click gesture. Optionally there is an acoustic feedback and a cleaning mode with time lock. The reach of operation through the surface material, behind which the device is plugged is 25 mm. The sensors are robust against splash-water on the surface material. *Contact: www.enertex.de*

EBOX: beautiful, simple, effective

ERGO3 SÀRL New technologies open up paths for new possibilities in building automation. KNX control via iPad or iPhone – no problem, thanks to the user-friendly EBOX from ergo3. With this device, you have access to sensors for brightness, wind, precipitation, temperature and global solar radiation for controlling your solar shading as required. All this is just a download away with the Ergo3 App, free of charge from the App Store. The EBOX can do much more than this, however. You can program various scenarios, e. g. for when no one is home, for vacation time or for watching TV. Whether it be information, settings, timer, automation or weather – the functions of the EBOX are practically inexhaustible. *Contact: www.ergo3.ch*

FLAT presence detectors

ESYLUX GMBH The elegant FLAT presence detectors from ESYLUX are now available for KNX systems – in all colours and shapes and with a glass cover on request. Two separate output channels are used for lighting control. In semi-automatic mode, these channels can also be controlled separately using an external KNX button. If no one is present, the detectors are able to initiate an orientation light which can either be activated permanently or with a switch-off delay time. To enable energy-efficient switching of HVAC devices, a presence signal can be sent to the KNX system via an additional output channel. The detectors can be combined and then configured as either a master or a slave. *Contact: www.esylux.com*

EVN-KNX-4 channel-dim-actuator

EVN-LICHTTECHNIK GMBH The new KNX 4-channel dimming actuator from EVN is most suitable for LED-Unicolor applications. Due to its compact design, it offers a variety of application possibilities for different kinds of use. It allows various functions such as for example relative/absolute dimming, status report/failure report, 15 scenes for selecting, staircase lighting timer function, BUS recovery and reset function, selecting the present value or modification, switching/relative dimming via manual buttons. Furthermore the actuator has various safety functions such as for example short circuit/over-voltage/over-temperature protection available. *Contact: www.evn-lichttechnik.com*

DomiOP eBIS513

EXOR INTERNATIONAL S.P.A. EXOR International eBIS513 is an advanced KNX HMI device combining top performance with an outstanding design. The eBIS513 features a 13"3 widescreen TFT display with 1280 x 800 pixel (WXGA) resolution. JMobile, Exor International's software platform for monitoring and control, offers an innovative and efficient solution for the new requirements in home automation. The product supports the KNX protocol with IP and TP interfaces. Additionally the product adds support for the new OPC UA standard, both server and client and BACnet network (MS/TP and IP). The native gateway capability of JMobile makes this device a natural way to implement a IoT-level integration with the home and building control systems. *Contact: www.exorint.net*

Water management with KNX option

FRANKE AQUAROTTER GMBH The AQUA 3000 open water management system allows operators of large drinking water installation systems to enhance their efficiency in terms of both water and energy consumption. The goal is to achieve the best possible level of drinking water hygiene at every withdrawal point in the building. Limited resources are conserved and therefore CO_2 emissions are not produced. The Ethernet CAN coupler (ECC2) with an integrated web server and two supplementary modules helps with mobile controlling and monitoring of the entire drinking water installation inside the building. *Contact: www.franke.com*

LU approved KNX Cable

FS CABLES FS Cables KNX cable has been approved by London Underground for use on their transport system. Similar in construction to the standard two pair green cable, the LU version has undergone extensive redesign to meet the requirements of LUL 1-085 A3:2011 and is now suitable for installations in stations covered by Section 12, having been independently tested by BRE and 4-Rail Services. It is clearly identified from the standard cable with a white stripe along the jacket and comes with full batch traceability. Available from stock, the cable is held on 100 m, 200 m or 500 m reels and cut to length. We offer a nationwide next day delivery service as well as same-day deliveries into central London. *Contact: www.fscables.com*

GEZE IQ box KNX

GEZE GMBH The new GEZE interface module IQ box KNX allows GEZE IQ window drives to be directly incorporated in KNX building systems. Thus enabling a dialogue with other KNX-enabled components, such as push buttons and sensors. For example, all windows in a building can be closed at the touch of a button – simply and efficiently. If a sensor reports rain or increased CO_2 levels, the intelligent GEZE window drivers receive a signal to open or close via the IQ box KNX. The box also supplies the building management system with exact information about the drives – e. g. opening width, window position or any faults. *Contact: www.geze.com*

Gira KNX RF system: simple cabling, easily retrofitted

GIRA GIERSIEPEN GMBH & CO. KG Gira KNX RF uses 100 % of the universal KNX standard "KNX RF1. R S-Mode"; it allows access to the full functionality of the KNX system. This means that all KNX products available on the market can be seamlessly integrated into the system. Another advantage is that the KNX system with coupled wireless connection reduces the wiring effort considerably if the last routes are bridged to the KNX devices in each room wirelessly. This saves time and therefore expense. Via the KNX RF USB data interface in the form of a USB key the electrician can access a KNX installation wirelessly via radio from a PC or laptop, for addressing, programming and diagnosing via ETS5. *Contact: www.gira.com*

K-BUS room controller v2.0

GUANGZHOU VIDEO-STAR ELECTRONICS INDUSTRIAL CO.,LTD. The GVS Intelligent Room Controller is designed in small size and high integration level to keep the high stability and reliability of KNX systems. It is integrated with switch, dimming, shutter, fan coil control and dry contact function. Replacing the traditional RCU Room control box with it will save space and costs. It support outputs for RS485, TCP/IP, KNX and infinitely expands other functions. This actuator module can control heating, cooling, ventilation, lighting, fire or water alarm, emergency SOS button, etc. Model: AMRP-41/00.2

Contact: www.video-star.com.cn

New system easy from Hager

HAGER VERTRIEBSGESELLSCHAFT MBH & CO. KG With the easy system, Hager provides the latest in simplicity for implementation of smart homes with the KNX standard. The system consists of the TXA100 commissioning case with configuration server and WLAN adapter, the free easy App, a comprehensive set of actuators and the new Berker sensors. The way it works: The server is connected via bus terminals to the KNX installation and via the WLAN adapter to a tablet, smartphone or PC. The App is then used to configure by drag and drop up to 255 Twisted Pair components, and as many KNX radio components (RF), and to label them with clear names – the domovea visualisation is then also ready. *Contact:* www.hager.de

MicrowaveSensor(M/WS05.1)

HDL AUTOMATION CO., LTD HDL KNX sensor -M/WS05.1 includes four independent logic blocks and one combined logic block. Each logic block is combined with the condition of microwave sensor, lux, temperature, humidity, dry contact, external telegram value. Logical relationship for AND or OR switch, absolute dimming, shutter, alarm, percentage, sequence, scene, string (14 bytes) can be used as a control function. The sensor can be configured as the master and slave mode; it can report the current status of every condition, in order to adapt to different environmental requirements.
Contact: www.hdlautomation.com

KNX LED dimmer SR-KNX9501FA

HONGKONG SUNRICHER TECHNOLOGY LIMITED The SR-KNX9501FA is a DIN rail mounted LED dimmer with four independent output channels and KNX bus connection terminal to connect to KNX. The input voltage range is DC 12 V – 36 V, and each of the four channels can output 5 A with a total combined output current of 20 A. Designed with short-circuit protection, overvoltage and overtemperature protection, the dimmer features great safety and reliability. With built-in 1 data bit, 4 data bit and 8 data bit control, the dimmer offers switching, relative dimming, absolute dimming, scene control, staircase lighting, preset value or modifying preset value, status report and bus recovery functions for LED lights. *Contact:* www.sunricher.com

idderocloud

IDDERO Idderocloud is Iddero's new cloud-based remote access service. Idderocloud lets users control their Iddero KNX devices remotely from anywhere, without the need for fixed IP addresses or external DynDNS services, and without interfering with the home router's configuration. The service is available for IP-enabled Iddero devices, and can be set up in a matter of minutes. Once enabled, transparent remote access is possible from any location using a smartphone or tablet (Android, iOS, etc.) or through standard PC web browsers, as long as an Internet connection is available. All communications are fully encrypted and 100 % secure. The idderocloud service is provided completely free of charge. *Contact:* www.iddero.com

DMXBUS-K – GW612100

INGENIUM SL – BES KNX The new DMXBUS-K is the renovated and bidirectional communication gateway between the KNX protocol and the DMX 512 protocol. This device allows you to regulate each channel supported by the DMX protocol, being easily programmable through the project software ETS. Thanks to this gateway it is possible to develop the integration of a DMX device or system into a KNX home automation installation, and individually regulate each DMX channel in a simple way like any other KNX dimmer. It also incorporates new functionalities, mainly the possibility to program and execute up to eight scenarios and eight different sequences, as well as RGB and RGBW controlling. *Contact:* www.besknx.com

KNX universal air conditioning gateway

INTESISBOX IntesisBox presents the IS-IR-KNX-1, compatible with more than 40 different air conditioner brands. This gateway stands out as the only one in the market that offers control and monitoring of the system. The device is installed next to the air conditioner and sends commands using infrared codes. Thanks to a built-in infrared receiver, it can also capture the changes made by the user through their own AC IR remote controller and show them in KNX. Another feature of this gateway is its easy configuration, carried out through ETS using a simple plug-in. This configuration can be downloaded via USB or via KNX TP1. Moreover, the IS-IR-KNX-1 is powered directly from the KNX bus. *Contact:* www.intesisbox.com

iRidium lite

IRIDIUM MOBILE iRidium lite is a solution for fast project setup, part of iRidium 3.0 – platform to control the smart home: professional automation equipment, including KNX, A/V equipment and IoT gadgets. An automation project is configured directly on a control panel - the users' favourite mobile device. Automatic device search finds all equipment available to control in the network. Control modules for the equipment are downloaded from the store and the graphic interface is ready to use. A project is given to the user via iRidium Cloud. Users themselves can create scenes and schedules of equipment. For convenience, iRidium lite can be used in two modes: online and offline with optional iRidium Server working 24/7. *Contact:* www.iridiummobile.net

World's first KNX connection for Axis IP products

ISE INDIVIDUELLE SOFTWARE-ENTWICKLUNG GMBH From now on, the ise smart app KNX Axis connects to the KNX building system technology with the extensive IP portfolio of Axis Communications. Benefit from both systems, such as the KNX motion detector that starts close to the light as well as the recording of the camera when there is movement. Use the detection of the camera (even through glass) to see whether objects move (Motion Detection) or virtual line crossing (Cross Line Detection) and trigger scenes in KNX. Other third-party applications, which are also installed on the camera, can also be used to provide numerous other possibilities. *Contact:* www.ise.de/en

Temperature control panel

LEGRAND Legrand presents its new flush-mounted KNX temperature control panel: a 1.6" backlit display with four push buttons embedding a temperature probe. Used in combination with a KNX HVAC controller, it can manage different types of heating/cooling systems (FCU, heating/cooling valve, electric load, etc.) to display the ambient temperature, adjust the temperature setpoint and/or fan speed, select the operating mode. Especially designed for hotels, several catalogue items are available in line with the Legrand and Bticino aesthetic finishes (Arteor, Valena Life, Valena Allure, Axolute and Living Light). Data to be displayed and action from push buttons may be set to meet specific requirements. *Contact: www.legrand.com*

8-channel multi-function actuator

LIGHT CONTROL The New LC-A0816 is a multi-function 8-channel actuator, programmable with ETS to perform different tasks like switching loads, open and close shutters and blinds, drive valves operating in PWM and control two or four pipe fan coils. Each output uses bitable relays with 16 A maximal load. Block terminals are very wide to insert wires with a section up to 5 mm². The relays can be operated manually via a push button mounted on the front of the device, a green LED indicates the switching status of each channel. The power supply is provided from the KNX bus through TPUART2 that provides better performance in terms of switching speed. The protection class of the package is IP20 and it is designed for installation on DIN 35 mm.
Contact: www.lightcontrol-knx.com

Lithoss, upgraded KNX switch

LITHOSS NV Lithoss upgraded its KNX switch in combination with an interface towards a fully integrated KNX switch. The Lithoss integrated KNX switch is available in the well-known stylish Lithoss Select finishes. Finishes that generate a striking effect in both traditional and ultramodern interiors. Features: fully integrated KNX sensor, individual RGB LED feedback for each button, 4-8-12 button solutions, integrated temperature sensor, 1 bit commands: on/off toggle with short/long press, 1 byte commands (0 – 255/HVAC/value %), orientation light led function, connect external temperature sensor, sequences with different group addresses, scene management and easy setup (compatible with ETS4 and ETS5). *Contact: www.lithoss.com*

LGATE-902 – Universal Gateway

LOYTEC The LOYTEC Universal Gateway LGATE-902 with integrated graphical visualisation concurrently integrates KNX and several other systems. It also comes with two 100Base-T-Ethernet ports that can be operated in switch mode. A built-in firewall, a web interface for device configuration using HTTPS and separate IP networks on the two Ethernet ports (LAN and WAN) ensure network security. Local operation and override is provided by the built-in jog dial and the backlit display (128 x 64 pixels). L-GATE also supports connectivity to WLAN and MESH networks via LWLAN-800 interface and connection to EnOcean wireless devices via LENO-80x interface. *Contact: www.loytec.com*

MDT STR-0640.01 redundant rus power supply with diagnosis function

MDT TECHNOLOGIES GMBH The redundant MDT bus power supply has two integrated power supplies to increase the operation reliability if power, a fuse or one integrated power supply fails. This prevents loss times on the KNX site for the customer. The integrated controller with diagnostics function monitors group addresses, bus voltage, bus current, temperature, overload, bus traffic and all devices inside the KNX line by their physical address. If a device fails a message is released. Events like mains voltage failure/return are stored in a ring buffer. *Contact: www.mdt.de*

KNX MultiTouch & PB Pro

MERTEN GMBH KNX Multitouch Pro is an innovative touch interface to control temperature, blinds and lighting. Vertical or rotary visual design. The device recognises the direction of movement of the hand and activates one function without touching the device. No additional power supply. KNX Push-button Pro is a flexible device including one, two, three or four configurable by ETS. The selectable backlight symbols are visible by proximity with two colours available. New 'Express' settings to simplify the commissioning. Available in System M and System Design ranges. *Contact: www.merten.de*

Free visualisation for all users of EiPLAN

NAUTIBUS ELECTRONIC GMBH The new KNX visualisation EiVisu4 is free of charge for all KNX users who make their ETS projects with the Nautibus ETS App EiPLAN. EiVisu enables display and operation of a KNX system in a floor plan view. Lighting, heating, blinds and energy monitoring are supported. Moreover EiVisu can generate log files and send e-mails. EiVisu runs on a Windows 10 PC or tablet and can be connected via USB or routing to the KNX bus. And the best part is: the visualisation is already finished if you have created your ETS project with EiPLAN. *Contact: www.Nautibus.de*

NETx BMS Server allows KNX project extension by access control systems

NETXAUTOMATION SOFTWARE GMBH The NETx BMS Server offers new interfaces to access control systems VingCard, Kaba and Salto. Thereby an extension of KNX projects by the information of the above mentioned systems is possible. The NETx BMS Server retrieves the data from access control systems and forwards it to any clients for further processing. The Server supports the exchange of data between different fieldbus technologies and application-specific systems, whereby sophisticated building automation projects can be realised effectively. *Contact: www.netxautomation.com*

Smart building control

PEAKNX Streaming, lighting, energy and climate management, air quality and video surveillance – the KNX-based, comfort touch panel Controlpro, built by PEAKnx – the experts for intelligent building controls – transforms houses into individual homes. The Controlpro stands out with a quad-core processor, open software architecture based on Windows 10 Pro and a variable front panel design. Houses become multimedia centres: surfing, installing apps, watching TV, listening to music – the panel is a full computer running all Windows 8 and 10 applications. *Contact: www.peaknx.com/en*

New Movicon.NExT 3.0

PROGEA SRL Progea recently showcased the long awaited preview of the latest Movicon.NExT 3.0 release to offer users a cutting-edge product that features the most innovative technology and maximum usability. This version undoubtedly exalts the already renowned product for its superior quality. Movicon.NExT, based on the Automation Platform.NexT technology, is the modular.NET platform designed to make industrial software more open and scalable. This has been achieved by integrating functional modules that are capable of managing all enterprise-wide business needs from supervision to control, Historian modules, MES and industrial analysis.

Contact: www.progea.com

Envision touch 7" & 10"

PULSAR ENGINEERING SRL Thinknx products family is growing with the new line of all-in-one touch servers. Envision devices combine the comfort of a first-class touch panel running a customised user design with all the powerful features of a Thinknx server. Each Envision touch server is characterised by stylish high-quality materials: the screen with very high resolution and brightness grants an optimal user experience and enhances the richness of the customised graphics created with Thinknx Configurator. The anodised aluminum frame, available in four different colours, permits a perfect accommodation to the location where Envision will be installed. *Contact: www.thinknx.com*

KNX gateway for Revox

REVOX With the new KNX Gateway, the powerful multi-user audio system from Revox becomes part of the primary building automation system. Using the KNX Gateway, the Revox multi-user system can be controlled via KNX and vice-versa. The KNX Gateway has a powerful ETS database that can be downloaded from the Revox website. In the standard configuration the gateway operates a maximum of ten rooms with up to 50 commands each including feedback. The Gateway is housed in a 2 HP wide built-in enclosure. It can be operated with PoE, 12 –2 4 V AC or 12 – 30 V DC and is connected to the KNX system with a two-core cable. *Contact: www.revox.com*

ekinex® PLC with KNX interface

SBS S.P.A. EK-IA1-TP is a freely programmable PLC equipped with a KNX interface that supports all the KNX communication objects. It is programmed in the CODESYS® development environment which provides several programming languages according to IEC 61131-3. A dedicated configuration tool allows the mapping of the objects defined in an ETS® project and the realisation of complex logical blocks. Libraries are available for the realisation of complex functions in an easy and intuitive way. The device receives telegrams from the bus sent by KNX devices and sends telegrams on the bus after the processing of the previously programmed logical sequences. *Contact: www.ekinex.com*

homeLYnk & spaceLYnk logic controllers

SCHNEIDER ELECTRIC homeLYnk/spaceLYnk are multi-protocol (KNX, other systems) logic controllers to create KNX smart home and smart building solutions. They are web servers to design customisable user interfaces accessible through smartphone/tablet/PC to allow IoT integration (Sonos, IFTTT,...) and cloud-based secured remote access and data service. Customer can design stand-alone lighting control and energy management solutions (monitoring and control) or integrated through BACnet in BMS for high performance building Class A. *Contact: www.schneider-electric.com*

IP Control Center N 152 (V.3.0.0)

SIEMENS AG Besides automation functions the IP Control Centers offers the customer an intuitive, fully graphical visualisation of a KNX system via web-based end devices. Thanks to the Smart Editor a tailored design visualisation for smart phones or tablets can be made quickly and easily. Powerful application modules like an annual schedule program, data recording, trend chart presentation, scene and event control, logic functions and an alarm module are integrated. The alarm list or recorded data can be sent via email. Additionally, various multi-media applications can be controlled with IP commands via an IP interface. *Contact: www.siemens.com*

KNX products with UL certification

SIEMENS SWITZERLAND LTD. The Gamma instabus KNX product portfolio has been extended with new UL-certified products and thus enables complete solutions for the UL/NEMA market. The new products are installed in distributed 4 x 4 inch junction boxes and the KNX cable is connected via bus terminals. Devices are offered for intelligent room lighting, including state-of-the-art light switches and dimmers, as well as for sun protection, such as blinds and shutters. This means customers are provided with a complete range of Gamma instabus surface-mounted devices – from smart terminal boxes and the bus coupling unit to integration of switches from the i-system and Delta style lines. *Contact: www.siemens.com*

IR 180 Universal KNX

STEINEL VERTRIEB GMBH World first in modernisation: existing buildings are quickly brought up-to-date with the IR 180 UNIVERSAL KNX infrared sensor switch from Steinel Professional. Suitable for use in standard 2-wire systems, it is ideal for modernising existing electrical installations. The IR 180 UNIVERSAL KNX with a 180-degree angle of coverage and 20 m reach has a SuperCap energy storage system. Electrical isolation of the cable via a relay prevents interference from leakage currents. As a result, it can also switch LED lamps without any flickering as and when they are needed. Temperature and air humidity readings can also be transmitted.

Contact: www.steinel-professional.de

Edition4 PC102

T2M2 GMBH The Edition4 PC 102 wide touch panels, which allow the user the change towards multi-touch and computing technology, are the logical development of a classical concept for the sophisticated housing market. The success of this concept was already realised in the Edition3 15.6" touch panels. Next to a powerful computing unit, the integration of KNX is also possible, which guarantees an easy connection to the BUS. All in all, a powerful T2M2 touch panel connects itself with the possibility to easily integrate this in flush-mounted sockets by various manufacturers. *Contact: www.en.t2m2.de*

Slimmest intelligent 640 mA KNX power supply

TAPKO The TAPKO IPS640 outperforms competitors on both efficiency and size, delivering the same power performance at half the usual footprint. The slimmest on the market at only 2 modules (35 mm), this intelligent 640 mA KNX power supply minimises costs as more KNX devices can be mounted on a single DIN rail. A user interface shows extensive diagnostic information (e. g. voltage, current, overload) that improves flexibility and usability via an additional KNX node. Remote-controlled functions, such as resetting a line, are integrated and all functions can be controlled/fine-tuned using a set of parameters. Also available as OEM. *Contact: www.tapko.de/en*

pureKNX switch for smart home

TCI GESELLSCHAFT FÜR TECHNISCHE INFORMATIK MBH The pureKNX switch is a touch switch and complements the pureKNX series of tci. Across the series it represents the simple but clear operating concept: four button areas in the corners, a touch area in the centre and a control ring, for dimming or setting the room temperature. The function of each operating zone is freely parameterisable. For a high level of operational safety different confirmations are possible: optical (color change), acoustic (clicking sound) or tangible (vibration). To match the interior the touch switches are available in black, white or in individual colours (RAL). *Contact: www.ambiento.de/en*
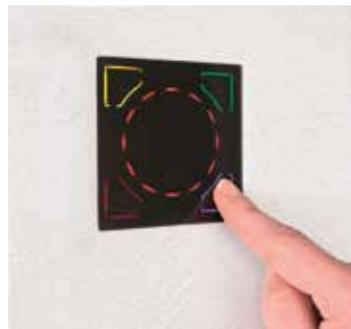
Flush-mounted i-Pad Frame

TENSE TOP DESIGN SWITCHES TENSE has launched three types of iPad frames in eight metal finishes: flush-mounted with colour LED background light, flush-mounted without background light, wall-mounted, easy to install, very stylish, highly innovative and first-class design.   *Contact: www.tense.be*

KNX IP Router

THEBEN AG The KNX IP router from Theben connects the KNX network with Ethernet, and thereby provides convenient access from the PC to the KNX network. It indicates power failures on the KNX bus (KNX IP service) and allows firmware updates. Via Unicast, up to ten devices can communicate with each other. For visualisations etc., five tunnelling servers are available. Power supply is available via bus voltage or via PoE. The KNX IP router can be used as an interface or as a line coupler. The IP router supports the complete filter table for all main groups.   *Contact: www.theben.de/en*

Thinka KNX

THINKA B.V. Thinka connects KNX to Apple Homekit allowing home owners to interface their home in new and exciting ways, such as Siri, geofences and Touch Id. Configuration is done by importing an ETS4 of ETS5 project file. Using the Thinka setup app from the Appstore, home owners can very easily configure Homekit on their iPhone or iPad. Accessories can be renamed for better Siri performance and can be moved to different rooms. A home owner can use the app to create zones and scenes as well. Some examples of Siri are: "turn off all lights in the living room", "turn on the coffee machine", "set the kitchen light brighter" or "activate good morning".

Contact: www.thinka.eu/en

New trivum FLEX: the SC044

TRIVUM TECHNOLOGIES GMBH trivum technologies expands its FLEX series. The new SC044 Multiroom Player offers four line-in, a 4-way FM tuner and four independent streaming clients for four zones. The trick: an extra subwoofer output and trigger port for each output, for driving external amplifiers for even richer sound. The mounting is very easy and can be done both on the ceiling, wall or shelf. The SC044 can be controlled via the trivum 7" TouchPad, the trivum app, a web browser or via the KNX environment in which the SC044 can be integrated bidirectionally. With the new SC044 the new MusicCenter v9 software is delivered. Easier to use, easier configuration and numerous new features make the new software generation a must-have.

Contact: www.trivum.com

u::Lux Switch KNX-TP

U::LUX GMBH Through its high-resolution colour graphic display, the intelligent room controller "u::Lux Switch" operates networked building technology in an individual and comfortable way. Four haptic keys with pressure point and RGB-LEDs ensure an intuitive operating experience. The switch is configurable without plug-in directly in ETS, additional components are not required. Thanks to the KNX-TP connection the "u::Lux Switch" can be easily and time-effectively integrated into the standardised KNX system, even in demanding projects. It's combinable with nearly all conventional 55 mm switch ranges and will be available from 3rd quarter of 2016.   *Contact: www.u-lux.com*

Memo KNX Time/Astro Switch

VEMER SPA Memo KNX can manage events depending on time and geographical position. This time switch, in three DIN rail housing (54 mm), operates up to nine relay outputs (one inside the product, up to eight in additional devices RX4) and can be connected to a GPS receiver (GEO-1) to get the geoposition and the exact time. There is a replaceable back-up battery (ten years duration) to save date and time. Each output can be used as a time programmed output (with daily/weekly/monthly/yearly programs) or as an "astronomic" output (operation based on sunset and sunrise time calculated every day according to the geographic position). All the functions and the programming details can be integrated in KNX system by the KNX-TP connection.

Contact: www.vemer.it

New KNX 340 mA and 640 mA power units

VIMAR S.P.A. The new power units for bus systems are equipped with a de-coupling coil and an auxiliary output. This provides a voltage of 30 V DC that can be used to connect an additional bus line via a decoupling coil. The power units are self-protected against short circuits (thanks to a voltage and current regulator) and ensure a power supply even in the event of brief mains failures provided they do not exceed 200 ms. It is recommended to always have a safety switch for the electric power supply circuit of devices 01500.2 and 01501.2.

Contact: www.vimar.com/en

Sense by Vitrum Design

VITRUM Sense is the latest release by Vitrum Design, the light switch which combines innovative, recyclable materials and contemporary touch technology. Shape, light and sound get together to create an unprecedented user experience: the buttons' design encourages the most natural action of the fingers on the commands, while all gestures are followed by the feedback of the luminous circle and the sound which confirms the execution of the command and the system's state (ON/OFF mode). Sense can be used not only to control lighting, but also home technology such as blinds and heating. The device is easy to install on standard commercial wall boxes and is fully compatible with KNX and many other systems.   *Contact: www.vitrum.com*

BAline KNXMCM: flexible room automation

WAREMA RENKHOFF SE The control system WAREMA BAline makes room automation flexible using a modular approach and allows different systems to be put together individually – based on the individual device family. The basic module KNXMCM allows the integration of WAREMA BAline into a KNX bus system. Here, up to eight BAline extension modules (MIOs) or consumers with different specific functions can be connected – for example sun shading control systems, DALI, SMI, valve controls or universal inputs. What makes this product so special is that the users can program the applications as they wish. *Contact: www.warema.com*

KNX PowerSupply USB 367

WEINZIERL ENGINEERING GMBH The KNX PowerSupply USB 367 is a 640 mA power supply with high efficiency and a small footprint of only 4 modules (72 mm). The device features a fully integrated USB interface (connector: micro USB), bus choke and additionally provides an output for auxiliary power. The integrated KNX node monitors output current, bus voltage and the temperature in the enclosure. Furthermore, the device features logic and timer functions. The configuration is done with ETS. An easy to read OLED display on the front panel enables you to display the operating parameters locally on the device. *Contact: www.weinzierl.de*

Iswitch by Yonnet

YÖNNET Yönnet is again taking the stage with a new product which has drawn a lot of attention at ISE Amsterdam at the KNX booth and in Frankfurt during L+B. The latest self-developed product of Yonnet is a KNX switch. It is outstanding due to its brilliant design as well as its functions. Iswitch has integrated light and temperature sensors and in different button configurations from one button up to 12 buttons. There are two models: with VATN display and without. One switch offers a perfect touch sensation, so the traditional customer will be more than satisfied. In addition, the unit is only 12 mm thick. *Contact: www.yonnet.com.tr/Eng*

Z41 COM

ZENNIO Complying with minimalist aesthetics and with the control capabilities of Z41 family (up to 96 functions available), Z41 COM allows a complete communication in smart homes, thanks to the integration with Zennio GetFace® video intercom system, including microphone and loudspeakers, as well as IP cameras of several manufacturers. All these features are added to the current remote control from smartphones and tablets through the free mobile app Z41 Remote. It includes additional audio output for auto-amplified loudspeaker (not included), USB port for configuration download and unique dual Ethernet port connector to isolate two different LANs. Plug&play system without additional configurations. *Contact: www.zennio.com*

National Groups

KNX Argentina at Buildgreen International Expo

ARGENTINA Focoussing on enhanced LEED certification and energy efficiency in smart buildings, KNX Argentina and the KNX training centre FACTUM participated in the Buildgreen International Conference and Exposition, organised by the Argentinian Green Building Council. Amongst top representatives from the industry, KNX was the most prominent technology, thanks to the unique advantages the standard provides.

Contact: *Augustin Abdala | augustin.abdala@knxargentina.com*
             www.knxargentina.com

Huge crowd at Buildgreen Expo

Robert Marzy, President of KNX Austria

General Assembly introduces new board of KNX Austria

AUSTRIA KNX Austria organised its 2nd General Assembly and presented its newly elected board. With Robert Marzy (Hager) as President and Rainer Breineßl (Euro-Unitech) as Vice-President, the new direction of KNX Austria was defined. The subsequent KNX Austria Journal and several technical magazines featured the numerous advantages of the worldwide STANDARD compared to propriety systems.

Contact: *Robert Marzy | robert.marzy@hager.com*
             www.knxaustria.at

KNX Belgium present at IoT Convention in Brussels

BELGIUM KNX Belgium participated at the 1st international Internet of Things Convention in Brussels on June 8th. Being the centre of attention at Light + Building 2016, the seamless interfacing between KNX and the Internet was also the highlight at this conference. Many visitors showed great interest in the international standard for home and building control and visited the KNX booth for more information.

Contact: *info@knx.be | www.knx.be*

KNX as the highlight at IoT Convention in Brussels

KNX is highlighted in CasaE BASF

BRASIL KNX Brazil is proud of an unprecedented achievement in Latin America. Thanks to a partnership with BASF, manufacturers and integrators from KNX Brazil worked together to deliver a model home for sustainability and energy efficiency, named CasaE. This project is certified as LEED GOLD by the GBC and realised by ABB, Schneider, Phillips, Jung, SBus, Hager, Smart-Homes, Comfortclick and AZHome.

Contact: *Alex Frazatti | executivo@knx.org.br | www.knx.org.br*

KNX Brazil and BASF raising the awareness of KNX

KNX China at ISH China

CHINA National and International KNX Members created a new chapter in the continuing success story of KNX China – the participation at ISH in Beijing. The fair took place from May 30th till June 1st and attracted many visitors, especially from the field of HVAC. Besides the prestigious booth at the New China International Exhibition Center, the KNX seminars were the main attraction of this fair.

Contact: *Shen Pu | info@knxchina.org | www.knxchina.org*

KNX Seminar and Expo a major success in China

KNX booth at AMPER

KNX Czech Republic on the rise

CZECH REPUBLIC 2016 is destined to be the year of KNX Czech Republic. The success of the first participation at AMPER, the biggest national fair for electrical trade, as well as the following workshop for KNX beginners, exceeded all expectations. Before capitalising on its full potential, KNX Czech Republic has already planned its next activities, which will further impress the community.

Contact: *Josef Kunc | sekretar@knxcz.cz | www.knxcz.cz*

Active Spring 2016 for KNX Finland

FINLAND The figures speak for themselves: more than 3,000 registered visitors at the major exhibition SähköTeleValoAV, over 500 participants at the national KNX Award and the opening of the 6th KNX Training Centre. These are only a few of the many milestones, which have been achieved by KNX Finland in 2016. The future holds great expectations, especially for the upcoming KNX Road Show in seven locations.

Contact: *Johan Stigzelius | johan.stigzelius@knx.fi | www.knx.fi*

KNX Award as opening of Exhibition in Finland

KNX France grows day by day

KNX France continues to grow

FRANCE After the accession of big names in electrical construction such as Philips, Somfy and Legrand, two new members joined KNX France: CGED and Konexion. In addition to manufacturers and distributors, KNX France was also happy to welcome the University of Rennes and the IUT of Nimes as new members, making it clear that education and training are key to sustainable success in the market.

Contact: Amel Karim | contact@knx.fr | www.knx.fr

KNX Hungary presents KNX City with HuGBC

HUNGARY KNX Hungary and HuGBC (Hungarian Green Building Council) are working together and last November a special conference was held by HuGBC for HVAC professionals on modern solutions for buildings and cities. KNX City was presented at the event as a solution for the challenges of modern cities. More than 100 participants attended the event, making the conference a huge success for KNX Hungary.

Contact: Zoltán Balogh | bz@berker.hu

Exciting conference (Picture by CSilla Katona)

KNX Italy Booth and the 'KNX Smart Home'

KNX Italy at MCE ExpoComfort

ITALY More than 155,000 visitors make MCE ExpoComfort one of the leading fairs for home and building control, energy efficiency and renewable energy in Italy. The 100 m² booth of KNX Italy drew a lot of attention and was used for networking opportunities by the Italian KNX Professionals. The main feature of the booth was the "KNX Smart Home", designed by the Politecnico University of Milan.

Contact: segreteria@konnex.it
www.knx.it

KNX Japan wins at ECO HOUSE & ECO BUILDING EXPO

JAPAN KNX Japan successfully participated at ECO HOUSE & ECO BUILDING EXPO, Japan's biggest fair for building control solutions. With the support of various manufacturers, KNX Japan made the participation at this fair a major success. One of the highlights was a prize draw with an ETS Professional license as the main prize and congratulations go to Yoshitaka Abe for winning this license.

Contact: Takayuki Shintani | info@knx.or.jp | www.knx.or.jp

KNX Japan actively pushes KNX in the market

KNX IoT plays a leading role in Korea

KOREA KNX Korea is happy to announce that its new secretary: Martin Han from the company InTheCore, a KNX IoT service provider, is now taking care of the activities of KNX Korea. Thanks to Martin Han's involvement in KNX, his focus on IoT and support from all members, the KNX National Group can count on a great future, and will drive the direction for home and building control in Korea.

Contact: *Martin Han | info@knx.or.kr | www.knx.or.kr*

Martin Han showing KNX in action

KNX Luxembourg celebrates 5th anniversary

LUXEMBOURG Concluding 2015 with the first National Energy Efficiency Award, KNX Luxembourg is now looking back at five years of continuous growth and success. The Energy Efficiency Award selected a winner in both "residential" and "commercial" categories, thereby giving even more to celebrate at the 5th anniversary ceremony. KNX Association congratulates the winners and KNX Luxembourg.

Contact: *Alphonse Massard | info@knx.lu | www.knx.lu*

Energy Efficiency Award Ceremony and winners

KNX Mexico creates a sustainable future

MEXICO KNX Mexico has expanded its influence by cooperating with the Instituto Tecnologico de Estudios Superiores de Monterrey (ITESM), one of the most prestigious universities in the country. The cooperation includes lectures at the campus, organising events, training teachers and support for PhD students. This not only raises the reputation of KNX, but also paves the way for a sustainable future.

Contact: *Maribel Pacheco | info@knx.mx | www.knx.mx*

KNX Mexico cooperates with ITESM

KNX Netherlands gets active about security

NETHERLANDS In March 2016, the Dutch KNX community discussed developments regarding security and it turned out that this topic is a broad concept. Whether it comes to burglar and fire protection, or the protection of networks and data traffic, KNX and the KNX Professionals bring together two seemingly separate worlds, being home and building control and security, with clever products and integration.

Contact: *Rob van Mil | info@knx.nl | www.knx.nl*
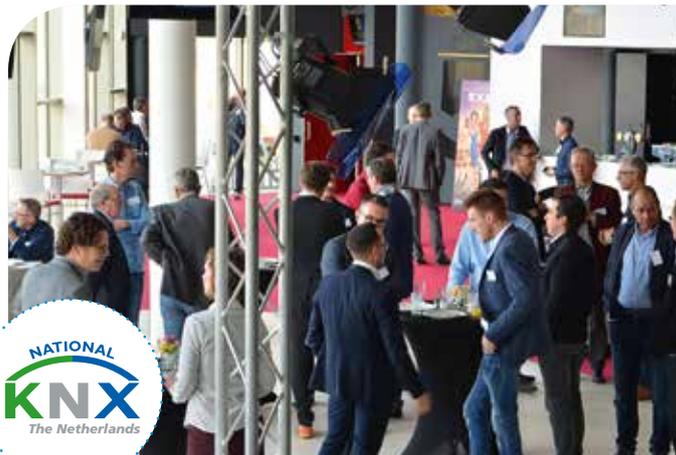
Security and KNX - a big topic in the Netherlands

Jury of the KNX New Zealand Awards

KNX New Zealand Day 2016 awards the best

NEW ZEALAND KNX New Zealand held its successful "KNX Day" in Auckland. This special day included an exhibition and a concurrent conference at which the main topics of KNX were addressed. However, the highlight of the KNX Day was the award ceremony of the first KNX New Zealand Awards, which recognised the best projects, and also the best new KNX product of the year. KNX Association congratulates all winners!

Contact: Colin Price / info@knxnz.org /www.knx.org.nz

KNX Norway succeeds at Eliaden

NORWAY Eliaden, the biggest fair in Norway for industry, energy and electrical installation/construction, is an exciting combination between of a source of inspiration and a professional arena. Taking place at Norges Varemesse in Lillestrøm from 31th May to 2th June, KNX Norway had a stand close to the entrance. The fair was a great success, with the highest numbers of visitors ever on Wednesday 1st.

Contact: info@knx.no | www.knx.no

Eliaden once again a huge success for KNX Norway

KNX Poland brings the STANDARD to the people

POLAND On the 9th June, Gliwice in the Polish region Silesia was host city for the first regional KNX Poland conference dedicated to installers. Exceeding all expectations, 120 participants attended the event, underlining the big potential of KNX all over Poland. Proven by this success, the next events in other regions have already been planned, such as in Wroclaw, Krakow, Gdansk and Poznan.

Contact: Jan Worobiec | jan.worobiec@targetpress.pl
             www.knxpolska.pl

Regional conference attracted 120 participants

KNX Portugal booths are hottest spot of Tektónika

PORTUGAL The largest Portuguese Building and Construction Fair took place from May 4 – 7 in Lisbon. Not wanting to miss this opportunity, KNX Portugal was present with several booths. Due to the many novelties of KNX, the KNX Portugal booths were actively approached by thousands of visitors. Proven by this success, KNX Portugal impressively showed that building automation with KNX is the right choice.

Contact: Rui Horta Carneiro | rhcarneiro@agefe.pt | www.knx.pt

KNX booths at Tektónika

First National Conference an outstanding success

Setting the pace:
First KNX Conference in Romania

ROMANIA Over 200 attendees participated in KNX Romania's first National Conference. Seeking to answer the question "Why building automation in Romania", leading names from the local industry, as well as international speakers highlighted solutions for "green" buildings. Business networking, the latest industry trends, new developments, an exhibition and a prize contest rounded up this impressive event.

Contact: *Rafael Marculescu | presedinte@knx.ro | www.knx.ro*

Spring PlugFest –
Light + Building Edition

RUSSIA More than 100 specialists took part in the 5th PlugFest on May 25th May. Due to the outstanding success of the previous PlugFest, this anniversary edition attracted 14 companies to present their KNX solutions. Following the special "Light + Building Theme" all companies showcased innovative products, which had been presented at Light + Building 2016.

Contact: *Andrey Golovin | golovin@konnex-russia.ru*
www.konnex-russia.ru

Anniversary PlugFest a major success

KNX Spain at Intelligent Buildings Congress

KNX Spain participates
at Intelligent Buildings Congress

SPAIN The "Intelligent Buildings Congress" is a forum addressing the concept of intelligent buildings from a holistic and multidisciplinary point of view. For two days, experts from various sectors discussed their views on the best possible technology solutions and systems in buildings. KNX Spain participated with a booth and in one of the round tables that dealt with trends of IoT in intelligent buildings.

Contact: *Michael Sartor | info@knx.es | www.knx.es*

KNX at Swedish Skills
for Electrical Installation

SWEDEN For three intense days, more than 200 young people competed in 40 different disciplines. Among 22,000 visitors the Swedish King, Carl XVI Gustaf, visited the disciplines and took part in the prize ceremony. Six strong contenders competed in KNX, and Robin Stattin from Kramfors became the very proud winner, who will represent Sweden at the WorldSkills Competition in Abu Dhabi 2017.

Contact: *Jan Hammersköld | info@knx.se | www.knx.se*

Robin Stattin wins ETS5 Professional License

KNX Swiss at the KNX IoT city

Light + Building Tour 2016

SWITZERLAND For the third time, KNX Swiss invited its members to join the excursion to Light + Building 2016. As KNX Swiss took care of the travel and accommodation, the members of KNX Swiss could lean back and enjoy a nice trip as well as the highlights of the fair, thanks to a special VIP tour in the KNX IoT city. There is simply no easier way to exchange knowledge and learn about the novelties of KNX.

Contact: René Senn | knx@knx.ch | www.knx.ch

KNX UK welcomes new board members

UK KNX UK is delighted to announce the election of four new board members following this year's AGM at the British Library, London. Mark Gedrych of Baulogic, Jon Payne of Entech, Paul Jones of BEG and Neil Grant of Harris & Grant will each be serving a term for the association. With a new board, KNX UK is all set for further growth in the UK, which will be of benefit to the whole KNX Community.

Contact: Tara Gartland | admin@knxuk.org | www.knxuk.org

Mark Gedrych   *Jon Payne*   *Paul Jones*   *Neil Grant*

Strong team of KNX USA at LIGHTFAIR International

KNX USA at LIGHTFAIR International in San Diego

USA With a strong presence, KNX USA participated at LIGHTFAIR, one of the world's largest architectural and commercial lighting trade events. Not only KNX USA, but also visitors to the show, confirmed that KNX is relevant for the fledgling US market and that more and more professionals, including many builders and systems integrators, are prepared to embrace KNX technology.

Contact: Marc-Antoine Micaelli | info@knx.us | www.knx.us

KNX Userclub / Professionals

KNX Belgium offers "new format" network meeting

BELGIUM The first "new format" network meeting by KNX Belgium was a huge success. About 75 KNX Professionals were informed about new trends and products on the theme of innovation. The attendees were very pleased with the combination of engaging speakers and interactive speed dates, proving the importance and added value of KNX Belgium's network for professionals in home and building automation.

Contact: Hannelore Verdonck | info@knx.be
                    www.knx-professionals.be

Networking Meeting for the KNX Professionals

KNX Professional meeting in Schorfheide near Berlin

Think tank for creative minds

GERMANY The program from the KNX Professionals Germany at the annual meeting during the summer was sophisticated. Statements around the topic „Intelligence from the green cable", building control, variety for the home control, enjoying music, smart visu server – platform for the home (IoT – Internet of Things) and electronic access management were presented and discussed.

Contact: Dirk Müller | info@knx-professionals.de
                    www.knx-professionals.de

KNX Professionals eager to learn about IoT

NETHERLANDS The Internet of Things (IoT) will form a future-proof concept with KNX was the message during the KNX Netherlands network meeting on 21st June. More than 100 KNX Professionals gathered to experience the combination of KNX and IoT being a reality already. Explanations about the new KNX web services and the interesting product presentations on KNX products making a connection with IoT, were highly appreciated.

Contact: Ineke van Erp | info@knx.nl | www.knx-professionals.nl

Speeches and product presentations at KNX Meeting

KNX Userclub France gets "Social"

FRANCE As a reaction to the growing need for support by the KNX community, KNX Userclub France started a new Facebook group, allowing the French community to support each other. This group follows the successful example of other KNX National Groups and Userclubs. To become a member, join this group under the following link

https://www.facebook.com/groups/KNXUserclubFrance

Contact: Amel Karim | contact@knx.fr | www.knx.fr

KNX Userclub France on Facebook

KNX Userclub Hong Kong finalises registration

HONG KONG HDL, Suffice and TÜV Rheinland are the proud founding members of the fully registered KNX Userclub Hong Kong, creating a dedicated platform for KNX in the special administrative region of China. Having well-known companies on board already, the KNX Userclub Hong Kong is destined to have a bright future with many activities.

Contact: John Lau | john_lau@suffice.com.hk

First KNX Forum in Hong Kong

KNX Userclub Hungary at CONSTRUMA in Budapest

HUNGARY CONSTRUMA is the leading professional exhibition of the Central-Eastern European region in the field of construction and automation. Taking this opportunity, KNX Userclub Hungary presented the worldwide STANDARD for home and building control to visitors. Fitting perfectly with the theme of energy efficiency and comfort, KNX positioned itself as the ideal technology for the present and the future.

Contact: Bate Gyorgy | info@installateur.hu | www.installateur.hu

KNX Userclub Hungary preparing for CONSTRUMA

KNX Training at IoT Academy in Korea

KOREA InTheCore, a KNX IoT service provider in Korea, introduced the IoT Academy with a certified KNX Training Centre at Pangyo IoT Gallery, in the area of Seoul. The certified KNX training is conducted by the KNX Userclub Korea, which not only spreads the knowledge of KNX, but also emphasises the many opportunities delivered by IoT Solutions for KNX.

Contact: Ik-Hwan Seo | knxkorea@knxkorea.com

KNX Training at the IoT Academy in Seoul

KNX Userclub Lebanon at "7th Build It Green – Seminar"

LEBANON KNX Userclub Lebanon was invited by EcoConsulting to participate in the "7th Build It Green – Lebanon Seminar". This seminar hosted 25 workshops and various exhibitions. One workshop was fully dedicated to KNX and hosted by the KNX Userclub Lebanon. The workshop was attended by 25 architects, engineers and contractors, thereby contributing to the overall success of the whole event.

Contact: *Hrayr Dantziguian | knx-userclub-lebanon@sodetel.net.lb*

Hrayr Dantziguian explaining the benefits of KNX

KNX Userclub Malaysia pushes KNX at ASC 2016

MALAYSIA Thanks to the continuous activities of KNX Userclub Malaysia, KNX is the technology used for the skill of electrical engineering at ASEANSkills Competition 2016 in Malaysia. As a major sponsor, KNX has been visible all over Kuala Lumpur, such as on subways, banners and commercials. Thanks to the support of KNX Userclub Malaysia, the upcoming competition is destined to be a great success.

Contact: *GP Chandran | gpchand@zmc.net.my | www.knx.org*

KNX sponsor at ASEANSkills Competition 2016

Start@KNX

Are you looking to expand your knowledge about KNX? "Start@KNX" offers an overview of the various training options, accompanying material and identifies how teaching materials and methods can effectively be used in order to increase knowledge about KNX. Find all info at

https://start.knx.org

Start@KNX

KNX Secure

The new KNX Secure pages offer you all information and material about security measures, which are implemented in the KNX Standard. KNX Secure guarantees you the highest security, which is available in the market for home and building control. *https://KNXsecure.knx.org*

KNX New Training Centres

Advantis Soluções em Eletricidade
Brazil
leandro.oliveira@advantiseletricidade.com.br
www.treinamentoknxbrasil.com.br

Artman Smart Energy Solutions
Iran, Islamic Republic of
roozbeh2004@gmail.com
www.smart-buildings.ir

Bergen Videreutdanning AS
Norway
lh.bevi@gmail.com
www.bvu.no

Building Automation Intelligence
Bulgaria
christodoulos.spagakas@gmail.com
www.batiknx.com
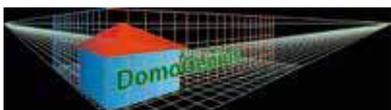
DomoGenius Formation – Nice
France
xavier.blanca@domogenius.fr
www.domogenius.fr/formation-domotique

E-Necker
Austria
gasper.pirnat@elektro-pirnat.si
www.e-necker.at

Elektro Pirnat Miroslav SP
Slovenia
info@necker.at
www.elektro-pirnat.si

freeDOM
Spain
samuel.ferrero@freedomingenieria.com
www.freedomingenieria.com

Hager Electro B.V
Saudi Arabia
frederic.tambe@hager.com
www.hager.com

IKNX Engineering
Spain
antonio.molero@iknx.es
www.iknx.es

KNX Romania
Romania
vicepresedinte@knx.ro
www.knx.ro

Oosterberg B.V.
Netherlands
peter.meijers@oosterberg.nl
www.oosterberg.nl

Smart Building Technologies
New Zealand
aleksandar@SmartBT.co.nz
www.SmartBT.co.nz

Smart Talent
Chile
vcbottner@yahoo.es
www.smarttalent.cl

SYNTRA Limburg
Belgium
patrick.delocht@syntra-limburg.be
www.syntra-limburg.be

Turun Kaupunki Ammatti-instituutti
Finland
ville.alava@turku.fi

UPEC
France
samer.mohammed@u-pec.fr
www.iut.u-pec.fr

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www.supsi.ch/dti

Universidad de Cordoba
Spain
fvazquez@uco.es
www.uco.es/eps

KNX News

At the light+building fair the latest innovations were shown at the KNX IoT city. You can find out what's new in the flyer KNX News with topics KNX IoT, KNX Secure and ETS Inside. The KNX News flyer is now available in 13 different languages; you can find it in the downloads section of the KNX website: *www.knx.org* (Downloads / flyers).

KNX News
KNX Internet of Things,
KNX Secure,
ETS Inside

KNX at International Conferences and Fairs

SmartHome Award 2016

GERMANY The SmartHome Initiative Germany honoured the best and smartest products, solutions, start-ups and projects on the 24th of May in Berlin. In the category "Best Realised Project", Elsner Elektronik GmbH received the first prize for the KNX project "User-Oriented Building Control for Commercial Buildings". Elsner Elektronik's project showcases that building control with KNX allows high energy efficiency and safety, while granting user co-determination.
Contact: info@knx.org

Winners and Jury of SmartHome Award

KNX Manufacturer Workshop Oldenburg

GERMANY The premises of ISE in Oldenburg hosted the 2016 Manufacturer Workshop, organised by the KNX Association. With representatives from various member companies, this event highlighted the many novelties in the KNX specifications, such as upcoming extensions and new chapters. The feedback was very positive, since it was again made clear that KNX is still developing and always stays one step ahead. *Contact:* info@knx.org

ETS session at manufacturer workshop

KNX Training reaching new regions

BELGIUM In order to reach out to new countries and regions, the KNX Association organised a KNX Tutor Crash Course in the their offices in Brussels. Thanks to thorough preparation all 12 participants successfully participated, and are now able to set up certified KNX Training Centres in Iran, Thailand, Latvia, Senegal, Morocco, Indonesia, USA, Lebanon and Australia. The KNX Association congratulates all participants on their success.
Contact: info@knx.org

Participants from all over the world

Irish ambassador visits the KNX IoT city

GERMANY Emphasizing the importance and the resulting business opportunities of the KNX Standard in the world-wide market, the KNX IoT city was honoured with a visit from the Irish Ambassador Michael Collins on the 4th day of Light + Building. Already celebrating St. Patrick's Day, the KNX Association invited the worldwide community to the KNX booth party, serving drinks and food, leaving visitors in awe again. *Contact:* info@knx.org

Michael Collins with Franz Kammerl

The winners at the German Energy Efficiency Award

GERMANY For the second time, the German Associations of Electronics and Electrical Installation awarded the most innovative projects in home and building control. In three categories, the companies Klaus Geyer (residential), Elektro Hering (commercial) and Köster Professionelle Gebäudetechnik (installation in company) were able to achieve the highest energy savings in their award-winning projects. *Contact:* info@knx.org

Proud winners of the Energy Efficiency Award

Podium discussion: Building automation and IoT – contrast or future trend

GERMANY Light + Building is not only the world's biggest exhibition for home and building control, but also a platform for discussions, conventions and press conferences. One of the highlights was the podium discussion about the pros and cons of "Building Automation and IoT – contrast or future trend". Franz Kammerl, President of the KNX Association, made it clear that IoT will be an unavoidable aspect, which will affect the whole industry. *Contact:* info@knx.org

During the speech "Building Automation and IoT – contrast or future trend"

Upcoming Certified Courses

Are you looking for a KNX Certified Course? On this new page you can have a convenient overview of all the upcoming certified training courses (basic, advanced and tutor) and register on the course of your choice. You can also filter the search based on your location and needs. Find a complete overview at: *http://www.knx.org/knx-en/ training/knx-certified-courses/knx-upcoming-courses/ index.php*

Events and Fairs Schedule

CEDIA Expo
13. – 17. 9. 2016
Dallas (United States)
The world's premier showcase
for home technology.
www.expo.cedia.net

IEAS 2016
20. – 23. 9. 2016
Bucharest (Romania)
IEAS is a technique event, specialised,
dedicated to electric equipment and
automation in Romania.
www.ieas.ro

Light India 2016
5. – 7. 10. 2016
New Delhi (India)
3rd edition of one of the largest
lighting shows in the industry
www.light-india.in.messefrankfurt.com

Elmässan 2016
19. – 20. 10. 2016
Stockholm (Sweden)
The best known event in Sweden
for electrical installers
www.easyfairs.com

Matelec 2016
25. – 28. 10. 2016
Madrid (Spain)
An ideal platform to present the new
developments related to HBS and
telecommunications.
www.ifema.es/matelec_06

KNX Scientific Conference
27. – 28. 10. 2016
Dortmund (Germany)
Conference to encourage co-oper-
ation between universities/technical
institutes and the KNX industry.
www.knx.org

Light Middle East
31. 10. – 2. 11. 2016
Dubai (United Arab Emirates)
The largest dedicated trade event
for urban, architectural, theatrical
and retail lighting in the Middle East
www.lightme.net

KNX Middle East Workshop
31. 10. 2016
Dubai (United Arab Emirates)
KNX Middle East is inviting others
to learn more about the worldwide
Standard for home and building con-
trol.
www.knx.org/ae/KNX-MiddleEast

HI-TECH Building
1. – 3. 11. 2016
Moscow (Russia)
Trade show with focus on building
automation and smart home systems
www.En.hitecbuilding.ru

Facilities Integrate 2016
3. – 4. 11. 2016
Auckland (New Zealand)
Trade exhibition for the facilities
management and system integra-
tion industries
www.facilitiesintegrate.nz

Interlight Moscow
8. – 11. 11. 2016
Moscow (Russia)
International trade fair for
decorative and technical lighting,
electrical engineering, home and
building automation
www.interlight-moscow.ru.
messefrankfurt.com

IBS 2016
8. – 9. 11. 2016
Paris (France)
Intelligent building systems exposition
focused on smart systems for
building performance.
www.ibs-event.com

ZVEI Kolloquium building control
11. 11. 2016
Frankfurt (Germany)
Kap Europa (floor 1)
Secure building automation hand in hand together with Internet of Things
www.knx.de

European Utility Week
15. – 17. 11. 2016
L Hospitalet de Llobregat (Barcelona Spain)
The annual premier event for the entire smart energy community in Europe.
www.european-utility-week.com

Get Nord
17. – 19. 11. 2016
Hamburg (Germany)
GET Nord is the response to the complex tasks and growing demands for technical infrastructure in contemporary buildings.
www.get-nord.de/en/

Beurs Domotica & Slim Wonen
23. – 24. 11. 2016
Eindhoven (Netherlands)
Trade show mainly based on home and building electronic systems
www.smart-homes.nl

Euroskills 2016
1. – 3. 12. 2016
Gothenburg (Sweden)
Europe's largest international skills competition
www.euroskills.org

ISE 2017
7. – 10. 2. 2017
Amsterdam (Netherlands)
Europe's no.1 show for professional AV and electronic systems integrations.
www.iseurope.org

Batibouw 2017
16. – 26. 2. 2017
Brussels (Belgium)
Batibouw is held every year and is entirely dedicated to the building trade.
www.batibouw.be

ISH 2017
14. – 18. 3. 2017
Frankfurt (Germany)
The ISH brings two trade fairs together under one roof: energy building and air-conditioning technology and the bathroom experience.
www.ish.messefrankfurt.com

YOUR PARTNERS

Heinz Lux
CEO
✉ heinz.lux@knx.org
☏ +32 (0)2 775 85 90

Joost Demarest
CFO, CTO
✉ joost.demarest@knx.org
☏ +32 (0)2 775 86 44

KNX ASSOCIATION
De Kleetlaan 5
B - 1831 Diegem-Brussels
Belgium

GENERAL CONTACT
Phone: +32 (0)2 775 85 90
Fax: +32 (0)2 675 50 28
Email: info@knx.org
Web: www.knx.org

Serge Creola
Sales & Support Manager
✉ sales@knx.org
☏ +32 (0)2 775 85 90

André Hänel
System & Tool Manager
✉ andre.haenel@knx.org
☏ +32 (0)2 775 85 90

Casto Canavate
Marketing Manager
✉ casto.canavate@knx.org
☏ +32 (0)2 775 85 91

Ufuk Unal
Certification Manager
✉ ufuk.unal@knx.org
☏ +32 (0)2 775 86 53

Angelique De Scheemaecker
Sales
✉ sales@knx.org
☏ + 32 (0)2 775 85 90

Steven de Bruyne
System Architect
✉ steven.debruyne@knx.org
☏ +32 (0)2 775 86 47

Thibaut Hox
Marketing
✉ thibaut.hox@knx.org
☏ + 32 (0)2 775 85 99

Jesús Arias
KNX Solutions
✉ jesus.arias@knx.org
☏ +32 (0)2 775 85 90

Ulrike Eggers
Sales & Administration
✉ ulrike.eggers@knx.org
☏ + 32 (0)2 775 85 90

Dries Verbrugge
KNX IoT Architect
✉ dries.verbrugge@knx.org
☏ +32 (0)2 775 86 58

Christian Stahn
Marketing
✉ christian.stahn@knx.org
☏ +32 (0)2 775 86 48

Follow us: twitter
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g+

Christophe Parthoens
Support Engineer
✉ support@knx.org
☏ +32 (0)2 775 85 90

Vassilios Lourdas
System Engineer
✉ vassilios.lourdas@knx.org
☏ +32 (0)2 775 86 40

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- Radio Frequency (RF)
- Powerline (PL)

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