



The worldwide STANDARD for home and building control



JOURNAL

1/2016

KNX Internet of Things (IoT)

KNX in USA

KNX Secure

New KNX Products

New KNX Manufacturers

domobrain
domótica y control energético

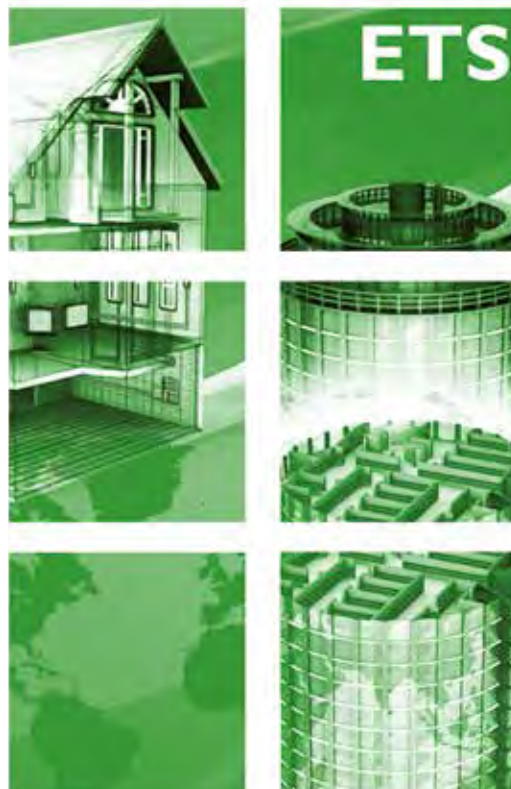




Embedded

Smart

Wireless



www.knx.org

ETS5 Professional

See all ETS Apps on www.knx.org

New licenses	Price	Restrictions
ETS5 Professional	1000,00 €	
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 €	
ETS4 Supplementary > ETS5 Supplementary	110,00 €	
ETS4 Lite > ETS5 Lite	150,00 €	
Educational licenses		
ETS5 Training Package	1.500,00 €	1 x ETS5 Professional, 10 x ETS5 Lite / 2 x Training Handbooks

All prices excl. VAT + Service fee (15,- € / order)

Order at: <https://my.knx.org>



Editorial

- 2 KNX shapes the Things in the Internet
- 3 Global KNX Community celebrate 25 years
KNX Day began in Japan and finished 18 hours later in Chile

KNX in USA

- 5 KNX Gains Ground In The USA
- 6 The Art of Light
Cincinnati Art Museum upgrades its lighting to KNX
- 8 When the Sun Goes Down on Sunset Strip
An upscale condo in Los Angeles puts KNX technology in the spotlight
- 10 The Workspace of the Future
Flexible organized workspaces thanks to the adaptability of KNX
- 12 Lighting Done Right
Reser Stadium upgrades to a KNX enabled lighting system
- 14 The Main Event
The World Trade Center Portland gets a KNX lighting upgrade

Projects

- 16 From KNX city to IoT city
Interconnected properties in synergy with KNX and internet
- 17 Management of distributed Power Generation by KNX IoT
Secure and encrypted: Virtualisation of KNX Web Services IoT via mobile communication
- 18 Operation Level and virtual World
Interconnected sites in the age of the "Internet of Things"
- 19 KNX operation concept for visually handicapped persons with KNX IoT
Softer living with coloured buttons
- 20 LED Lighting by KNX IoT
KNX emphasizes the features of tomorrow's LED lighting
- 21 When iWatch controls the KNX Smart Home
IoT Multiprotocol Gateway creates an overall concept in building automation
- 22 KNX of Things connects to Smart Things
KNX IoT opens for web designers the way to building automation by standardised interfaces.
- 23 Simple Connection of Intelligent Systems by KNX IoT
KNX Web Services for access control, security and room allocation
- 24 Global Monitoring based on KNX IoT
Quick reaction to failures and breakdowns
- 25 Augmented Reality and KNX IoT
Operating comfort by "augmented reality"
- 26 Secure Alarm System with KNX IoT
Synergies by multiple usage

Tools

- 27 KNX Secure integrated in the ETS5.5
KNX IP Secure and KNX Data Secure provide secured access to KNX Installations.

Members

- 28 New Members
- 34 New Products

Partners

- 53 National Groups
- 62 Userclub | Professionals
- 65 Training Centres
- 67 Scientific Partners

Out and About

- 68 KNX at International Conferences and Fairs
- 72 Imprint



KNX shapes the Things in the Internet



Heinz Lux
CEO, KNX Association

The question, what holds the world together at the very heart, has occupied scientists and researchers from the very beginning. Aristotle insisted, that even the improbable is probable, and made a clear distinction between ideas and things.

In our time the measure of all things is the internet. In the Internet of Things (IoT), things of everyday life become intelligent and communicate via the internet. Until 2020 a number of 50 billion of them is expected. They will include intelligent domestic appliances, smart homes, intelligent meters and, power grids and even entire cities.

The automation of buildings, our core competence, plays a central role in the Internet of Things. Since more than 10 years KNX has interconnected sensors and actuators via KNX/IP and as such has been able to “talk” to the desired end-device via the internet. But the internet can do more: it can integrate various subsystems. KNX Web Services (KNX WS) make a simple and versatile communication between the KNX network and the world of internet, between web

services and building automation possible. The KNX WS-Gateway maps the KNX project, is able to display and interpret values and states via internet and in this way connects KNX building automation with the world of Internet even better.

In this way ideas again become part of the world of things – into the Internet of Things. Aristotle would have called it “Shaping things under the control of an active form factor.” KNX is that active form factor.

In the Internet of Things the form factors for the building of the future are: more information instead of more isolation, controlling instead of switching, managing instead of setting, communication instead of compromising.

With our Web Services one thing is for sure: The Internet of Things “knxes”.

“

But the internet can integrate various subsystems. KNX Web Services (KNX WS) make a simple and versatile communication between the KNX network and the world of internet, between web services and building automation possible.

”

Global KNX Community celebrate 25 years

KNX Day began in Japan and finished 18 hours later in Chile

KNX Association has marked the 25th anniversary of KNX, the worldwide STANDARD for home and building control, with the largest ever, global event in one day for the building automation sector.

Taking place on Tuesday 20th October 2015, "KNX Day" featured a total of 53 KNX co-ordinated events, bringing together thousands of participants across 36 countries to share in KNX training, technology presentations, project showcases, awards, promotions and more.

"What a spectacular way for the global KNX community to unite and celebrate 25 years of KNX," says Franz-Josef Kammerl, President of KNX Association. "Each participating country has succeeded in focusing the minds of installers, specifiers and end-users on the capabilities, strengths and bright, long-term future of KNX as the worldwide standard for building automation. We can



KNX cake at ABB event in Cairo

rightly say that, on this momentous day, KNX has connected the world." KNX Day comprised a series of dedicated events created by KNX National Groups, Training Centres, Scientific Partners, Userclubs and Professionals to meet the localised needs of respective territories.



KNX in Iran by Artman Smart Energy Solutions

CNFPC Luxembourg organising training workshop





Fun with KNX at KNX Kids event in Spain



KNX Training workshop participants in Egypt



KNX Training event at Amaysys Training Centre

- KNX Day began in Japan and finished 18 hours later in Chile.
- 44 ETS5 Professional Licences, worth 44,000 Euros, given away for free to KNX Day attendees.
- Over 2500 social media shares of the KNX Lottery Game using the #KNXis25, the most popular hashtag ever in KNX history, with main winners coming from Australia, the Netherlands and Romania.
- <http://KNXis25.knx.org> became the most visited webpage in KNX history.
- 120 KNX Supporter companies joined in promoting KNX Day with banners, news and mailshots.
- Live-streaming from eleven KNX Day activities in Sweden, Finland, Greece, Spain, Belgium, Iran, Brazil, Romania and Russia.
- A total of six co-ordinated KNX events took place at different locations in Spain – more than in any other single country.
- Energy Efficiency Award presentations for prestigious KNX installations in Belgium and Luxembourg.

Since its introduction in 1990, KNX has transformed residential, commercial, public and industrial building automation applications. The standard provides an open, reliable and easy to install approach for controlling lighting, blinds, security, heating, ventilation, air conditioning, (HVAC), water supply and irrigation, energy management, smart metering, fault finding and remote monitoring systems as well as household appliances, audio-video technology and more.

Today, over 400 manufacturers develop and supply compatible devices and technologies for over 7,000 certified KNX product groups to a customer base of more than 50,000 KNX certified installers, operating in over 125 countries across the globe.

In 2015, KNX continues to evolve with the development of ground-breaking concepts and market-changing technology applications. For example, KNX city demonstrates the potential of deploying the standard to provide a combined solution for buildings, infrastructure, mobility and energy generation. Other initiatives include the development of KNX Secure for ensuring higher security in home and building control; the implementation of RF within KNX's ETS commissioning tool; the increasing simplicity of KNX configuration via smartphones and tablets and using KNX to harness the power of big data and the "Internet of Things".

KNX Gains Ground In The USA

Following the launch of KNX National Group USA in May 2015, KNX continues to build momentum in the “Land of the Free” on the back of its successful participation at two major national shows and a growing number of flagship KNX projects.

KNX is making a big impact in the USA,” says David Thurow of Siemens, the President of KNX National Group USA. “Since the formation of the KNX National Group USA, we have introduced KNX at the prestigious LIGHTFAIR International show in New York and also at CEDIA Expo in Dallas. The response has been overwhelmingly positive. This is a market ready for KNX open protocol technology because it brings integrators and end-users the freedom they increasingly want in building automation.”

Manufacturers, end-users, designers and integrators flocked to the KNX Association booth at LIGHTFAIR International, the leading exhibition for lighting and building automation solutions (New York, 5–7 May). The event attracted a record-breaking attendance of 29,900 registered visitors. KNX’s debut told a similar story at CEDIA Expo (Dallas, 14–17 October), the industry show attended by over 18,700 home automation integrators. Hundreds of visitors beat a path to the KNX booth to find out how the technology could help them integrate efficient, seamless and easy

KNX USA at CEDIA Expo



KNX National Group USA Foundation Members

to install systems for their clients when using products from a wide choice of different KNX manufacturers.

This appetite for KNX technology is reflected in a range of recently completed showcase projects across the USA. These include the Cincinnati Museum in Cincinnati, Ohio, the World Trade Center and the Reser Stadium both in Portland, Oregon as well as a new, luxury mansion for a wealthy client in upmarket Beverly Hills, California. These build on earlier successful KNX installations at the home of baseball legend Eddie Murray and the House of Rock in Los Angeles. A steady pipeline of KNX projects will reveal more and more significant installations in 2016. Launched at LIGHTFAIR International, KNX National Group USA now includes 20 members and of-



KNX USA President David Thurow

fers extensive KNX Certified training through DMC Technology, an accredited KNX Training Center, in California, New Jersey and Illinois. Online webinar content, additional resources and support are also available. For more information, please visit www.knx.us.

“We are delighted at the progress KNX is making in the USA,” says Franz Kammerl, the President of the KNX Association. “The recently formed KNX National Group is taking an active, and increasingly influential, role in meeting the demand from the market. In 2015, we have opened the door for KNX in the USA, in 2016 and the years ahead we will push right through to create more and more opportunities for the KNX community.”



The Art of Light

Cincinnati Art Museum upgrades its lighting to KNX

The Cincinnati Art Museum is one of the oldest art institutions in the United States.

Since 1881, it has been committed to the community and its members, continually adding to its rich collection of more than 65,000 works of art that span more than 6,000 years.

The collection includes the ancient art of Egypt,

Greece, and Rome; Near and Far Eastern art; art of Africa and the Americas; prints, photographs, paintings, sculpture, contemporary art, and more. Some of the museum's most notable gems include the only collection of ancient Nabataean art outside of Jordan and the renowned Herbert Greer French collection of old master prints.



Courtesy of the Cincinnati Art Museum

The Cincinnati Art Museum is one of the oldest art institutions in the United States. Since 1881, it has been committed to the community and its members, continually adding to its rich collection of more than 65,000 works of art that span more than 6,000 years. The collection includes the ancient art of Egypt, Greece, and Rome; Near and Far Eastern art; art of Africa and the Americas; prints, photographs, paintings, sculpture, contemporary art, and more. Some of the museum's most notable gems include the only collection of ancient Nabataean art outside of Jordan and the renowned Herbert Greer French collection of old master prints.

As with any museum, proper lighting design and control was imperative, not only to show works to their best possible advantage, but to protect them from long-term damage. The Cincinnati Art Museum wanted to upgrade its lighting and install new fixtures and called in Christopher Neff, Engineering Specialist at Siemens, to ascertain the scope of the project and engineer the system.

The museum has special lights brought in from China with about 400 LEDs in one fixture. Because the Siemens GAMMA lighting system operates on the open, international KNX standard, integration with these fixtures was simple. The lights were installed in a large 50- by 85-foot room that was set up as a classroom for kids that could later be used as a gallery.

In addition to the LEDs, the room features standard recessed lights along with a custom light, featuring hand-blown 'bubble' glass ball. "That particular fixture didn't have a 0 to 10-volt driver; it required a line voltage dimmer. We found a line voltage dimmer that could be controlled from 0-10 volt that would come from the Gamma dimming KNX actuator which would then control the line voltage out to the fixture," says Neff. Instead of using voltage dimmers, Neff installed two 8-button push control KNX panels in the classroom.



Cincinnati •

Thanks to its ease of integration and compatibility, this KNX technology can be scheduled by the Siemens APOGEE building management system. “We could have used the APOGEE relay outputs, but they are only good for three amps,” says Neff. “I would have had to add an additional relay to take the system up to a higher current. With the lighting system at 20 amps, you don’t have to do that intermediate step.” Because the museum lighting is fairly static, the system schedules run like clockwork and add energy efficiency, but changes can also be made with ease. After the lighting system was completely set up, the museum decided they wanted to add some display cabinets with lighting, as well. Now, they are finding out that the KNX system can automatically turn these displays on and off. “We added more circuits to them for additional control and so staff doesn’t have to go around and turn them off manually,” says Neff.

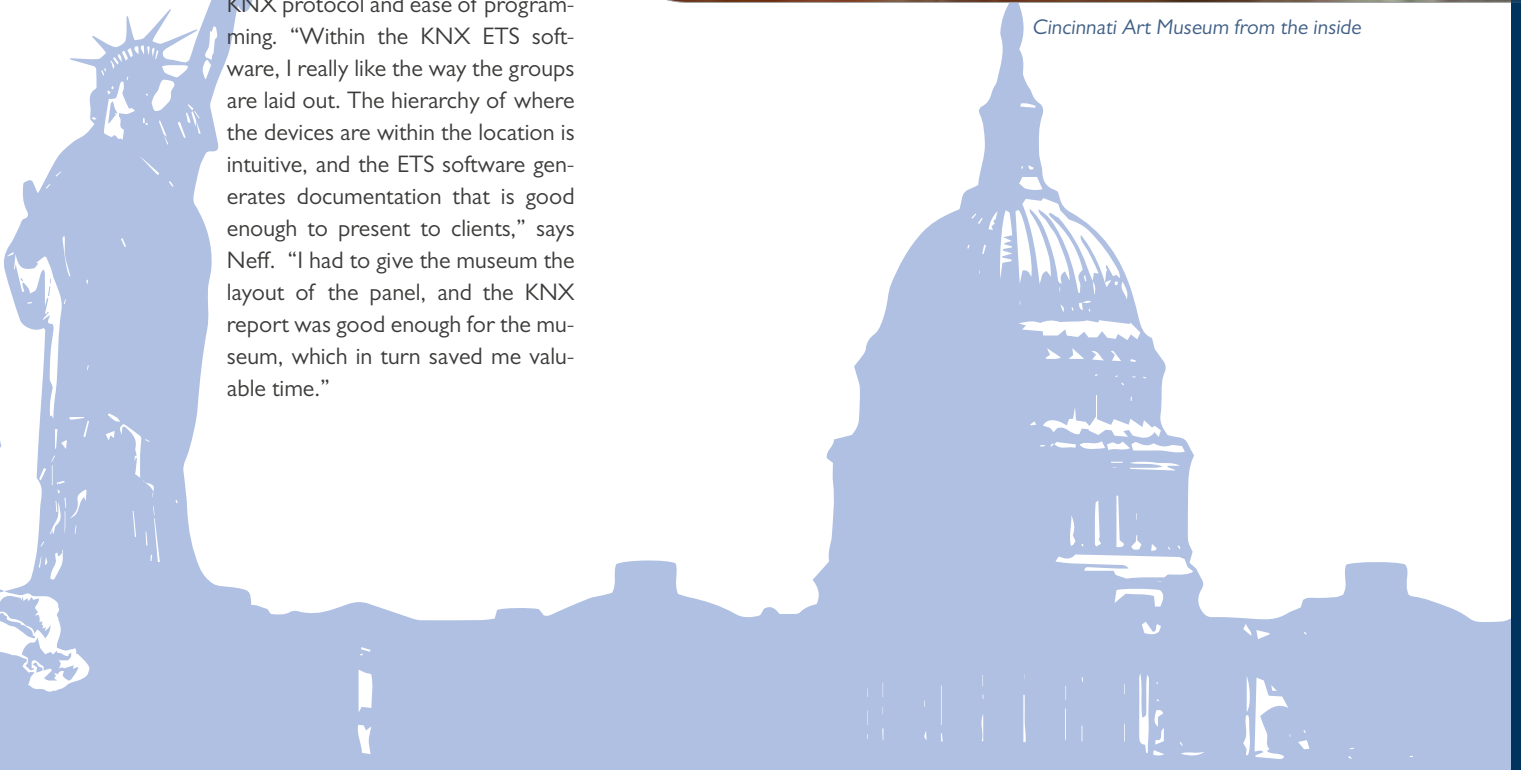
As for the project’s technical challenges, there were relatively few. That’s in large part thanks to the KNX protocol and ease of programming. “Within the KNX ETS software, I really like the way the groups are laid out. The hierarchy of where the devices are within the location is intuitive, and the ETS software generates documentation that is good enough to present to clients,” says Neff. “I had to give the museum the layout of the panel, and the KNX report was good enough for the museum, which in turn saved me valuable time.”



Museum Director Cameron Kitchin and Richard Rosenthal, March 2014.



Cincinnati Art Museum from the inside



When the Sun Goes Down on Sunset Strip

An upscale condo in Los Angeles puts KNX technology in the spotlight

A few years ago, a high-profile musician in Beverly Hills contacted a local integrator to install his KNX based home automation system. DMC Technology has now improved the KNX system for more functionality and easier usability. The owner agreed to allow DMC to use his home as a showroom for KNX technology and home automation.

A few years ago, a high-profile musician in Beverly Hills contacted a local integrator to install his KNX based home automation system. DMC Technology has now improved the KNX system for more functionality and easier usability. The owner agreed to allow DMC to use his home as a showroom for KNX technology and home automation.

"This was an incredible opportunity for us, because the homeowner is a very prominent figure in the music industry and has many friends and associates over to his condo," says Frederic Chaussy, COO & Co-Founder of DMC Technology. "In turn, we had several clients who were interested in KNX technology for their own homes and this was an ideal real-world Los Angeles residential showcase."

The first step when Frederic Chaussy, his business partner Marc-Antoine Micaelli, CEO & Founder and Christophe Lavergne of DMC Team, began their work was to assess the existing system. "Marc-Antoine created an electrical map of the condo to determine how everything was configured. Then Christophe Lavergne was able to remotely design an interface based on the electrical CAD plan, giving the homeowner a Vectorial 2D model of the home on his iPad and allowing him to control different areas on an actual map of the home," says Frederic Chaussy. This custom interface offers one-touch operation of the condo's systems and makes it easy for the homeowner to turn things on and off, expand upon a room view, and understand the system graphically. "We work much like architects in that regard. The floor plans are extremely important to us, whether it's a new build or a retrofit," adds Marc-Antoine Micaelli.

Normally, creating a custom graphic user interface for a control system might take a programmer three weeks parked on their customer's couch with their laptop, but with the KNX protocol, DMC was able to pre-program the system in one to two days at their main office in Beverly Hills. "This reduces the cost of paying a programmer, and is greatly appreciated by clients like this one, who values his privacy" says Frederic Chaussy.



KNX installation in the home in Los Angeles



High comfort thanks to KNX

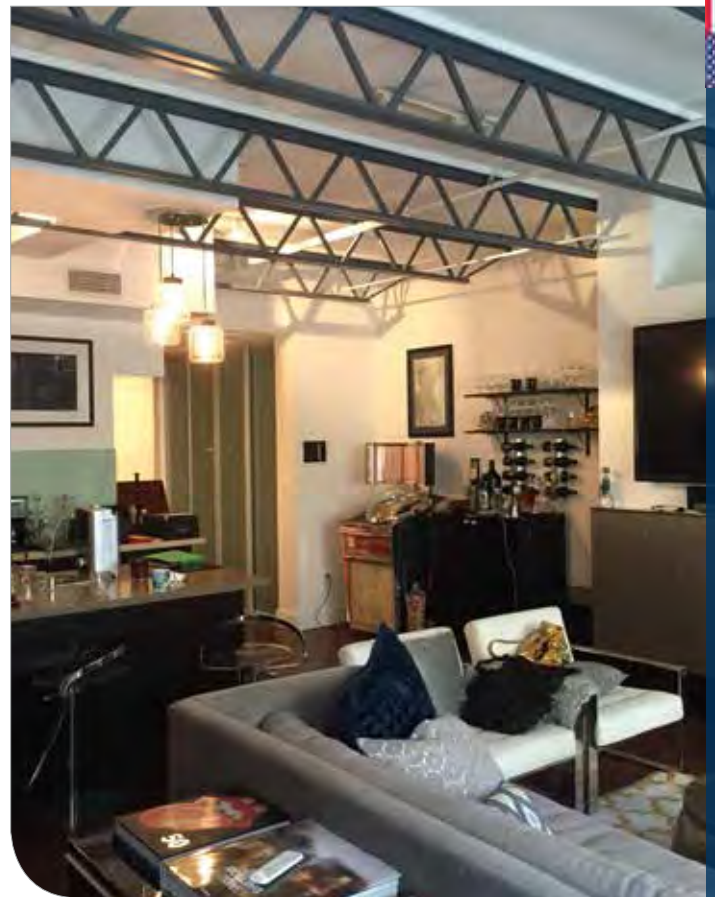
To that end, the KNX technology here can also be remotely managed offsite, meaning that if there is a technical problem or the homeowner wants to change a certain feature, it can be handled in a matter of minutes from DMC's offices. "That kind of flexibility allows you to respect your clients' time, and that makes them happy."

When it comes to remodeling, Frederic Chaussy notes that while wireless is on trend to easily incorporate various high-tech systems into the home, with KNX technology now available in the U.S., it isn't necessarily the best option. "For this kind of installation and for big houses, wireless is not a good choice," he comments. "Wireless systems can be unreliable. The KNX protocol can be installed via the existing home wires like twisted pair, making it just as noninvasive as wireless, yet way more reliable."

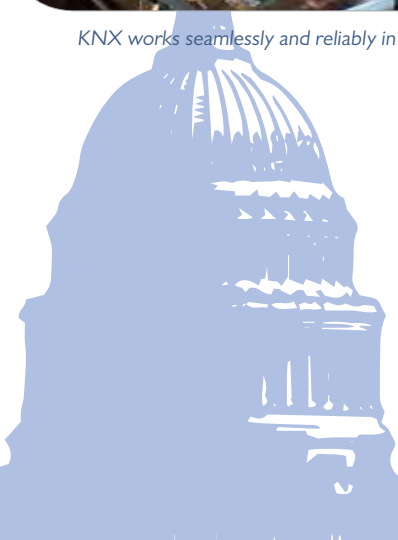
The condo is now a prime showcase for how home automation technology can be done right, with the KNX system controlling the lights, HVAC, and shades.

A feather in DMC's cap, this is also the first place in which KNX has been integrated with a Sonos music system. When the sun goes down over Sunset Strip, you'll find the homeowner enjoying his favorite music while entertaining other music-industry luminaries.

By day, DMC's Frederic Chaussy and Marc-Antoine Micaelli bring their residential clientele and interested architects to the space to demonstrate how a star KNX system can be made to work seamlessly and reliably in homes of any size.



KNX works seamlessly and reliably in homes of any size





The Workspace of the Future

Flexible organized workspaces thanks to the adaptability of KNX

Dots is an innovative co-work concept and flexible workspace environment located in Beverly Hills, California. The startup launched in April 2015, with the goal of providing a month-to-month, rentable co-work space complete with organic kitchen, state-of-the-art conference rooms, lounge area, mail concierge, and offices. This high-energy, high-design, high-tech hub of activity is open 24 hours a day, seven days a week. Here, creativity is fostered and ideas are incubated. Next door, busy professionals can recharge in the yoga room.



Yoann Bohbot, Founder at dots SPACE – Beverly Hills Coworking

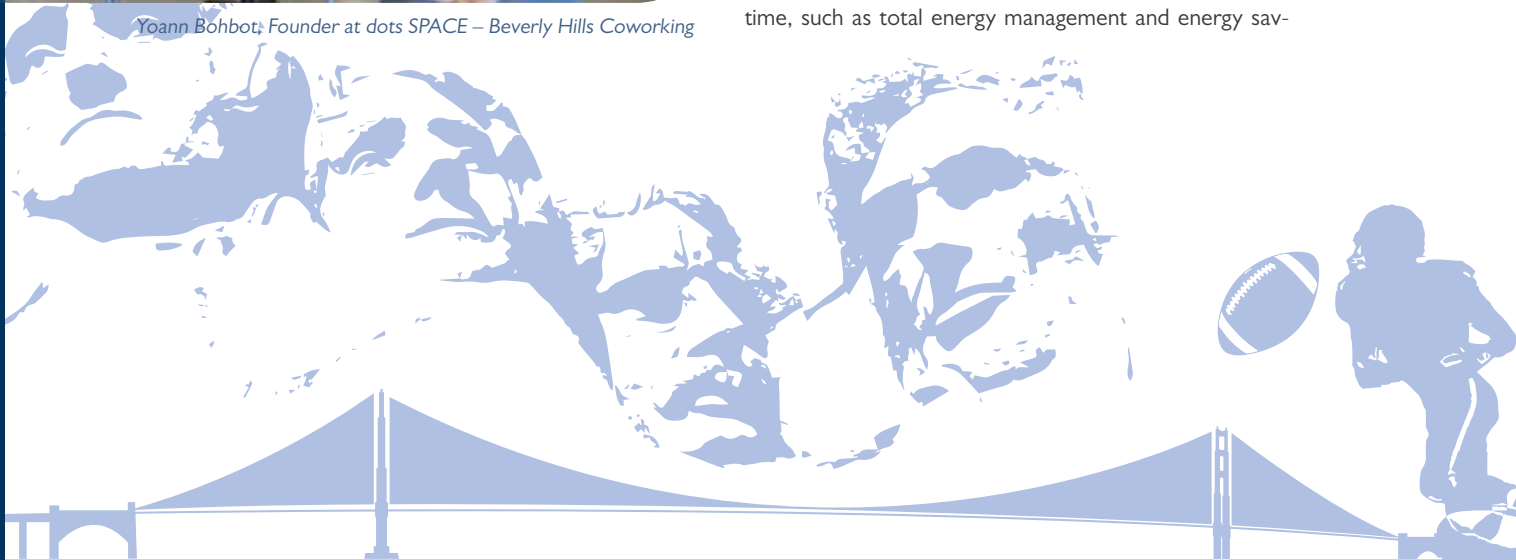
In such a contemporary environment, only the most modern technology would suffice. “When we were called onto the project, Dots had someone else in mind to automate the offices. When shown the KNX technology for their space, they said ‘this is it,’” comments Frederic Chaussy, COO & Co-Founder of DMC Technology.

That’s in part due to KNX’s open protocol, which ensures a high degree of flexibility for any install. For example, the owners of Dots wanted to make KNX work with their booking system, along with a DMX lighting system. The KNX API not only allows this, but also lets the KNX RGB White lighting system, Nest climate control system, access control, energy management, and remote access systems all work together seamlessly.

“With KNX, you have a choice of what to integrate, including best-of-breed brands like Lutron, Crestron, and even products from overseas,” says Marc-Antoine Micaelli. “Our area of LA and Beverly Hills demands revolutionary design, as well as something they’ve never seen before. Thanks to KNX, we now have choices because we don’t have to stay within the same ecosystem or even the same country.”

KNX’s international interoperability helped seal the deal for Dots.

“Dots wanted features that were not easy to incorporate using the technology that was available in the U.S. at the time, such as total energy management and energy sav-





California



Together work in a contemporary environment, only the most modern technology would suffice.

ings.” Most automation platforms don’t have energy management for the smart grid, according to Marc-Antoine Micaelli, CEO & Founder DMC Technology, LLC. KNX is a solution that is smart-grid ready and even helps to make the smart grid smarter. And from the Dots point of view, they already saved more than 60% on the energy bill after activation of the energy saving optimisation mode. Because Dots is open 24 hours a day, freedom from the networking woes is critical. KNX is not IP-dependent, so if the office network is down, Dots’ KNX system still works.

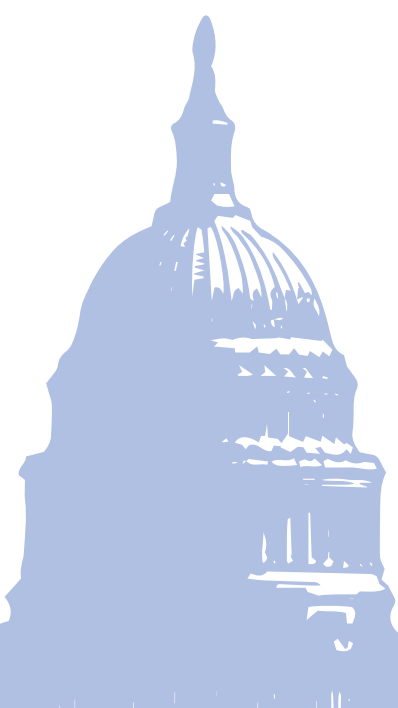
“We can use it the way we want, without worrying about the network. KNX only uses the IP network to communicate with other systems,” says Marc-Antoine MICAELLI. “It was very easy to install our KNX cable where we needed it, and it wasn’t a big deal for the electricians to understand. They are able to figure out things very quickly because there is only one cable. Furthermore, and most often in the U.S., metallic tubing is used for wiring. Using low voltage cable tubing is no longer necessary, which saves a great amount of time.”

After the installation was completed, DMC appreciated the Dots working space so much, it now uses the building as its own headquarters and showroom. It is, in fact, the first KNX training center in the U.S.

DMC is happy with the progress it has made with the KNX protocol in the Dots workspace and in the U.S. at large. It’s always the client that is a testament to the success of any project, however. In this case, the fact that Dots is expanding to several more locations in Los Angeles, Florida, and New York and wants to use KNX devices in all of them is proof enough that the KNX protocol has empowered the workers at this busy, modern-day workspace.



KNX visualisation – RGB White lighting system, Nest climate control system, access control, energy management.



Lighting Done Right

Reser Stadium upgrades to a KNX enabled lighting system

One of the top worries among university IT professionals is that technology can quickly become out of date. As lines lose support over the years or manufacturers force obsolescence, old products become incompatible with new, and it becomes more and more difficult to bring a mature system up to date without going back to the drawing board.

One of the top worries among university IT professionals is that technology can quickly become out of date. As lines lose support over the years or manufacturers force obsolescence, old products become incompatible with new, and it becomes more and more difficult to bring a mature system up to date without going back to the drawing board.

“Seldom is there a person at any facility who was operating the system when it was first created,” says David Thurow, Senior Product Manager for Siemens GAMMA Lighting Controls. “Often, there is no one left behind who knows how to use the technology.”

When Martin Campbell, Engineering Specialist, was called in to overhaul the existing lighting control system for Oregon State University’s Reser Stadium, easy integration with the existing building management system was therefore imperative. The technology would also need to be upgradeable in the future, and easy to program and use. At the time, the stadium’s lighting control system didn’t work properly. Stadium operators couldn’t get certain lights to come on, or the lights would turn on at strange times, wasting both money and energy. With the help of Kevin Vandeberghe, Lead Electronic Installer, Campbell took the guts out of the lighting control relays and replaced them with Siemens GAMMA lighting control KNX actuators. The GAMMA system features a distributed control architecture that lets the stadium easily manage all aspects of lighting, without worrying about single points of failure. It’s also based on the worldwide KNX open protocol, which is used by more than 400 manufacturers worldwide.

This new KNX system now controls all the lighting in Reser Stadium’s concession stands, main concourse, suites, club rooms, and even the Musco Sport Lighting system.



Reser Stadium upgrades to a KNX lighting system



• Oregon

KNX Project in Oregon

“The Musco lights give the GAMMA system a signal that tells the latter to turn on the lights, and we energize the contactors that bring the Musco lights on.”

Campbell used a BACnet gateway to integrate the lighting into the existing Siemens building automation system. This gateway converts the KNX protocol to that of BACnet, monitoring and commanding points within the lighting system. Because the stadium is such a large venue, electrical rooms are scattered throughout the structure, so all the lighting panels network together using their existing IP backbone. “KNX is very flexible as to how you integrate it,” Campbell adds.

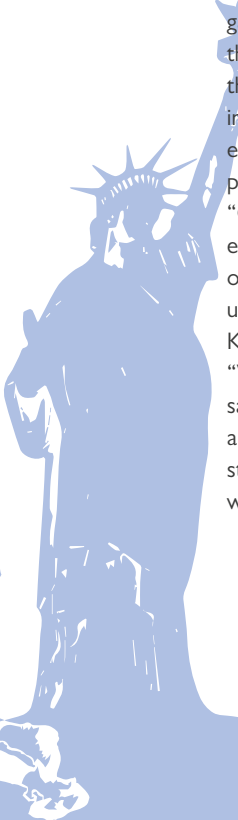
The wow factor of the system happens when the stadium operators turn on any number of preset lighting scenes based on all the various ways the stadium is used. For a game-day event, they can press one icon to turn everything on. For events at the Club level, a scene turns on all the lights there, but also illuminates path or ground lights in the halls and elevators for safety as guests enter and exit. Meanwhile, daylight sensors control the street and plaza lights.

“One of the benefits of having the KNX system integrated into the building automation system is that we can use our control system to create the scenes and the graphic user interface,” adds Campbell. The team simply used the KNX ETS software, greatly reducing programming time.

“We have 300 Siemens devices now that include KNX,” says Thurow. “KNX is in every continent and country, and is growing due to its neutral protocol.” It’s that open standard that is helping to grow KNX systems all over the world.



The GAMMA system features a distributed control architecture that lets the stadium easily manage all aspects of lighting.



The Main Event

The World Trade Center Portland gets a KNX lighting upgrade

The World Trade Center Portland, located on the city's Waterfront downtown Portland, Oregon, is one of the city's most elegant venues. Known for its ambiance, views, and cuisine, the World Trade Center Portland hosts conferences, receptions, weddings, and other festivities. With all this functionality comes the need for both ease of operation when it comes to the venue's technology systems, as well as increased energy efficiency.

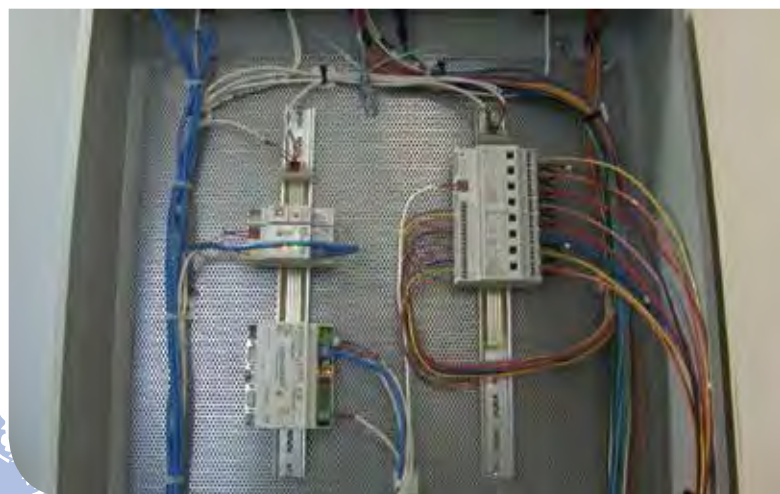
The existing lighting system from a major lighting manufacturer was considered to be the 'Ferrari of Light Harvesting', with scheduling, features, and more. Siemens had installed the previous system, but because it was a third-party vendor and not Siemens' software, servicing and maintenance was proving difficult. "Employees didn't get trained on the system, and if there was a problem, they would have to call the manufacturer who would then have to literally stand on top of someone's desk to see what was failing," says Andrew Mason



World Trade Center in Portland



Visualisation – GAMMA Lighting System



Configuring – retrofitting the eighth floor of the 19-story building



• Oregon

of Siemens. “Needless to say, the customer didn’t like that.” Mason and the engineering team retrofitted the system with a KNX solution using the GAMMA Lighting System. “A KNX approach allowed the team to ascertain and fix any problem at the front end, and the customer liked this idea a lot considering the company’s previous experience with lighting service calls.”

The team then set about configuring the system, retrofitting the eighth floor of the 19-story building. They programmed lighting scenes and schedules, and they also control the dimming level throughout the building.

“For example, the lighting can be set to 90 %, saving 10 % on energy and nobody notices the difference,” says

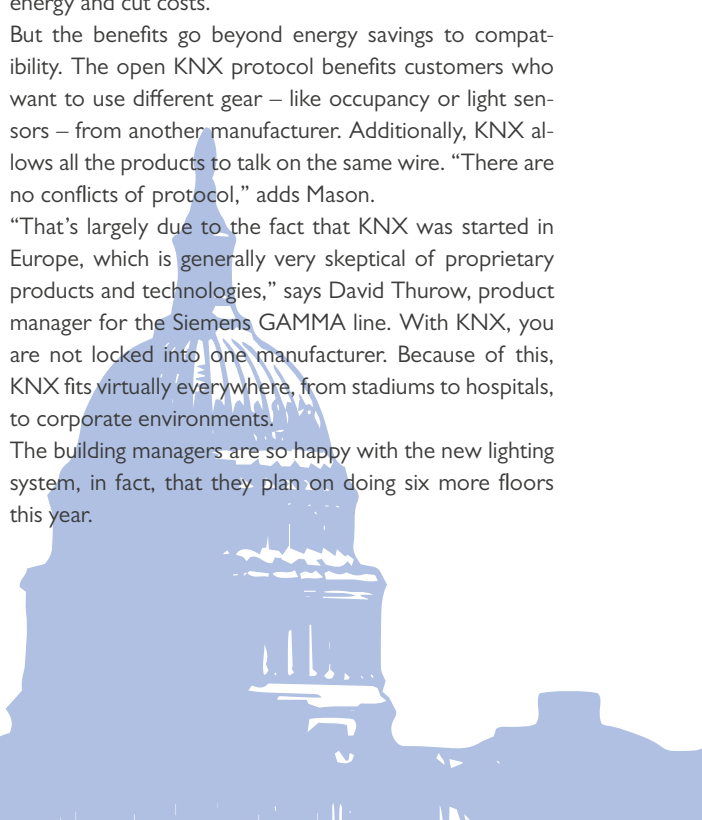
Known for its ambiance, views, and cuisine, the World Trade Center Portland hosts conferences, receptions, weddings, and other festivities.

Mason. “The scheduled on and off times also help to save energy and cut costs.”

But the benefits go beyond energy savings to compatibility. The open KNX protocol benefits customers who want to use different gear – like occupancy or light sensors – from another manufacturer. Additionally, KNX allows all the products to talk on the same wire. “There are no conflicts of protocol,” adds Mason.

“That’s largely due to the fact that KNX was started in Europe, which is generally very skeptical of proprietary products and technologies,” says David Thurow, product manager for the Siemens GAMMA line. With KNX, you are not locked into one manufacturer. Because of this, KNX fits virtually everywhere, from stadiums to hospitals, to corporate environments.

The building managers are so happy with the new lighting system, in fact, that they plan on doing six more floors this year.



FROM KNX CITY TO IoT CITY

Interconnected properties in synergy with KNX and internet

Task

The KNX Internet of Things (KNX IoT) points out options which KNX offers not only for present but also for future developments. With KNX buildings can be adapted to future requirements that are currently not foreseeable. The example shows the city of Flensburg where municipal buildings are equipped since 1992 with Home and Building Control Systems. The flexibility of the system was recognized already 20 years ago. Such it was possible to respond to technological developments with little effort. Whereas in the beginning mainly technical buildings systems had been controlled, now options for a central management are increasingly used.

Solution

The municipal KNX installations are working autonomously and many of them have a customised visualisation (Eisbär, Alexander Maier GmbH). They are interconnected via KNX/IP routers. Selected Datapoints of high importance like energy measurement or fault monitoring are forwarded to a superordinate central visualisation located in the "technical town hall". There, energy-savings are checked and evaluated taking into consideration technical and organisational measures in the properties.

Realisation

The components used on the sites differ from each other and reflect the development of the KNX devices offered to the market. Some bus devices are successfully in trou-

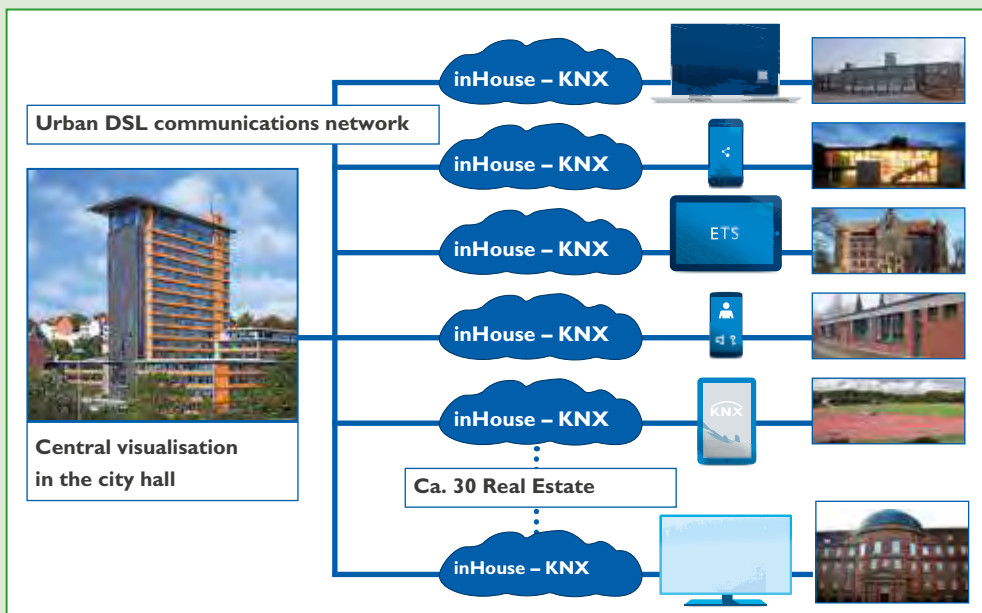
ble-free operation already since 20 years. The exhibition board shows the floor plan of the city of Flensburg. Push buttons on different positions symbolize public buildings like schools, museum, town hall etc. Visitors can call simulated energy values from the different locations just by a keystroke. A graphical visualisation shows their evaluation just like in real life.

Functions

The respective visualisation is available locally on site and thanks to KNX/IP also at a central place. Such the technical systems can be remotely monitored and if necessary also controlled. Today the concierges control "their" site via a tablet PC and if necessary they are able to act for a colleague. This was completely unthinkable in 1992 and years later.

Advantages

By the use of KNX, technical data can be collected and made available at the desired location. When the decision for the bus system was made in 1994 energy monitoring was far from being a main issue. However due to the realised network the city of Flensburg was fast able to collect consumption data of their properties and to realize optimisations. Due to its flexibility and high durability KNX is the ideal solution. Thus, last but not least, the city of Flensburg is well prepared to use with little effort in future services of the "Internet of Things" via KNX IoT Web Services.



Ingenieurbüro Beyer
Gebäudesystemtechnik
Dipl.-Ing., Dipl.-Wirt.-Ing.
Dirk Beyer
Liegnitzer Str. 10
24537 Neumünster
Tel.: 04321 / 9938-0
Fax: 04321/9938-28
Mail: info@ing-beyer.de
www.ing-beyer.de

MANAGEMENT OF DISTRIBUTED POWER GENERATION BY KNX IoT

Secure and encrypted: Virtualisation of KNX Web Services IoT via mobile communication

Task

Solar systems produce energy depending on the solar irradiation. The unstable energy harvest causes problems with respect to energy usage and commercial exploitation but also with respect to the grid load. As a result operators of photovoltaic plants and wind power stations increasingly have the challenge to manage the current energy harvest. Dipl. Ing. Marco Koyne, Berlin, shows how the data from decentrally located plants can be securely brought together for a centralised evaluation by KNX IoT.

Solution

The generated power can be measured on site by KNX electricity meters without any problems. For a wireless transmission of the data the secure communication via mobile communication is an appropriate solution. The possibility to process the data via the KNX Web Service IoT is especially of interest. Thus they can be retrieved from the internet and further processed at a central point.

Realisation

Data like power, current, voltage and frequency are captured by KNX and forwarded via a KNX/IP Router (ABB) to a KNX Webserver Gateway (Raspberry Pi). There they are processed for the web services applications. By means of the Easy Gateway EG400-HE (Aartesy) the data can be securely transmitted via mobile communication.

In order to connect further devices interfaces for Ethernet, USB, S0 and RS485 are provided. The central element is a terminal PC with Windows visualisation (Agentilo Mobile). The multifunctional system for monitoring, control and visualisation in the „Internet of Things“ communicates via the portal of Aartesy.

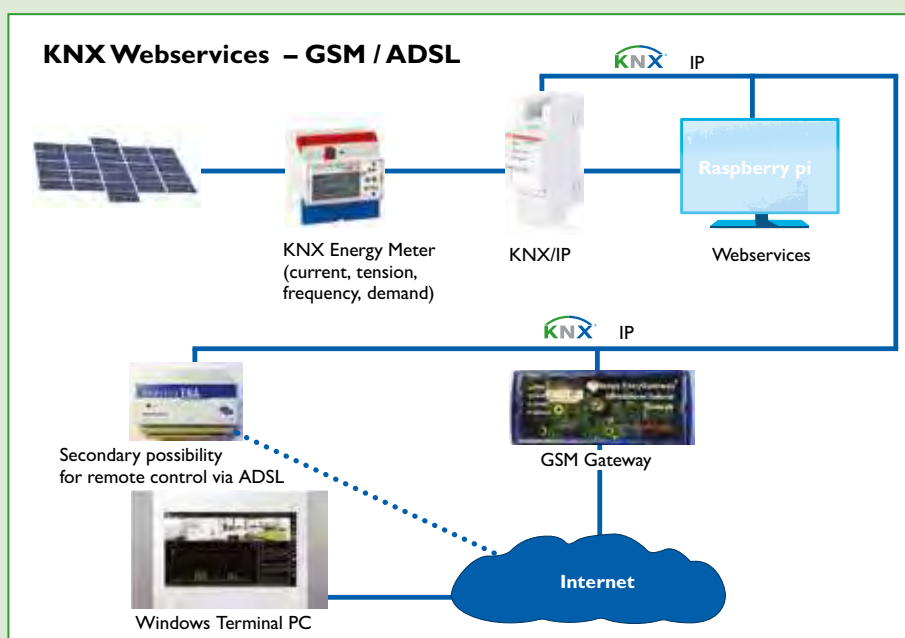
An alternative is an ADSL-connection between the KNX/IP Router and the „cloud“ with secure remote access (ENA, Enertex). It enables a secured and encrypted point-to-point data transmission. Further KNX devices like sensors and actuators help to simulate the functions.

Functions

The terminal PC processes and displays the data. It is also possible to have access to further web services, e.g. to manage the current energy supply. This is shown on the example of a single family house in cooperation with the „partner panel“ of Jürgen Katzenmeier.

Advantages

- Central energy management of decentralised power generators via KNX IoT.
- KNX Web Service IoT as solution for the communication via the internet
- At locations without direct internet connection secured and encrypted data transmission can be realised.



KOYNE
SYSTEM ELEKTRONIK

**Koyne-System-Elektronik
intelligentes Wohnen**

Marco Koyne
Dipl.-Ing. (BA) Elektrotechnik
Automatisierung
Duchrother Str. 38
D-12559 Berlin, Germany
Tel.: +49 (0)30 - 47 03 21 82
Fax.: +49 (0)30 - 47 03 21 83
Mail: info@koyne-system-elektronik.de

OPERATION LEVEL AND VIRTUAL WORLD

Interconnected sites in the age of the „Internet of Things“

Task

Terms like “Internet of Things” or even “Industry 04” suggest virtual worlds, where objects communicate with the Smart Home or industrial processes are interconnected with management or logistic systems. Until now it makes sense to interconnect decentrally located factories, offices, sports complexes, seaports. The KNX IoT application of GePro, Stralsund, shows, how decentrally located KNX installations can be coupled and how KNX IoT Web Services enable the connection of different subsystems. It shows the interaction of industrial and administrative processes with modern building technology. In doing so the important role of the operation level based on KNX becomes evident.

Solution

Single KNX systems are able to communicate via a network. Usually routers and gateways use KNX/IP for the interconnection. What is new is the KNX Web Service which connects KNX directly with the internet. This method is interesting because it is easy to recognize the ETS parameters from the part of the internet infrastructure. Thus the tasks of operation and control in all areas can be solved still better. Especially in public and industrial facilities robust and intuitive operation and control terminals are requested. The installed KNX operation and control panels comply with these requirements.

Realisation

Production, administration, high-bay storage and logistic symbolize the different sites as well as the subsystems to be integrated. The operation “on site” is realised by panels with push buttons and LEDs (GePro KNX-TAB 8, TAB 12/2, TAB15), partially they are also equipped with acoustic signaling devices and key switches. Several KNX components like FM actuator (Merten, Hager), dimming actuator (Gira), binary inputs for window contacts (ABB) and LED displays are used for the connection to KNX. “Ise Smart Connect KNX Secure” performs an SSL-protected connection to the mobile operation facility “smart-phone” as well as to the remote parameterization.

Functions

Status indications, fault signals and alarms are centrally displayed by the building management system. The BMS evaluates the alarms and informs the concerned persons. Consumption data are logged, evaluated and optimised. Via centralised panels at the factory gates messages can be acknowledged and lighting, gates etc. can be controlled. By KNX Web Services information from administration, production, storage and logistic can be used.

Advantages

- Central monitoring intended for the commercial administration of sites.
- Fast information and saving of time by mobile control devices
- Energy savings by optimisation of consumptions. KNX operation and display level for all systems and therefore retrofittable with robust and intuitive panels.




GePro – Gesellschaft für Prozeßtechnik mbH
Geschäftsführer / Business manager:
Dipl.-Ing Dirk Müller
Heinrich-Heine-Ring 78
18435 Stralsund, Germany
Tel.: +49 (3831) 390055
Fax: +49 (3831) 390024
Mail: info@gepro-mv.de

KNX OPERATION CONCEPT

for visually handicapped persons with KNX IoT

Softer living with coloured buttons

Task

In the equipment of a house adapted to the needs of a disabled, a home technology controlled by KNX is not to be omitted. If correctly applied, electrical functions provide relief and more quality of life. GePro is facing the task to facilitate the life of visually handicapped persons. The solutions have to prove themselves especially in case of restricted visual perceptive faculty. Part of the task is the coupling of emergency phones and nurse call systems into the KNX operation concept.

Solution

The main focus is put on the operation of domestic functions. Unclear touch surfaces and tiny displays are a problem for visually handicapped persons. KNX buttons with different colours have proved themselves e.g. already in nursery schools. The KNX 4-fold buttons (GePro) have brightly illuminated touch surfaces in red, green blue, yellow, cyan-blue, violet and white colour with a clearly perceptible action point and thus they are a solution for buildings adapted to needs of the disabled. In contrast to the cover plates which are also available in different colours individual colour concepts can be developed. The new KNX Web Service IoT offers a solution for the integration of subsystems into the KNX system and for their operation concept.

Realisation

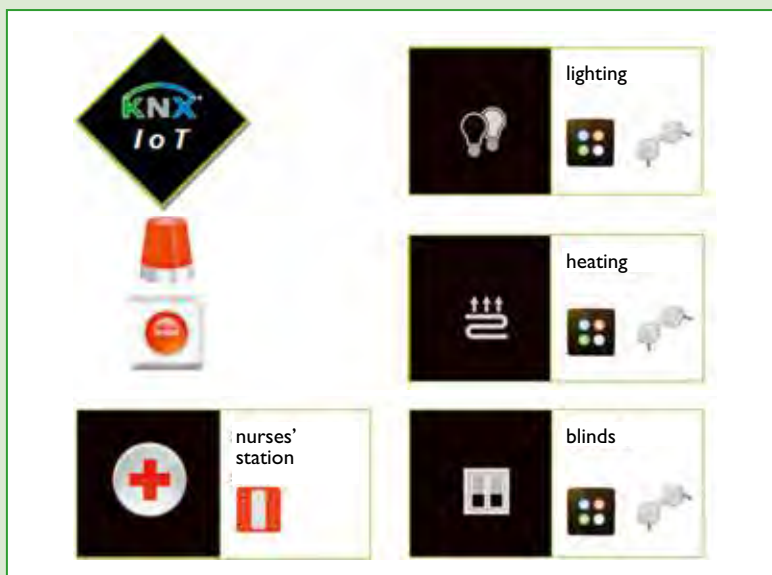
4-fold KNX buttons are installed where visually handicapped persons have to switch on and off lights, shutters, heating etc. The colours are consistently allocated to dedicated functions. A nurse call can also be made by KNX buttons. The acknowledgement of the nurses' station via a KNX panel (GePro) is signaled in the same way by a defined colour display. The connection to alarm functions preforms KNX IoT by an appropriate and an gateway and ETS App.

Functions

Functions like e.g. switching on or off and dimming can be performed with the push button. Emergency and nurse calls are forwarded to other systems. The possibility of a central monitoring is demonstrated by means of a mobile tablet.

Advantages

- It is easier for visually handicapped persons to operate domestic systems.
- More security by emergency call integration.
- Possibility to monitor remotely the functions in disabled households.
- Possibility to add KNX functions for a higher life quality.



LED LIGHTING BY KNX IoT

KNX emphasizes the features of tomorrow's LED lighting

Task

LED lamps replace conventional illuminants. They consume 80 % less energy than the incandescent lamps, which have been progressively withdrawn since 2009 by the EU. Thus the installation of LED lighting is an important step towards the envisaged 20 % reduction of greenhouse gas emissions until 2020. The filigree lamps are very versatile, shine in cold and warm white or even in any colour and provide focused or isotropic light. They are the ideal solution for modern lighting concepts in private houses, commercial rooms and outdoors. Peter Sperlich shows how LEDs can be comfortably controlled by KNX IoT.

Solution

In residential and commercial buildings several LED lamps are used: For instance, in the form of incandescent lamps or halogen spots, as LED strips or flat LED ceiling panels. Various KNX solutions are possible: Universal dimming actuators detect the load automatically and provide the relevant parameter settings for dimming the LEDs. DALI, which is an industry standard for lighting is used in residential buildings for ceilings spots and coloured light applications. DMX originates from stage technology and is popular amongst the lighting specialists. Furthermore, the direct control via KNX LED dimming actuators becomes more and more popular.

Realisation

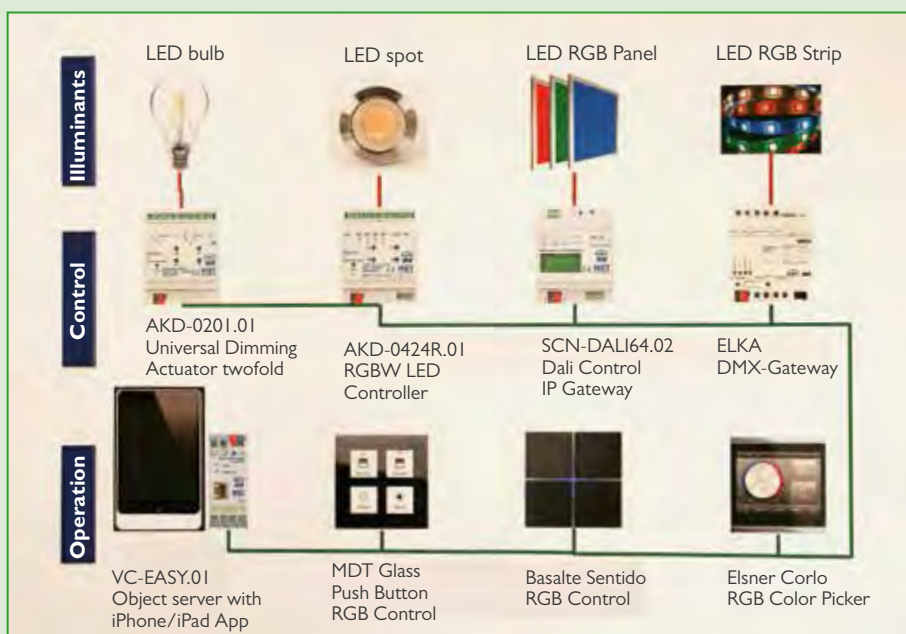
For the implementation, a Universal Dimming Actuator 230 V, an RGBW LED Controller 24 V, a KNX/DALI Gateway and a KNX/DMX Gateway are used. As example for comfortable operating concepts an MDT Glass Button, a Basalte Multitouch Sensor as well as an Elsner RGB Colour Picker are installed. The secured connection for mobile controls is realised by a VC Easy Object server with an iOS App. Thus, KNX is already able to perform today what will be possible in the future by KNX Web Services IoT under the term of "Internet of Things".

Functions

Besides a simple white dimming, LED controls provide colour schemes. By touching the appropriate buttons of the multitouch sensor and with the help of a display, the desired colours can be set. The colour picker's colour wheel provides the choice of the whole spectrum. The advantage of DALI is besides a simple planning, the direct dimming of the ballast with feedback and failure control.

Advantages

- Intelligent control of LED lighting.
- Versatile design options with light and colour.
- High energy efficiency in comparison to conventional illuminants.
- Mobile operating concepts.



ALL-COM

all-com ag
Peter Sperlich
Buchenweg 11
CH-8442 Hettlingen
Tel.: +41 76 7500 152
p.sperlich@all-com.ch
www.all-com.ch

WHEN iWATCH CONTROLS THE KNX SMART HOME

IoT Multiprotocol Gateway creates an overall concept in building automation

Task

KNX takes over more and more tasks in the building automation. In special areas, for example the wireless light design with Philips HUE, in home audio systems, like e.g. Sonos, or for social media services it may become necessary to ensure data communication between proprietary systems. The missing interoperability is the challenge here. Topic by Michael Eudenbach is how to bring together intelligent systems into a consistent overall concept. The system integrator has the task to interconnect across all systems different technologies like KNX, Sonos, Trado, Push Notification Services and Apple iWatch via KNX IoT.

Solution

The multiprotocol gateway “nomos Box” of the Nomos System AG, Switzerland offers the solution. The gateway supports different technologies and unifies the different protocols in the so-called “nOS” (nomos operating system) language. The access to this finally consistent protocol can be established by simple socket connections, a socket IO API (JSON) via a real time cloud access or a REST API with XML or JSON. Additionally, the new KNX Web Services IoT are also supported. The utilised hardware is based on Intel's IoT platforms.

Realisation

Exemplary solutions of the respective technologies are installed: Lighting with a Philips HUE lighting fixture, room temperature control with a Tado smart thermostat and window monitoring by means of wireless window contacts. All systems are interconnected via a local network infrastructure with internet access. A cloud access is not necessarily required. The bidirectional data exchange is realised via the local multiprotocol gateway.

Functions

The control of the different trades is realised by KNX sensors, via an App as well as via an Apple iWatch. The Philips HUE lighting fixture as well as the Sonos system can directly be operated via the KNX sensor. In the same way the functions of the Tado thermostat can be influenced. Different window states and messages are sent as push notification and/or posted in different social networks.

Advantages

The advantages of the presented solutions are obvious: The multiprotocol gateway opens the KNX technology for further trades and offers to the user the advantage of consistent applications across the systems by intelligent products being available in the Smart Home market. It offers as well to the manufacturers of IoT solutions a simple unified access to the world of the KNX Standard.



nomos system AG
Neumühlestrasse 42
CH-8406 Winterthur
www.nomos-system.com
info@nomos-system.com

KNX OF THINGS

CONNECTS TO SMART THINGS

KNX IoT opens for web designers the way to building automation by standardised interfaces.

Task

The "Internet of Things" opens new possibilities and challenges for the modern KNX building automation. The keyword (IoT) defines the interconnection of several decentralised intelligent components, which communicate directly and autonomously via the internet. In the same way they have to exchange bidirectional data with the KNX building automation respectively they shall be integrated into it. For that purpose a new interface has been created by the new KNX Web Service IoT (Internet of Things). The application of Michael Eudenbach and Bernhard Huessy, Nomos System AG, Switzerland, shows, how the world of KNX can nowadays be connected to the virtual world of the IoT.

Solution

The application shows exemplarily how a cloud based Smart Home System (Samsung "SmartThings") can communicate with the KNX System. The IoT eco system "nomos Box" serves as gateway between those two worlds. The multiprotocol gateway provides as one of a few systems of this type a KNX connection. As a new feature, the existing real time REST API of the "nomos operating System" (nOS) has been amended by KNX Web Services, by means of which both systems can exchange data.

Realisation

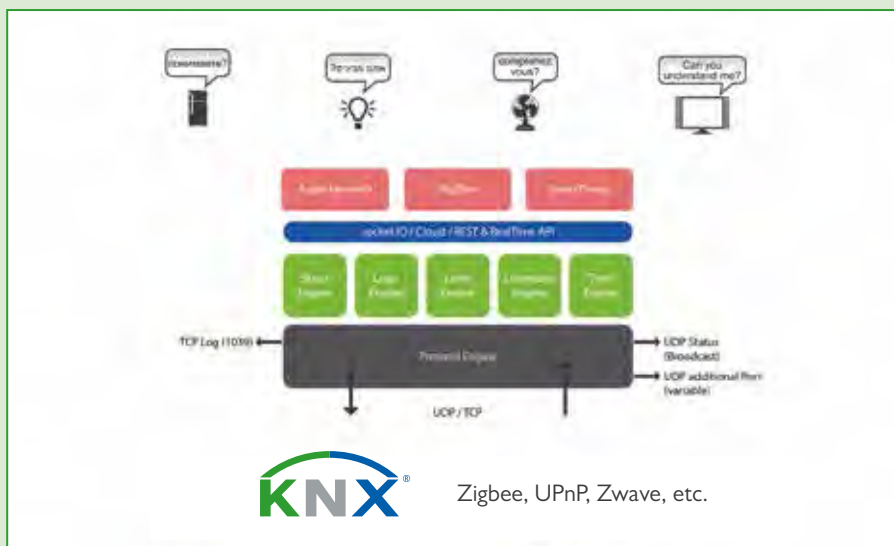
KNX applications for lighting, shutters and heating as well as a KNX/IP interface are installed in order to simulate a home automation. The "nomos Box" is integrated as central gateway and has access to the internet via the local network. The KNX object table, generated by the ETS WS Exporter App, is deposited in this web service/multiprotocol gateway. The "nOS" generates automatically from this object list web objects for the smart home system and ensures the bidirectional data exchange between both systems. The web services "SmartThings" have direct access to the KNX Web Services via the multiprotocol gateway. In turn the "nOS" transforms this protocol into the KNXnet/IP protocol.

Functions

The KNX functions of the exemplarily installation like lighting control, display and modification of the room temperature as well as shutter control are detected by the corresponding App of the smart home system and thus become operable. In the same way status changes in the KNX world are automatically sent respectively synchronised.

Advantages

With the new KNX Web Services a further interface has been defined, which enables web designers, to get easily access to the world of KNX building automation by common protocols like CoAP, HTTP etc.



ELEKTRONIK INNOVATIV

Technische Gebäudeausrüstung
+ Systemtechnik

Hochstraße 12
D-59425 Unna
Tel.: +49 (0) 2303 983 79 91
Fax.: +49 (0) 2303 983 79 97
E-Mail: m.eudenbach@mac.com
www.mremote.de



Zigbee, UPnP, Zwave, etc.

SIMPLE CONNECTION OF INTELLIGENT SYSTEMS BY KNX IoT

KNX Web Services for access control, security and room allocation

Task

Hotels, youth hostels, assisted living – in such buildings persons can be present or not. Data of the temporarily usage of the rooms are important for organisational tasks, monitoring functions, but also for heating and climate control, security systems etc. The application of Jochen Katzenmeier shows, how different systems for building control can be interconnected for their management.

Solution

Prerequisite: The electrical installation for lighting, room temperature control, shading etc. is realised with KNX. Due to the new possibilities of KNX IoT Web Services other intelligent systems can be easily interconnected. Thus, the door communication is not only used for access control, but provides also data for booking management and presence monitoring. KNX IoT integrates booking system, fire alarm and solar energy management systems.

Realisation

The installed door communication system consists of an outdoor station and a 10" panel that serves concurrently as indoor station. Access to the booking system is possible via web browser. A fire detector represents the fire and burglar alarm system. Different lamps symbolise states like room allocation, presence, alarm, local energy consumption or feeding solar energy into the grid. The

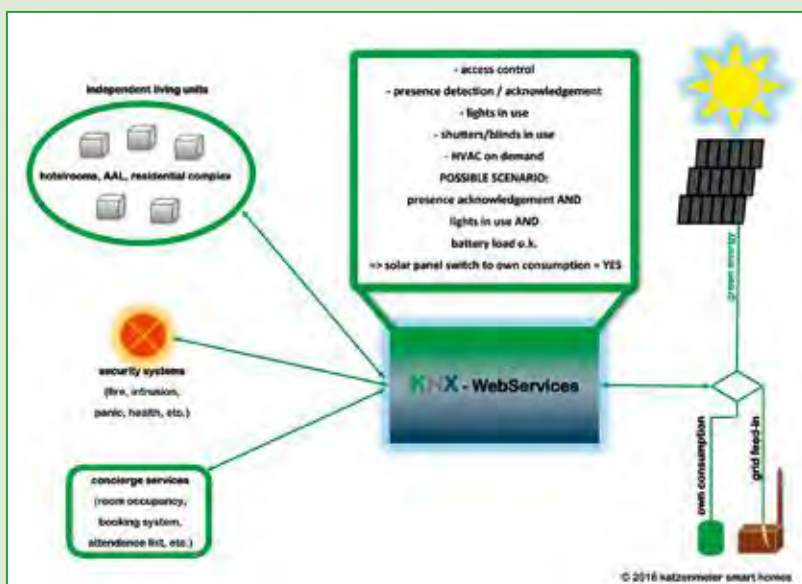
values of the heating system can be displayed graphically via visualisation. Contactless transponders respectively card holders serve for access control and presence monitoring. Operation and control of the functions is possible via push buttons and mobile devices.

Functions

The door communication system with call buttons is used for the access of third persons to the building. Registered persons can directly enter using their key, their badge or their keycard. The functions of the living units like security system, alarm triggering, lighting and heating control are controlled automatically depending on the presence/absence information from the booking system. Based on the presence/absence information, the energy flow of the photovoltaic system can be controlled, either local energy consumption or feed back to the grid.

Advantages

Simple integration of intelligent systems: Thus always up-to-date information on presence/absence of persons and the status of the living unit. Simplified organisation, high room comfort and energy savings due to demand controlled lighting control, heating control and shading as well as monitoring and security functions adapted to the current situation.




katzenmeier smart homes
systemintegration
 Jochen Katzenmeier
 Audifaxstr. 7
 78315 Radolfzell
 Tel.: +49 (7732) 89 29 087
 Fax: +49 (7732) 89 29 174
 Mail: joka@bus-i-joka
 Web: www.bus-i-joka.de

GLOBAL MONITORING BASED ON KNX IoT

Quick reaction to failures and breakdowns

Task

The motor protection switch of the water pump has switched off, the differential switch of the door drive has tripped, fuel is running out, the heating system does not start even if the outdoor sensor signals low temperature, there is a smell of gas or water leakage in the basement – such bad situations have to be detected and resolved as soon as possible. Elektro Wagner has set itself the task of “Global Monitoring” of buildings and their functions. Thereby, it does not matter if the monitored object is located in the vicinity or thousands of kilometers away.

Solution

Due to the “Internet of Things”, “Global monitoring” gets a completely new relevance. However, up to now the decentralised bus system KNX with distributed sensors and actuators and interfaces to other systems is already used like an “IoT”. Local KNX installations and third party systems communicate via KNX/IP gateways and enable a central monitoring. The building control system shows graphically values and indicates faults, detects faults in systems by comparing the values to the normal ones and alerts the responsible service technician. Depending on the fault, local or remote reaction is required.

Realisation

The “Global Smart Home Service Desk” of Elektro Wagner operates as follows: A touch screen with visualisation (Divus) serves as central monitor. Intelligent devices, like e.g. a TFT display (Gira GI), a multisensor with voice control (Enertex Synohr) and a touch button (Elsner) show not only the comfort of a Smart Home but represent in this case the systems to be monitored. These are brought together via a KNX/IP router (Gira), which provides a high degree of security. Nevertheless: In future, KNX IoT Web Services would be able to undertake these tasks in a much simpler way.

Functions

Via the TFT Display a failure of the heating system can be simulated. The multisensor keeps the states of lighting, shading, as well as the values of temperature, humidity and ventilation – in the full sense of the word – ready for recall. But also on the pages of the touch button’s display prepared values respectively failure simulations are available. Threshold values and failures are evaluated by the centralised monitoring respectively by the BMS.

Advantages

Global monitoring by integration of local systems. KNX IoT extends these possibilities especially for third party systems. Faults are quickly detected, which is particularly necessary in case of unoccupied buildings or unattended sites. Thus a quick reaction to failures and breakdowns is possible.



Elektro Wagner GmbH
Bierhausweg 1
61273 Wehrheim, Germany
Tel./Phone: +49 (6081) 9525-0
Fax: +49 (6081) 95 25-95
Email: info@elektro-wagner.com
Web: www.elektro-wagner.com

AUGMENTED REALITY AND KNX IoT

Operating comfort by "augmented reality"

Task

Incomprehensible operation of systems can be frustrating. Intuitive operation is the prerequisite for the acceptance of a technical device. Who does really like to read the user manual often written in an unwieldy way? This applies for the own and especially for an unfamiliar living environment. The function of switches for lighting, shutters, heating or sound system has to be palpated in the full sense of the word. Christian Kiefel, Valbonne, France, faces the challenge of creating an easily understandable operation concept for the smart home. He uses the possibilities of a computer aided enhancement for the perception of reality, the so-called "Augmented Reality".

Solution

An application for the smartphone or tablet in combination with the built-in camera enables the detection of objects in the environment. The camera image is directly overlaid with the operating elements for the control of an object. Next to a lamp appear the control buttons for switching or dimming, if a window is detected, the control elements for moving the shutter are overlaid, while targeting a speaker the current music title is displayed and by an appearing slider the loudness can be controlled.

Realisation

A software package for a NAS embedded mini-server allows the local data storage of the different objects in the living environment. As a first step, they have to be

taught-in by the camera of a smartphone or a tablet and thereafter they are allocated to the devices being accessible via the KNX installation. When connected to the local WiFi the application of the customer's smartphone imports these data. As soon as the camera image of the application is activated, the application compares the current image with the imported data. In case of identification the respective device is connected via the KNXproServ Controller and it can be controlled by the overlaid operating elements.

Functions

Nowadays image recognition is very reliable. Especially tablets with 3D cameras allow the detection even under adverse lighting conditions. Also the direction, from where an object is targeted by the camera, does not influence the recognition. Teaching-in the objects is very simple and the allocation to the devices in the KNX installation can be made even by a layman. The KNX proServ Controller operates object oriented. The KNX Datapoints of a device are already grouped in ETS. Thus a device can be addressed as a whole.

Advantages

- Intuitive operation in a previously never enjoyed way.
- Contact-free control is also possible for persons with restricted mobility.
- Later adaption of objects also possible by layman (e.g. when changing a pending lamp)



PRO KNX
by BleuComm'Azur

Bleu Comm'Azur SARL
Christian KIEFEL
180, imp du Baou
06560 Valbonne
France
Tel +33 607 50 25 06
Fax +33 9 55 27 50 25
realknx@proknx.com

SECURE ALARM SYSTEM WITH KNX IoT

Synergies by multiple usage

Task

Measures for intrusion protection and barrier-free access are still better subsidised in Germany since November 2015. This draws the attention on the integration of alarm systems into the KNX installations. The bus system already controls the technical trades starting from lighting, via heating/climatisation up to sun protection and thus ensures comfort, safety and energy efficiency. A further application is evident. Dipl. Ing Holger Schult shows, how this can be realised.

Solution

From the technical point of view alarm systems can be realised by KNX – yet the requirements of the insurance companies are in contradiction to such a solution. Thus, not everything that is technically feasible can be realised. But there are synergies by multiple usage. Therefore it makes sense to realise e.g. a burglar alarm system according to the requirements of the insurance companies (VdS). When doing so attention has to be paid that KNX does not affect the alarm system. On the other side the signals of the sensors and/or alarm information can be used for further functions of the KNX system.

Realisation

The presentation shows, how to burglar alarm systems use the above mentioned possibilities. One burglar alarm system (Telenot) offers an RS232 interface to the building management system and an extension module RS232 to

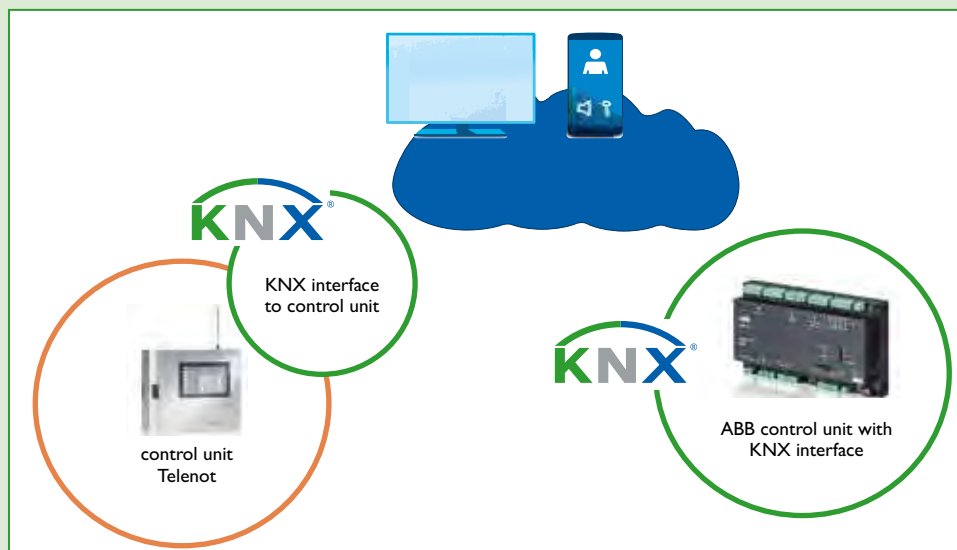
KNX. A further burglar alarm system (ABB) can directly communicate with KNX. It depends on the required safety classification of VdS what and how detailed information can be exchanged. Thus e.g. the existing window contacts can be used for further purposes. It is also possible to display alarms on mobile devices like smartphone or tablet via KNX Web Services and other applications.

Functions

All sensors required for the function “perimetric protection” of the burglar alarm system can also be used for KNX functions: Examples are: Setting the system switches centrally off the lighting or changes the heating from “comfort mode” to “standby”. When open windows are detected, the heating valves are – with a time delay – automatically set to “frost protection”. Motion detectors of the burglar alarm system provide simultaneously presence information for several kinds of KNX functions. Further technical alarms provided by smoke detectors, leakage detectors and gas detectors can easily be integrated.

Advantages

- Up-to-date information on the state of the house
- Increased sense of security
- Information on alarms
- Information can be selectively retrieved at any time



HSEEG

HSEEG – Ingenieurbüro
für Elektroplanung und
Gebäudesystemtechnik

Dipl.-Ing. Holger Schult
Waidmansweg 7
16548 Glienicke
Tel.: +49 33056 89632
Fax.: +49 33056 89633
Mail: info@hseg.eu

KNX Secure integrated in the ETS5.5

KNX IP Secure and KNX Data Secure provide secured access to KNX Installations.



KNX IP Secure and KNX Data Secure are available with the ETS5.5.

Already up to now KNX complies with the security requirements, as long as installers of Home and Building Control take care of the recommended protective measures against manipulations. Yet, new media like LAN and WLAN with internet access, wireless operation concepts and applications in sensible areas increase the risk of damage by unwanted intruders. According to these but also to other requirements KNX has developed new security concepts: KNX Data Secure and KNX IP Secure. Both of them are based on worldwide established security protocols and already integrated in the new ETS5.5.

The safety requirements of KNX installations are growing. Critical and confidential information is increasingly transmitted due to extended application areas. These are for instance:

- information on consumption data that should not be seen by third parties,
- signals of locking systems (e.g. door contacts) which have to be protected against manipulation,
- KNX devices for critical functions, which only shall communicate with authenticated participants,
- data protection in security applications; here the code for the access system or even for setting/unsetting an alarm system may only be sent in encrypted and not in clear form.

Encrypted Telegrams

If data have to be sent via the internet the connection between the sending and receiving network can be protected by a virtual private network (VPN). Yet, this does not ensure, that the sender is authorized to configure the bus system or to exchange data with it. Here KNX IP Secure offers additional security by extending the KNX IP protocol in such a way that the transmitted data are completely encrypted. This can be realized even in existing installations with little effort.

If data have to be transmitted via KNX only locally, it is sufficient to protect the data by an extension of the bus protocol. The specified protection mechanism KNX Data Secure authenticates and/or encrypts selected KNX telegrams independent of the medium. The keys are allocated to the devices resp. to the objects via ETS. As in one KNX system secured and unsecured applications are possible, it is not necessary to secure all devices. Also existing system components have not to be replaced. Such the effort is kept low and the investment in the KNX bus technology is ensured.

Security Protocol worldwide established

In future the newly specified protection mechanisms KNX Data Secure and KNX IP Secure will allow the creation of secured communication

channels between KNX participants. Thus the infiltration of manipulated messages in order get control of the system can be inhibited. For this purpose each message is equipped with an authentication code. The automatic allocation of sequence numbers resp. the sequence identification prevents from the attempt to log data and to re-transmit it later on for sabotage purposes. Finally the encryption of the data traffic makes the KNX installation almost invulnerable. The procedure is based on worldwide established security protocols.

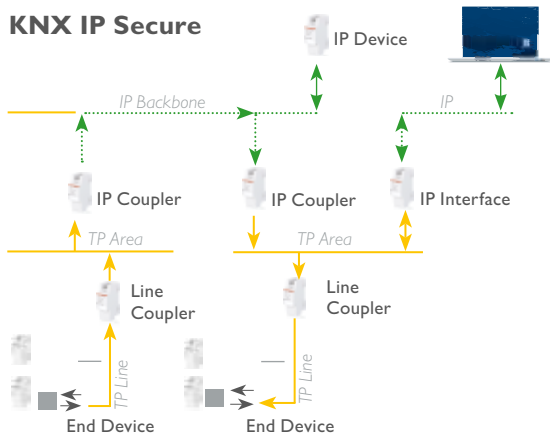
Introduction with ETS 5.5

The new security functions, especially for the access via the internet, can be applied to existing systems by using interfaces with the new KNX security mechanisms. KNX IP Secure and KNX Data Secure will be supported by the new ETS 5.5 planning and commissioning software.

Important to know:

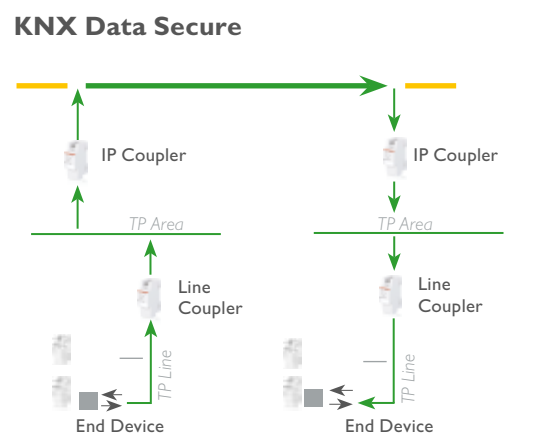
- In a KNX installation KNX IP secure and KNX Data Secure can be used in parallel.
- In a KNX installation secured and unsecured applications can be used in parallel, i.e. not all devices have to be secured.
- The new security functions can be integrated seamlessly in existing installations.

KNX IP Secure



KNX IP Secure for secured KNX transmission between buildings

KNX Data Secure



KNX Data Secure secured KNX transmission within the building



New Members

Active DBS



FRANCE Active DBS is a solutions & services company, targeting time & money savings through productivity improvements, water and energy savings. Their open & application oriented software suite for “Energy Efficiency & Maintenance Suite”, called E2MS, can be embedded or is available via the Web (Cloud Computing). The range of systems is then designed to serve single sites as multiple sites, local monitoring up to complex remote management needs, as a stand-alone solution up to a multiple purpose Enterprise Information System (customised reports for all levels, energy efficiency & ISO 50 001 compliance, KPI, etc.). E2MS is common for any site from 50 to 50 000 m², with one or multiple utilities such as refrigeration, HVAC, lighting, one or many networks with input & output modules, meters, controllers, PLCs. The KNX protocol is fully part of the Active DBS road map to enlarge its E2MS library.

Contact: www.actedbs.com

Advancis Software & Services GmbH



GERMANY More than 1,000 installations realised in most diverse application areas, local representations worldwide and numerous certified integration partners make Advancis one of the international market leaders in the field of vendor-neutral PSIM (Physical Security Information Management). Founded in 1994, the company was pioneering with regard to cross-domain security management. From the very start, independence and vendor-neutrality have been the key advantages of the WinGuard system, as it integrates the total security, building, communication and IT infrastructure.

Contact: www.advancis.net

Alexander Bürkle GmbH & Co. KG

AlexanderBürkle ■

GERMANY The company Alexander Bürkle stands out as electrical wholesalers with millions of innovative technical products and numerous matching services for people who appreciate modern building technology and want individual solutions implemented in their homes. terminal[®] is their planning tool for building a self-developed software for electrical contractors. It can also help craftsmen, architects and planners with an uncomplicated planning of KNX. Multimedia systems, antenna technology and networks are set up within the shortest time. Professionals have with terminal the perfect tool to plan and network all the desired devices and necessary technical functions at the end customers' home.

Contact: www.alexander-buerkle.de

ATEN International Co., Ltd.



TAIWAN ATEN International has been a reputable provider of IT connectivity and management solutions among IT infrastructure access management (KVM), Professional Audio/Video, and energy intelligence power & cooling distribution system markets for over 35 years. ATEN would like to offer KNX connectivity for further control and communication services.

Contact: www.aten.com

AVE S.p.A



ITALY AVE S.p.A. was the first Italian manufacturer of electrical material in 1904. They started by manufacturing simple switches made in wood and ivory and across over a century of innovation they became a multinational company active in over 60 countries across the globe. During 111 years they were able to design and deliver thousands of innovative products to the market. Always combining high technology with the best of Italian design is the identity of their products. Continuing their efforts to deliver new solutions they are already on the market with many ranges of smart systems: from home and hotel automation to safety and security products. They are now joining KNX to offer their quality, design and innovation also to the big KNX community.

Contact: www.ave.it

Domonetio



SPAIN Domonetio is a new KNX member, based in Barcelona and provides a range of KNX products for smart homes, smart buildings and smart cities solutions. The company markets devices worldwide in order to promote the use of the KNX standard from the very small projects to the larger ones. Domonetio's main goal is to ensure the use of an automation system in every house or building as a natural evolution of the electrical installation.

Contact: www.domonetio.com

ELKO EP s.r.o.



CZECH REPUBLIC ELKO is a traditional and innovative Czech manufacturer of electronics devices that has been around for over 22 years. They are proud to be a true specialist for modular electronic devices – relays, of which they produce more than 200 types. Own production, modern tools and devices, research and development centre – all these allow them to develop of the most sought after technology – the intelligent electro-installation iNELS system. Connection to KNX allows their system integrators to use any KNX compatible brand with iNELS. The bridge between these two BUS systems is formed by „connection server“. The main benefit for integrators is that KNX components can also be transferred to multimedia server iMM, which is the control centre for AV technology and third parties. Parameterisation goes through IDM3, which is iNELS design manager and tool to set up iNELS.

Contact: www.elkoep.cz

enno electronics Co., Ltd.



CHINA ENNO is a technology innovation company focusing on smart home hardware from Chengdu, China. Their products are based on wall-mounted intelligent control panels, which can connect and control luminaires, curtains and air-conditioners in homes and public spaces like offices, hotels, etc. They are very dedicated to the KNX Standard and related products as it will greatly contribute to the continued growth of their business. The next level of the product development will show KNX-compliance.

Contact: www.enno.com

EVN-Lichttechnik GmbH



GERMANY EVN-Lichttechnik is a German company, which is active in the field of lighting technology. Their product range consists of various aluminum profiles, LED Strip Lights, LED panels and various light control techniques, etc. Their distribution caters to customers' needs all over Germany. *Contact:* www.evn-lichttechnik.com

Finder S.p.A.



ITALY Finder designs and produces relays, timers and products for residential and commercial installation exclusively in the EU. Most of machinery and automation systems that are used in production, assembly, and testing are designed and manufactured at the Almese plant. Plastic materials and metal alloys are also processed there and then components are assembled to complete the finished product. This procedure attests to the high level of specialisation and depth of technology resources available within the Finder group. Long-standing partnerships with distributors and customers guarantee continuity, stability, and growth. *Contact:* www.findernet.com

Gerhard Geiger GmbH & Co. KG



GERMANY Gerhard Geiger GmbH & Co. KG in Bietigheim Bissingen manufactures mechanical and electric drive technology for sun protection and special applications. Geiger-drive technology is a leading manufacturer in the production of highly automated blind drives with very high quality standards. The X-Line venetian blinds has been developed together with Rademacher Geräte-Elektronik GmbH, a specialist in KNX-technology. Both manufacturers complement and broaden their product range with the GJ56 with integrated bus technology with the torque increments of 3–24 Nm as the drive system for sophisticated building automation. *Contact:* www.geiger.de

Grünbeck Wasseraufbereitung GmbH



GERMANY The goal of Grünbeck GmbH is that people worldwide have access to clean water worldwide. With know-how, products and communication Grünbeck, as a water treatment specialist, makes lots of effort to implement this right on a long-term basis. With the core competence „We understand water“ they want to educate both the public and water professionals about water, because this is crucial for conscious people dealing with the vital resource of water. Grünbeck develops and manufactures products for water treatment, equipment for water treatment for heating and cooling systems and swimming pools. KNX is the leading standard in the home and building technology worldwide. By providing the KNX technology they adapt their products even more to their customers' needs. *Contact:* www.gruenbeck.de

HangZhou berlin Intelligent Technology Co., Ltd.



CHINA HangZhou berlin Intelligent Technology Co., Ltd. provides cost-efficient and customised high-tech solutions for architectural lighting control and building automation applications, based on KNX technology. They manufacture building automation products to control lighting, curtains, HVAC, security, video intercom, audio/video as well as centralised control, remote control and links to other subsystems. Through bus installation and wireless high-speed Ethernet technology integration their products can achieve control of all building functions for families, communities and cities. You will fully experience the smart home life of comfort and convenience. *Contact:* www.rudolph-ibs.com

iHaus AG



GERMANY iHaus has a clear vision: a simple and intuitive control solution that allows you to combine home automation and lifestyle devices from multiple vendors into one easy-to-use system. Using the patented software solution, any number of devices from cooperating providers, such as Sonos, can communicate with each other and add entirely new functionalities and thus added value through the exchange and analysis of operational data. iHaus combines KNX and IoT products in a Smart Control Platform. With their solution comfort, energy efficiency and security can be combined and controlled via App, KNX push button and cloud. At any time each iHaus user may create new functions and flowcharts for automatism by himself and mix KNX and IoT products thereby optionally and complete it with services via the internet. *Contact:* www.ihaus.de

Miles Magic Automation Private Limited



INDIA Miles Magic Automation, an ISO 9001:2008 company, is a leading technology driven organisation providing end-to-end solutions in the home and building automation segment. Miles Magic brings state-of-the-art technology to India that adds value to customers through a combination of multiple high-end technologies for a complete solution in home and building automation. With offices in major cities in India and a strong dealer network of more than 100, spread across India, they are just a call away. Their services span across homes, villas, farm houses, offices, condominiums, hospitals, airport, luxury hotels etc. and suits every budget and lifestyle. Their comprehensive automation solution includes lighting control, Audio/Video control, curtain control, HVAC control, energy management and security and surveillance. *Contact:* www.milesmagic.co.in

OSRAM GmbH



GERMANY OSRAM is one of the two leading light manufacturers in the world. The company's portfolio covers the entire value chain from components – including lamps, electronic control gear and opto-semiconductors such as light-emitting diodes (LED) – as well as luminaires, light management systems and lighting solutions. The company, which is internationally oriented, had around 34,000 employees worldwide at the end of the fiscal year 2014 and generated a revenue of more than 5.1 billion Euros in that year. For more than 100 years, OSRAM has been “passionate about intelligent light”. As a globally operating company, they also explicitly encourage socially and environmentally responsible policies around the world – as well as sponsoring art and culture at home and abroad. *Contact:* www.osram.com

Private Home (Beijing) Intelligent Home Technology holding Co.,Ltd



CHINA Private Home (Beijing) Intelligent Home Technology holding Co.,Ltd has more than eight years' experience in system integration for buildings and conference halls. Their company and factory manufactures Audio/Video and control products. In 2012, they started the development of lighting control systems. And now they have their own intelligent lighting control system, network control bus and the relevant equipment. Customers use their control system in homes and buildings. They have already sold many lighting control modules and software in the Chinese market. They also have a number of successful project cases in different provinces in China. *Contact:* www.vipsmart.cn

Renesas Electronics Europe GmbH



GERMANY Renesas Electronics is the world's number one supplier of microcontrollers and a premier supplier of advanced semiconductor solutions, including system-on-chip and a wide range of discrete analogue and power devices. Renesas' products provide pioneering platforms for the advancement of the Smart Society, embedding intelligence, connectivity, safety and security in solutions for cars, homes, buildings and factories. As part of the activity for Smart Building, Renesas is investing more and more into connectivity protocols used in building and home automation. Renesas Electronics Europe, as premier provider of advanced semiconductor solutions, has certified the well-established KNX stack from Tapko Technologies to operate with its entire line-up of RL78 microcontrollers. *Contact:* www.renesas.eu

rutec Licht GmbH & Co.KG



GERMANY rutec Licht GmbH & Co. KG is one of the leading manufacturer in the market segments of downlights and led-strips in Germany. Rutec was founded on 1 September 1990 by Manfred Rullhusen, Birthe Eikmeier and Holger Rullhusen and is until now a family business. As sole agent of KANDOLite Halogen lamps in Germany rutec took advantage of the booming halogen light market in the early 1990's. In the mid-90's, rutec expanded the program by adding down lights – today one of its core product lines in the professional market. In today's booming LED market they offer a specialised and innovative program of LED downlights and led strips including profiles and controlling systems. LED strips became the second core assortment. *Contact:* www.rutec.de

WExcedo, Lda



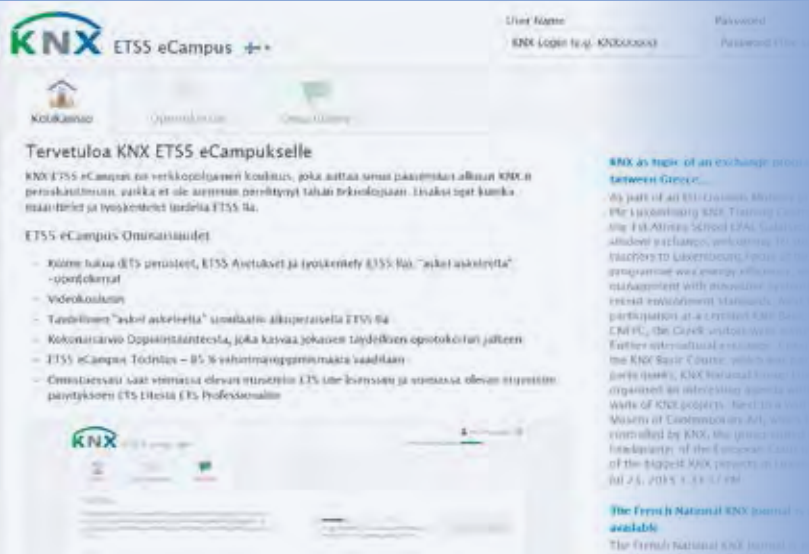
PORTUGAL WExcedo is a company that wants to develop innovative solutions for the future Internet. The name WExcedo is a contraction of the word WE (English) with EXCEDO (Latin), which means going beyond. They want to go beyond on the Internet of Things and intend to develop projects in the area of smart homes, smart cars, and smart cities. They also have plans in the field of additive manufacturing (3D printing) micro fabrication and powder injection molding (PIM). Web platforms as a service is a goal beyond all these technologies. Providing a way for smart buildings to be remotely controlled and programmed in a simple and inexpensive manner. Simultaneously it will be possible to collect and store all the data that is being generated over time. Thereby the owners of buildings with KNX and installers of this technology will have a new powerful tool that will modify the way how they interact with smart homes. *Contact:* www.wexcedo.com

ZhuHai Sation Technology Co.,Ltd.



CHINA Established in 2012, Sation Technology is a member of KNX China, dedicated to developing products according to the KNX-standard like actuators, control panels, sensors, system components, etc. They have developed a KNX-standard protocol stack (0701) for their shareholder - Shenzhen HuaYuan Display Co.Ltd, member of KNX Association. And now, 0901 protocol stacks and other KNX standard products are also under development. 4 series of their KNX products have been tested and certified by KNX association, and more series are/will be submitted. Their products are widely used in several Chinese intelligent building projects and received good feedback on its stability and reliability.

Contact: www.sation.com.cn



ETS eCampus available in 13 languages

Since its contents have been updated to ETSS, the ETS eCampus has once again proven a great success. Thousands of new users have joined this free online training, making it at the same time a unique community of ETSS students. The tool is available in Czech, Danish, Dutch, English, Finnish, French, German, Greek, Italian, Japanese, Portuguese, Spanish and Turkish. <http://ecampus.knx.org>

KNX books now available as ebooks.

Until now, the KNX books were only available in paper format. Due to the number of smartphones and tablets used worldwide, KNX Association offers now most of its books in ebook format like KNX Handbook, Basic Course and Advanced Course. The ebooks are available via the Amazon website. If you want to see a list of the KNX books, have a look on this link: <http://www.knx.org/knx-en/training/books-documentation/knx-association-books/index.php>



New Products

ABB i-bus KNX/IP Devices



ABB STOTZ-KONTAKT GMBH The new range of ABB i-bus KNX/IP devices, consisting of IP interface and IP router, can be used in all applications in which KNX shall be interfaced to IP networks. The IP interface is especially suitable to connect visualisation systems and ETS software to the KNX bus, therefore it features 5 tunneling servers allowing up to 5 IP clients to simultaneously build up a connection. The IP router can be used additionally as fast line and area coupler for KNX installations and provides 5 tunneling servers. Both devices can be powered via a separate 12 – 30 V DC power supply or via Power Over Ethernet (PoE), saving space in the distribution board. Furthermore, the new range supports the ABB i-bus Tool which significantly facilitates the installation and commissioning.

Contact: www.abb.com/knx

Agentilo Mobile 1.3 for KNX

AGENTILO GMBH The new version 1.3 of the Agentilo Mobile visualisation and control software opens the space to realise own ideas and extends version 1.2 with additional layouts and control functions. User libraries and comfortable tools allow for fast and efficient work. Automatic switch of visualisation pages in case of events, screen lock, code lock, page scaling and embedding web pages, cameras or videos round off the range of functions provided by the software. Secure, mobile and communicative, supporting business processes across buildings with web services and dedicated components, the Agentilo Mobile visualisation is highly recommended for the use in the field of commercial and municipal applications.

Contact: www.agentilo.com



KNX Presence Detector Mini



ALBRECHT JUNG GMBH & CO. KG Unobtrusive design and powerful: The compact design of the KNX Mini Presence Detector provides three options for ceiling installation: in a false ceiling, surface mounting, or in a flush wall box. The 5 functional blocks of the Universal version may optionally be configured for Presence Detector, Ceiling Detector, or Signalling Mode applications. They work independently of each other and can be switched between day and night operation. Additionally, the three PIR sensors with a total detection area of 360° can be individually analysed as required by software. Setting and operating the Universal version can optionally be carried out through infrared remote control.

Contact: www.jung.de/en



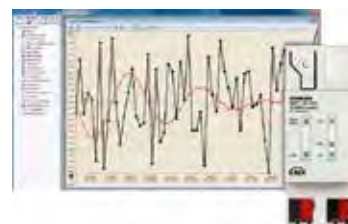
KNX COMMUNICATION MODULE

ALGODUE ELETTRONICA SRL Very compact and easily remotely managed, the Algodue DIN-rail KNX communication module is ideal for measurements of consumption, power and peaks for home automation systems, as well as civil and industrial automation. To be coupled with Algodue single-phase and three-phase counters, it can be maintained also in case of replacement of the counter. Ideal for rapid installation in narrow spaces and ideal for monitoring equipment for the clean energy such as photovoltaics. Also available in OEM version. *Contact:* www.algodue.it/eng/communication_modules.html

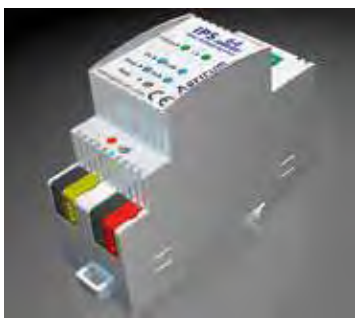
AMC KNX-Channel for WinCC

AMC DATENSYSTEME GMBH The AMC KNX Access Protocol guarantees you the control, surveillance and visualisation of KNX compatible devices through a SIMATIC WinCC system. It allows direct access to the KNX installation's Group Addresses without the necessity of additional soft- or hardware solutions. It requires only an established bus coupler, which allows you to access the KNX bus via a computer. Through the import of ETS4 and ETS5 projects you can import Group Addresses into the tag management of a WinCC project and configure them as required. Install SIMATIC WinCC as your building control system, one of the most widely used HMI systems with the most extensive functionalities.

Contact: www.amc-ds.de



IPS 64 – smallest intelligent KNX Power Supply on the market



APRICUM The intelligent DIN-rail mount KNX Power Supply for 640 mA is the smallest on the market with just 2 unit width. It outperforms any other KNX Power Supply for 640 mA in size and functionality. The narrow size allows more KNX devices on the same DIN-rail. This reduces cost by increasing free space in the distribution board. An additional KNX node ensures higher flexibility and usability by providing diagnostic information like voltage, current, overload, and other data describing the operational state of the device. Also remote and locally controlled functions like reset of a line are implemented. All these functions can be controlled and fine-tuned with a set of parameters. A user interface is providing local information. The device is also available as OEM. *Contact:* www.apricum.com

OS-384i-KNX-HB Highbay Presence Detector

AUREX INDUSTRIES, INC. The KNX Presence Detector integrated PIR motion and light level detector for highbay mounting solution. Solely designed for incorporating with KNX home and building control system to enhance lighting management and achieve better energy savings. The detection coverage is up to Ø16 m at installation height of 10 m; Its parameter and function settings in an easy way via ETS or IR remote control or potentiometers (VR), and the ambient Lux value can be learned as the threshold for switching On/Off the loads by IR or VR as well for different environmental requirements. OS-384i-KNX-HB is available in various mounting methods: surface and flush mount, European standard junction box is also applicable.

Contact: www.aurex.com.tw



KNX, Multimedia and Logic



AV STUMPFL GMBH Are you looking for a single device which offers sophisticated building and media control functions together with interactivity, user interface hosting, logic and open source scripting included? Avio Master is AV Stumpfl's advanced solution for corporate installations such as conference rooms, museums or themed attractions where cloud based management, straight forward systems design and 24/7 availability is needed. The device can be mounted on DIN-rails and reliable control and management of even sophisticated KNX and multimedia setups is easy to achieve thanks to a built in HTML5 based visualisation engine. *Contact:* www.avstumpfl.com/aviomaster

New generation of KNX Sensors

B.E.G. BRÜCK ELECTRONIC GMBH With the new KNX-sensors' generation 6 B.E.G. – the lighting control professional – introduces occupancy detectors with completely re-engineered hard- and software. The new hardware allows a significant lower mounting depth, which facilitates considerably the installation with limited space such as false ceilings. In addition to the reliable functions of former products, the functionality includes further features. The lighting adjustment was improved and the independent activation of single PIR-sensors implemented so that separate areas can be turned off by setting parameters via ETS. Thus, the installer can save time because he does not have to climb a ladder in order to fix blinds.

Contact: www.beg-luxomat.com



APP MODULE



BAB TECHNOLOGIE GMBH The APP MODULE is equipped with a KNX TP interface and is based on the proven, modular app concept: choose, install, get going. It does not have functionalities ready out of the box, but can be individually customised with apps. For example SONOS devices, Philips hue devices or BOSE components can be integrated into KNX installations in an instant. It does not matter if the components are controlled by push-buttons or existing visualisations. Various apps are available via www.bab-appmarket.de and can be combined in an APP MODULE as desired. *Contact:* www.bab-tec.de

Basalte introduces high end music server with native KNX control



BASALTE Asano, the world's first KNX multiroom audio system, amplifies and distributes uncompressed hi-fi music in luxury homes worldwide. Now, Basalte completes this solution, as they proudly introduce the Asano S4 music server. It hosts 4 personalised streams with extensive user profile options to play your music everywhere using the native app. Combined with networked amplifiers, Asano S4 is perfectly tuned to play pure, vibrant music in a virtually unlimited number of rooms! To top it all off, the integration in KNX opens a world of possibilities to control your music with KNX control interfaces.

Contact: www.basalte.be

NEW BILTON KNX LED-DIMMER



BILTON With the control unit SXT KNX LED dimmer, BILTON combines a dimming actuator and power source in one unit. Thanks to the integrated master/slave function only the master device needs to be programmed and up to 20 others follow the first device. With an output power of 100 W, the control unit is the smallest of its kind. Intelligent load management distributes the overall output power to the four channels depending on the configuration. The programming time has been drastically reduced compared to the predecessor model. The new KNX dimming actuator makes self-programmable colour sequences with up to 16 scenes possible, whereby the channels can be controlled independently of one another. *Contact:* www.biltongroup.com

RealKNX – Augmented Reality for KNX

BLEU COMM AZUR SARL KNX proServ, the first device for KNX smartphone control, configured completely with the ETS software, can be expanded by an embedded mini server. The new application allows detecting objects in the environment using the smartphone's camera. Directly in the camera image, the controls are appearing to switch the devices and get full feedback: a button comes up for switching the standing lamp, upon detection of the window the controls for driving the shutter are displayed, when sighting the speaker, the current song is displayed and the volume can be adjusted. Configuration is done by assigning simple photos of the objects to the proServ functions. *Contact:* www.proknx.com



KNX MCU-MODULAR



BMS SOLUTIONS functional, flexible, simply clever – this is the new generation of blind actuators by BMS. Main and extension modules, each with four outputs and integrated push button inputs, are available for 230 V AC and 24 V DC motors. Together with the SMI-devices, which are also available for 230 V AC and 24 V DC, all available motor types can be controlled. BMS-typical functions such as pre-configured product libraries and movement strategies, priority management, SunControlObject or end position detection have been developed extensively. Additionally new features like blockage detection and the APP-Object for direct communication with the BMS-Smartphone-APP have been added. *Contact:* www.bms-solutions.de

Energy harvesting KNX wireless light switch module configurable via ETS

CHERRY (ZF FRIEDRICHSHAFEN AG) Under the Cherry brand an energy harvesting wireless light switch module for KNX/RF is going into series production at ZF, which will be configurable via ETS (with ETSS). Regardless of whether it is being used as a light switch with or without dimming, as a shutter switch, etc, the wireless light switch module is very functional and versatile to integrate thus creating a level of freedom at the planning stage. It enables a way of communication without the need for a gateway. There are many potential applications, e.g. flexible room partitions in functional buildings, glass walls, or directly at a lectern. The wireless light switch module is compatible with standard frames and panels for energy harvesting light switch modules. *Contact:* www.cherryswitches.com



CJC Systems launches touch collection on KNX!



CJC SYSTEMS CJC Systems, well known for their stylishly designed switches, will present their first 'touch' collection during the Light + Building trade fair. Like the other collections of CJC Systems, this touch collection will also be made out of aluminium material and will be available in different high end finishings. With the touch-sensitive surface you will be able to command lights, blinds, scenes, etc. Integrated RGB backlight gives you feedback and / or orientation. An integrated thermostat logic makes this switch all you need for all your commands with a simple touch within a stunning design.

Contact: www.cjcsystems.com

ComfortClick Jigsaw

COMFORTCLICK Jigsaw is the new product from the ComfortClick Controller family. It runs the software platform bOS – the first Building Operating System, which enables you to control all devices in your smart building from a single app on any mobile device. Jigsaw supports KNX and many other systems. It comes with the free configuration tool bOS Configurator which enables the simplest system configuration you will ever see. You can design your own custom GUI, logical operations, scenes and schedules. Free bOS Client apps for iOS, Android and Windows are also available.

Contact: www.comfortclick.com



Living Emotions – The next generation KNX Sensor

CONTROLTRONIC The Living Emotions app for iOS allows convenient control and visualisation of any KNX installation. The consistent focus on simple operation, the visually appealing presentation and the extremely flexible structure of the control elements offer a new experience in the operation of building technology. In conjunction with glass panels for flush wall mounting thus is creating a completely new KNX operating concept: The next generation KNX Sensor for the communication with the KNX tunneling and routing is available, whereby all common KNX/IP interfaces and routers can be used. The complete configuration takes place entirely within the app itself.

Contact: www.controltronic.com

kamereon wood

DAKANIMO GMBH With kamereon wood dakanimo expanded its range to include an individual solution for upscale design from natural materials. As individual is the grain of each switch so inimitably shines his LED lighting: The natural fiber structure of the wood always creates its own variations of light penetration. Dakanimo created 2014 kamereon as a KNX switch which interacts with its owner on the senses: the feedback via vibration, noise and the individual lights LED RGB colour space. In the spirit of a manufactory, Dakanimo allows each customer a maximum customisation. The result is impressive: The light shines through the surface and merges with the individual character of the wood grain. In the end no "kamereon" wood looks like another one. Each switch is unique.

Contact: www.dakanimo.com



KNX regulation of heating / cooling mats



DGA-GEBÄUDEAUTOMATION DEUTSCHLAND GMBH Capillary tube mats are successfully used in cooling ceilings and floor heating systems worldwide. Using capillary tube mats makes possible a quality room air-conditioning with low energy costs. It is precisely here that the KNX controller of the DGA takes over. The control of e.g. cooling ceilings is particularly effective on the active Dew point. Cooling ceilings may dissipate from the room only latent heat, thus their efficiency is limited. If the surface temperature of the cooling ceiling is below the dew point of the air, condensation is created over a large area. Therefore, the dew point must be safely ruled out. This is what the DGA KNX controller The guarantees.

Contact: www.dga-automation.eu

HomeCockpit Major 4.0: now also as 21.5-inch wall-mounted touch panel!

DIALOGIC SYSMTES GMBH Flexibility repackaged: the Dialogic Systems intelligent multi-touch panel PC is now available in a 21.5-inch version as a wall-mounted panel minus flush-mounted box – overall depth a mere 5 cm. In addition to a fast quad-core processor, 8 GB RAM and 120 GB SSD the Major 4.0 boasts top features such as a pre-installed Windows 8.1 industrial OS, extended-frequency 2-way speakers and KNX enabled watchdog function with automatic restart. In short, all you need for perfect control processes.

Contact: www.home-cockpit.de/en



PIR Movement Detector with Constant Lightcontrol



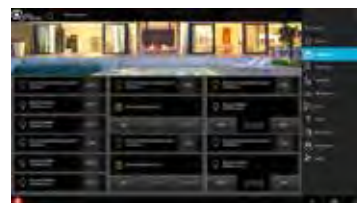
DINUY S.A. DINUY S.A. introduces a new multi function motion detector with an integrated bus coupler. Besides the main function as movement detector, the DM KNT 003 incorporates five configurable functions: constant light control, twilight switch, brightness sensor, signal monitoring and temperature sensor. Universal box mounting device with a detection range of 200° and 8 m at 1,2 m – 1,5 m high. The time delay and the brightness can be adjusted through its own control knobs, via ETS or with a remote control. The detectors' two PIR sensors detect even the smallest movement. Designed for indoor applications with a protection degree IP40.

Contact: www.dinuy.com

DIVUS Optima 2.0 – New design, new functionalities, new possibilities

DIVUS GMBH The new OPTIMA shines in new splendor. The visualisation of KNX CONTROL enables you to display your own home or office building in a new attractive design with more features and possibilities. The creation of the visualisation is easier than ever before. Basic knowledge of working with a graphics program and the ETS software are enough to realise the customer's wishes. In order to use OPTIMA, a graphic designer is no longer needed. New users feel as comfortable as experienced ones. Even the user himself can now create own scenarios with the intuitive software, collect and analyse energy data.

Contact: www.home-cockpit.de



EcoButler KNX Automation for a bargain



EASYMOBIZ MOBILE IT SOLUTIONS GMBH With EcoButler integrators and users can create automation rules as easy as setting an alarm clock on a smartphone or tablet.

- Schedulers, Calendars
- KNX triggered logic-functions
- Integrated SONOS to KNX gateway
- Sun-position calculations
- Multimedia and XBMC integration
- Security: Send free alarm messages to smartphones and tablets.

EcoButler formerly known as EcoPilot is an add-on to ayControl KNX, it runs on a super cost efficient Android HW or even on a PC. Try it for free or contact us to discuss your requirements!

Contact: www.ayControl.com

3025 – KNX Switch 55 x 55 – four Channels + Thermostat

EELECTRON SPA The 3025 switch is a 4-fold switch with temperature sensor. Minimal shape leaves space to noble material surfaces, and one LED Bar easily displays status (as comfort, economy, heating, etc), levels (dimming percentage, setpoint, temperature setting), scenarios, with colour and intensity variation. The product is available in different finishings and material including five different woods, black – white and brushed aluminum and plastic. Suitable in the 2 module boxes and fits in 55 mm systems with direct connection to the KNX bus.

Contact: www.eelectron.com



WireGate Multi Interface Server



ELABORATED NETWORKS GMBH The WireGate Server acts as an KNXnet/IP Interface with up to 25 tunneling connections. It logs dozens of millions telegrams with in deep analysis, provides NTP time synchronization, VPN and multiple messaging options via an Internet connection. Additional KNX Interfaces could be appended. Optional interfaces are two TIA/EIA 485 or DMX for lightning control with co-processor; CAN-Bus for connection to PV inverter, home battery, charging station and additional co-modules; optional RS232 serial interface for control of serial devices; build in three ports for I-wire buses with co-processor to handle up to 80 I-wire slaves on each port. Modern responsive web interface for analysing and logic-controller.

Contact: www.wiregate.de

ELKA KNX motor actuator 1B

ELKA ELEKTRONIK The latest generation of KNX motor actuators for small control valves from ELKA continues the success story of this product series. The functionality has been expanded with an integrated room temperature controller for heating/cooling application. Combined with the integrated sensor or an external temperature sensor to be connected on demand, an independent room temperature control is possible. A scale at the valve head shows the valve setting. To the binary input, for instance, window contacts that affect the motor actuator (window open > heating off) can be connected and thus make an active contribution to a reduction of energy consumption.

Contact: www.elka.de



Room Controller with Display



ELSNER ELEKTRONIK The ambient climate controller Cala KNX has got a touch display and sensors for monitoring temperature, air humidity and CO₂. Various sensor combinations allow for a very specific application. The device is combined with a frame of the standard 55 mm switch series and thus merges with the interior. In addition to control functions for temperature and ventilation, Cala KNX offers calculation of mixed values, an energy-saving summer compensation function for cooling, logic gates and multifunctional modules for transformation and conversion of data. On the screen, the user can read current ambient data and directly set the control functions via the menu for automatic settings.

Contact: www.elsner-elektronik.de

7" KNX Intercom Panel

EMT CONTROLS EMT Controls HTP700 Touch Panel combines the functions of video telephony, KNX home automation (with physical KNX port), security, energy management and concierge services. The complete flat touch panel offers a stylish sleek design. The elegant touch panel merges user experience of modern building visualisation and media technology in a unique design that adapts in any interior conditions. Use free of charge Apps for Android and iOS for remote access and control of your devices.

Contact: www.emtcontrols.com



Energex KNX SmartMeter 85A



ENERTEX BAYERN GMBH The new "Energex KNX Smartmeter 85A" is a 3-phase (or 3 x 1-phase) bidirectional meter for measurement of active and reactive energy up to 85 A. Current measurement is performed without loss via external current sensors, which are delivered calibrated and therefore provide also an exceeding accuracy for small (up to 0,2 mA resolution) currents. Furthermore the Smartmeter is suited to monitor power supply quality. Current, voltage, active power, reactive power, power factor, THD, harmonics, unbalanced load, zero system current and frequency can be monitored at KNX bus and recorded on a SD-card.

Contact: www.energex.de

Light sensor LS-FLAT mini KNX

ESYLUX GMBH With the LS-FLAT mini KNX light sensor, ESYLUX presents a dimmer switch with a construction concept and functionality designed to offer every lighting-based control unit a better level of individuality, flexibility and energy efficiency. Hidden in a tiny housing, the targeted light measurement can be used to switch, regulate or control two separate lighting channels semi-automatically or fully automatically. The dimmer switch can also align two external lighting values with its own value — thereby offering the corresponding potential for extensive cascading. Any customer looking for a highly precise method of detecting daylight will also benefit from a very high measuring range of up to 10,000 lux.

Contact: www.esylux.com



DomiOP eBIS513



EXOR INTERNATIONAL S.P.A. EXOR International eBIS513 is an advanced KNX HMI device offering outstanding design. Easy to use, it is the ideal choice for all demanding HMI applications in building automation. The eBIS513 features a 13"3 widescreen TFT display with 1280x800 pixel (WXGA) resolution. JMobile, Exor International's software platform offers an innovative and efficient solution for the new requirements in home automation. The product supports the KNX protocol with IP and TP interfaces. Exor International is now introducing the Android operating system as an option for certain products. This will open the possibility to use existing apps also in Exor high-quality HMI products.

Contact: www.exorint.net

KNX MultiController HCL – Human Centric Lighting

FUNCTION TECHNOLOGY KNX MultiController DALI-HCL is the newest KNX product from function Technology. It is equipped with a Human Centric Lighting (HCL) controller. The integrated DALI gateway supports the new standard of DALI control gears, device type 8. HCL optimizes colour temperature for maximum comfort and productivity. User control and predefined settings for healthcare, office and education make this solution easy, fast and reliable. The KNX MultiController is the perfect match for room automation with built-in DALI gateway, relays, inputs, constant light control, thermostat, HVAC and much more. Accessories such as presence and temperature sensor, user-panel and analog in/outputs can easily be connected.

Contact: www.function-technology.com



New LED Dimmer 4 channels from GDS



GDS DIGITAL SYSTEMS LTD. GDS digital Systems launches the new LED Dimmer 4-channel, which can be operated independently or as RGB+Y. A common Dimmer (dim by ramp, timers, staircase, timers, dim level limiters etc...) with unique characteristics:

- 12V – 36 V. Up to 10 A per channel
- built in Electronic Current limiter and Eye curve correction
- short circuit and overheat protection
- power measurement for each channel available as KNX telegram with 1 % precision
- energy consumption storage for life with reset capability for each channel
- hours counter for each channel
- reset possible by KNX telegram
- last state store and recovery after power failure, efficiency > 99,5 %

Contact: www.en.gds.com.gr/knx_site/company-profile

GEZE IQ box KNX

GEZE GMBH The IQ box KNX is the interface of the GEZE IQ window drive series to the KNX world. Access to the intelligence of the drives allows real status reports, e.g. "window locked". The window drives also offer new possibilities when they are activated via the KNX bus. The automated windows can thus be integrated directly into the KNX bus system and be opened and closed efficiently, comfortably and safely as KNX bus participants. Controlled natural ventilation improves the air quality and reduces the consumption of energy. The commissioning and setting of KNX parameters of the IQ box takes place via the ETS software.

Contact: www.geze.com



Gira G1



GIRA GIERSIEPEN GMBH & CO. KG The Gira G1 is the new, compact and visually appealing room operating device for the KNX system. All the functions can be operated intuitively by touching or gesturing on the excellent multi touch display – more easily than ever before. The visual impression is captivating: The Gira G1 looks extremely delicate, appearing to almost float on the wall. The design is linear and puristic, and the materials are high-quality. The continuous front panel consists of scratch-resistant special glass which is 1 mm thick. The real metal frames underline the elegant design. The models in black glass and white glass harmonise with almost any interior design concept.

Contact: www.gira.com

Tantron Ripe serial push button

GUANGZHOU TANTRON ELECTRONIC CO.,LTD Tantron Ripe series of push buttons provides a range from 2-fold up to 16-fold push buttons. Frame and surface are made of metal. For the frame the colours gold and silver, for the surface the colours white and metal are available. Furthermore the series includes devices like room thermostats (or VRV air condition), outlets for shavers, 10A AC, RJ45 and TV outlets. They can be combined together in any combination. The devices of the Tantron Ripe series are KNX certified and include functions like switching, dimming, scenes and sequences.

Contact: www.tantron.com.cn



3.5" colour TFT capacitive touch screen

GUANGZHOU VIDEO-STAR ELECTRONICS INDUSTRIAL CO.,LTD. The new 3.5" colour capacitive TFT panel has 320 x 240 resolution. Functions include switch actuator, dimmer, shutter, scene, customise, thermostat, timing, intelligent scene, proximity sensor, etc. There is no limit of each function, in accordance with the need to be configured. Icons, backgrounds, layouts can be customised and configured to your preference.

Contact: www.video-star.com.cn

The Smart home with 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). After labeling them with clear names, the domovea visualisation is then also ready to be used.

Contact: www.hager.de



RGBW 4-fold Driver



HDL AUTOMATION CO., LTD(HDL) The M/DRGBW4.I is fully compatible with all KNX systems and meets all KNX certification criteria. The input voltage range is DC 12 V–60 V, and each of the four channels can output 5 A with a total combined output current of 20 A. Each channel can be used separately, or used for RGBW composite control. Safeguarded by short circuit protection and overload protection, the module is inherently safe and reliable. PWM linear dimming brings users unparalleled illumination control, as does the 1 bit, 1 byte, and 3 byte state feedback. With a built-in staircase lighting, flasher, logic control, threshold switching, sequence control, and RGBW composite control switching, the M/DRGBW4.I is as flexible as it needs to be.

Contact: www.hdlautomation.com

DIN-rail Energy Meter with built-in KNX

HERHOLDT CONTROLS Herholdt Controls expands its range of DIN-rail mounting Energy Meters, proposing for the OEM market a new family of products with KNX built-in communication. These single and three phase (CT operated or 63 A direct connected) Energy Meters provide up to 58 measured values to monitor any AC electrical installation, making them available on a nine digit LCD or through KNX bus. They measure active energy (Class 2 – EN 62053-23) in four quadrants and under two Tariffs, in a wide range of voltage (92 ... 276 V AC / 160 ... 480 V AC) and frequency (45...65 Hz).

Contact: www.hhcontrols.com



CO₂ based climate control



HUGO MÜLLER GMBH & CO KG The climate control unit GS 40 KNX has three sensors (CO₂-, humidity- and temperature sensor) to identify and control the room climate and air quality. By means of an integrated air pressure sensor the influence of altitude and atmospheric pressure changes are automatically corrected. The measurement ranges are defined as follows: CO₂ (400–2500 ppm), rel. humidity (15–85 %) and temperature (0–50°C). The ETS software has numerous setting and controlling parameters which are despite their diversity well and logically arranged. Hence, easy and intuitive handling is assured. The device is designed for wall mounting. It convinces with its easy handling as well as with a decent and planar design.

Contact: www.hugo-mueller.de

Iddero 4.3" Touch Panel

IDDERO Iddero presents its new 4.3" capacitive Touch Panel. This elegant device is available in white or black glass, and can be installed in portrait or landscape mode. The unit provides an intuitive, user friendly visualisation with up to 48 configurable functions, arranged in six control pages. UI themes and customisable background images make it possible to adapt the interface to any location or ambience. Advanced functions include weekly time schedules, alarm monitoring, an internal scene controller, and two independent thermostats. Additionally, the built-in temperature sensor, four multi-function inputs, and integrated KNX bus coupler make this all-rounder a perfect choice for all KNX projects.

Contact: www.iddero.com



SRKNX - SR570000



INGENIUM SL – BES KNX SRKNX is a hidden motion detector easy to install in false and technical ceilings. It is based in radio-frequency technology so it can detect motion pass-through different surfaces (except metallic surfaces). This technology also allows the device to achieve a high sensitivity and accuracy. It is secure against sabotage and vandalism due to its hidden installation. The device combines security, aesthetics and an easy configuration, making it suitable for applications such as lighting, intruder detection or any desired application where the sensor should not be seen. The size is 25 x 45 x 65 mm and it has a 360o detection range. The detection area is an oval of 6 x 12 meters.

Contact: www.besknx.com

New BACnet KNX Gateway

INTESISBOX IntesisBox® introduces the new BACnet KNX Gateway, the first of a fully renewed and powerful generation of gateways to come. The new BACnet KNX Gateway inherits the best features of the former IntesisBox (i. e. the points capacity) and incorporates many new and interesting ones. Among them: fully B-AAC profile (BTL certified) on the BACnet side, full support of standard KNX Datapoint types with the possibility to import the KNX project from ETS, LED indicators on top of the box for relevant gateway's status information, console USB port for easy connection, and a brand new configuration software fully redesigned offering a new integration concept while keeping its well-valued diagnose and troubleshooting tools.

Contact: www.intesisbox.com



iRidium 3.0

IRIDIUM MOBILE LTD iRidium 3.0 is a platform with wide control and monitoring capabilities consisting of 2 products: iRidium pro for professional integrators and iRidium lite for installers. With iRidium pro you can create customised control projects with any interface. iRidium lite automatically locates KNX and other automation hardware, IoT gadgets and creates a control interface without programming right from your iOS, Android or Windows device. Both products support project update via cloud and storage in cloud and are compatible with iRidium Server. iRidium Server is a software agent that can be launched on different hardware platforms for keeping data on resource consumption, creating scenes and running logics. *Contact:* www.irdiummobile.net

LC-DM02 2 Channels Dimmer

LIGHT CONTROL LC-DM02 is a 2-fold KNX dimming actuator 2x300W or 1x600W for switching and dimming of lighting devices. Mounting in distribution board on EN 60715 DIN-rail (four modular units, each 18 mm). Manual control by membrane push buttons. To be used in KNX installations for home and building automation. *Contact:* www.lightcontrol-knx.com



New "middle class" L-INX Automation Servers

LOYTEC ELECTRONICS GMBH LOYTEC's new "middle class" L-INX automation servers communicate via BACnet, LON and OPC with management systems. They come with two Ethernet ports, integrated network security features, support of WLAN and SNMP. The devices provide connectivity to concurrently integrate KNX, Modbus, M-Bus, and EnOcean. Local operation and override is provided by the built-in jog dial and the backlit display. The programmable L-INX models can have up to 160 physical IO connected. All L-INX models host user specific graphical pages in HTML5 format to visualise dynamic content on mobile devices and PCs using a web browser.

Contact: www.loytec.com



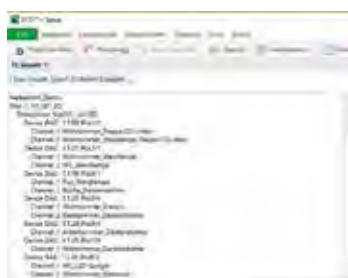
SCN-IP000.02 / SCN-IP100.02 IP-Interface / IP-Router

MDT The new generation of the MDT IP-Interface / IP-Router provides complete new functions. It is possible to send messages, trouble notes and automatically generated reports of the building status directly via email. Any text telegrams, reports or predefined messages are triggered by time or an event and are sent across an encrypted transmission by email. The integrated NTP timeserver provides date and time on the KNX bus. The devices are supplied without external power supply or PoE directly from the KNX bus. The previously required power supplies are not needed anymore. *Contact:* www.mdt.de

Slim KNX Power Supply

MEAN WELL EUROPE B.V. The KNX Power Supply KNX-20E is a 640 mA power supply with high efficiency and a small footprint of only 3 TE (54 mm). The device has a bus choke output and an additional output for ancillary power. The -30~+50°C wide temperature operating range can meet all kinds of applications. LED indicators are used in case of normal operation, overload conditions and RESET operation. With over 30 years of industrial power supply experience, KNX-20E is engineered to be a reliable and safe solution for KNX bus environment.

Contact: www.meanwell.eu



ETS APP Elektro-Installation-Import

NAUTIBUS ELECTRONIC GMBH EI Import generates a ETS5 project from a cable list, as used by the electrician when laying the cables. You can easily create a CSV file with Excel or a text editor. In the first phase the required device types are determined. A Device wizard helps selection and parameterisation of KNX devices. In the second phase the ETS project will be created automatically. A configurable Group Addressing scheme controls this process. The project produced 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

New KNX Twisted Pair ICs

ON SEMICONDUCTOR The NCN5110, NCN5121 and NCN5130 integrate two high-efficiency DC-DC converters and a 20 V low drop-out regulator for powering external loads from the bus. The NCN5121 and NCN5130 implement the complete KNX physical (PHY) and media-access (MAC) layers, while the NCN5110 is an analog-only bit transceiver. The family offer pin to pin compatibility with NCN5120 for most configurations and provide significantly higher efficiency and increased regulator output and are capable of taking from 5 up to 40 mA from the KNX Bus. The devices are offered in a QFN-40 package and are specified for operation over the extended temperature range of -40°C to 105°C.“

Contact: www.onsemi.com



Venetian blind drive with KNX interface



RADEMACHER GERÄTE-ELEKTRONIK GMBH In cooperation with Geiger, Rademacher has developed a new Venetian blind drive, that does not need a separate external actuator. Thanks to integrated KNX intelligence, the new motor is simple and inexpensive to install. Live feedback or a “real” status message is ensured, thus eliminating the need for a reference run to determine time duration. The drive can be controlled directly or controlled and monitored over the bus.

Contact: www.rademacher.de

ScreenTronic App

SCREENTRONIC The ScreenTronic App enables convenient control of blinds. All Apple tablets from iPod Touch, iPhone, iPad (mini) to the iPad Pro are optimally supported. The consistent focus on the control of blinds, the flexible structure of the control groups and the comfort positions offer a previously unknown experience in the operation of blinds. The configuration takes place entirely within the app itself. Extensive communication options allow a wide range of applications. With the flexible KNX standard direct communication (tunneling and routing) with all KNX/IP Interfaces and KNX/IP routers is possible. Also the special CONTROLtronic blind controls can be integrated easily and without any special knowledge.

Contact: www.controltronic.com



Universal dimmer for dimmable lamps

SIEMENS SCHWEIZ The universal dimmer reliably controls all kinds of dimmable lamps. The two load outputs are used to independently control up to 300 VA or even up to 500 VA when only one channel is used. A minimum load is no longer necessary. In addition to traditional lamps, such as halogen lamps or lamps with stomach tables or electronic transformers, it can now also be dimmable energy saving lamps and LED drive. Extensive setting in the application program enabling optimisation of the dimming behavior even in demanding applications.

Contact: www.siemens.com/gamma

Touch sensors glass – stylish and high-quality design covers

SIEMENS The new touch sensors are available with two-, four-, or eight-button surfaces, which are arranged vertically and can be used in pairs or as individual button surfaces. With a light touch of the circular button surface, the basic functions and scenes can be intuitively activated in the room. The button surfaces are edged with dimmable LED light rings that can be set to any of seven colours. They can be used for status indication (such as light on/off) or as orientation lighting. A proximity sensor provides helpful guidance for operation in dark environments. This makes them particularly suitable for high-end non-residential buildings.

Contact: www.siemens.com/gamma



Sense – Control System



SIMON S.A Simon presents the new Sense collection. The power of the senses inspires the first modular collection that manages to combine two concepts: touch interface and ergonomics designed for personal use. Thanks to its modularity, Sense allows users to mix and match various features for enhanced comfort and control: controls lighting, air conditioning and blinds in any space. It also offers interaction with users, alerting them of the action being performed: By tapping or sliding the finger, users receive haptic feedback through vibration or LED light. The collection offers three versions (Regular, Custom and Personal) which allow users to customise the lighting, temperature and blinds in every room.

Contact: www.simon.es/sense/en

Equobox rEVolution: RTU-EVO

SINAPSI S.R.L. EQUOBOX solution for smart metering, cost allocation and energy efficiency, improves with a new rEVolutionary device, with great new features:

- greater simplicity: the Wi-fi connection allows an easier configuration through mobile devices.
- improved security: RTU_EVO preserves any attempt to gain unauthorised access to data thanks to improved security features (SSL encryption and HTTPS integrated web-server)
- wide integration: the RTU-EVO provides an easy integration over TCP/IP with KNX, BACnet and MODBUS protocols.
- enlarged flexibility: a new user management provides access in relation to the assigned profile.
- more expandability
- the RTU-EVO allows the management of remote, analog and digital I/O.

Contact: www.sinapsitech.it/en



KNX/RS485 Motor Controller for six individual shade



SOMFY GMBH The new Motor Controller enables the controlling of six similar Somfy RS485 motors which can be controlled individually through the KNX bus. Thanks to the increment encoder technology of the RS485 motors perfect alignment is guaranteed. The exact position of the shades, during movement and when reaching the upper and lower end limits, can be monitored. Adjustment of the upper and lower end limits can easily be achieved over the KNX Bus. The KNX/RS485 Motor Controller is available in two versions: wall-mounted and printed circuit board (PCB) for the electrical cabinet installation.

Contact: www.somfyarchitecture.com

Internet Service Gateway with numerous advanced functions

STIEBEL ELTRON GMBH & CO. KG Now, most Tecalor heat pumps can be integrated into a KNX building management system more comprehensively than before. This is made possible by the Internet Service Gateway (ISG). It is simply a matter of loading the KNX software extension (version 2) – a certified KNX product. By linking the ISG to the Tecalor Portal, the ISG can be remotely equipped with the KNX/IP capability. Around 100 functional parameters and items of appliance data, as well as the Smart Grid interface for heat pumps (SG READY), are now available for the comprehensive integration of a heat pump into the KNX system. The SG Ready function can, for example, be used for optimising the consumption of PV power generated on site

Contact: www.stiebel-eltron.de



Detection without visual contact



STEINEL The highly sensitive ultrasonic sensors from Steinel Professional provide comprehensive sensor coverage in large indoor spaces and corridors, even behind obstacles such as pillars or room dividers. Working as an active system, ultrasonic waves spread throughout the room, completely filling it and enveloping every object. This means they can even detect movements behind objects – without any line of vision from sensor to person and regardless of the direction of movement. The Dual and Single US KNX corridor sensors, the US 360 KNX 360-degree ceiling sensor as well as the DualTech KNX infrared ultrasonic sensor will be available from the summer 2016.

Contact: www.steinel-professional.de/ultraschall

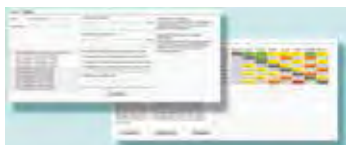
Edition3 touch panel for flush mounting

T2M2 GMBH The Edition 3 touch panel for flush mounting is the logical evolution of a classic concept and thus creates new design possibilities for the upscale housing. An intelligent “Push to open mechanism” is possible as well as the installation of an electronic unit for the KNX connection enabling easy integration into the wall. All in all exist along powerful T2M2 Touch Panel with a newly developed flush-mounted socket for flush mounting.

Contact: www.en.t2m2.de



KNX RF Field Strength Analyzer App for ETS



TAPKO The KNX RF Field Strength Analyzer (KNX-RF-FSA) app is taking the innate uncertainty of KNX RF installations. By gathering the Received Signal Strength Indicators (RSSI) of all user-selected RF devices and displaying them in a colour-coded matrix, the KNX-RF-FSA makes testing and debugging of KNX RF device connections easier than ever before. Designed to be used for short and long-term observations of the device's RSSIs, the KNX-RF-FSA is a high-quality tool that can highlight any weaknesses in a KNX RF installation. This tool also tests the functionality of activated repeater for increased area coverage to avoid future problems. The RF FSA is all you need for successfully commissioning your KNX RF installation. Available in MyKNX.

Contact: www.tapko.de

10-inch touch panel in white

TCI GESELLSCHAFT FÜR TECHNISCHE INFORMATIK MBH A glass front with white frame and a launcher with a white background – the ultra-flat 10-inch touch panel luna I0 is presenting in a noble design. It is suitable for applications in building automation, home communications, conference room technology and digital signage. The completely flat surface in real glass emphasises the timeless elegant design. The bright display in 16:9 format shows ambitious visualisations and product launches razor in sharp true HD resolution. A KNX interface is optionally available.

Contact: www.ambiente.de/en/products/touch-panels/luna-multitouch-panel



TRIMLESS INNOVATION

TENSE TOP DESIGN SWITCHES BVBA All Intensity switches, Infinity room controllers and Motivity wall detectors can be mounted in the strong, fire-resistant, plaster- and paintable TRIMLESS composite fixture. This innovative recessed solution is fast & easy to install (pre-drilled screw holes or glued / large mounting surface) and easy to plaster thanks to a rounded second level on the fixture. The TRIMLESS meets the highest finishing standards and is suitable for all surfaces (brick/plasterboard/concrete) which creates a uniform look in every project.

Contact: www.tense.be

Fancoil actuator for hotel facilities and apartments

THEBEN AG The new FCA 2 KNX fan coil actuator from Theben adjusts the temperature with precision to the last degree, thanks to proportionally controllable control valves. The fan can be controlled proportionally, or in three steps via the switch outputs. The FCA 2 KNX has two inputs for condensation monitoring and for connecting an external temperature sensor, or window contact. Thanks to the varying-voltage power supply, it is universally usable. Small split units can be controlled, due to the integrated restart delay. The FCA 2 KNX supports 2 and 4 pipe systems.

Contact: www.theben.de



Audiofy by ThinKnx, limitless audio multiroom system

THINKNX BY PULSAR ENGINEERING SRL ThinKnx introduces Audiofy, a complete multiroom audio solution which combines an audio matrix with an internal network player. The matrix is equipped with 4 to 8 inputs and outputs with an built-in amplifier of 40 W Stereo. Thanks to the internal network player, Audiofy can read from the common analog inputs, but also from NAS, web radio and any network service. Audiofy can be controlled through a very simple and intuitive app, which allows to manage audio routings and command the internal player (create playlists, etc.). The integration with KNX is bidirectional and all the commands and feedbacks are available on the bus. It is also compatible with ThinKnx supervision system for a full integration with the building.

Contact: www.thinknx.com



trivum 7" TouchPad

TRIVUM TECHNOLOGIES GMBH Trivum technologies, the expert for Audio Multiroom solutions, is expanding its CONTROL series. The new trivum 7" TouchPad combines classy design with the newest technology. Behind the frameless glass-touch-front operates a high resolution multi-viewing-angle display with 1024 x 600 pixels. Thanks to KNX support, the trivum room controller can also be used as switch, button and dimmer, e.g. for sunblinds control. Whether operated in portrait or landscape mode, the proven magnet mounting system of the in-wall box keeps both the smaller 4.3" as well as the new 7" model securely fastened. Retrofitting is not applicable.

Contact: www.trivum.com



Vitrum KNX Clima Control

VITRUM Vitrum KNX Series. The most wide-spread technology becomes stylish thanks to the most exclusive Vitrum Design. Vitrum renews its entire KNX Series, implementing it with the new interface Clima Control. This is a thermoregulation terminal with integrated temperature probe. You can view detected and set temperature through the alphanumeric display. Clima Control have LED backlight and proximity sensor to optimise energy consumption. The new Vitrum KNX Series includes devices from one to six buttons completely redesigned to be installed in Fast Installation mode: just connect the electronic components to the two way-KNX Bus. Vitrum Clima Control is available in the 126x95 mm and 95x95 mm format.

Contact: www.vitrum.com

KNX IO series

WEINZIERL ENGINEERING GMBH Made Compact. By introducing the KNX IO series Weinzierl expands its range with a new product family. The models 410, 411, 510, 511 and 520 provide input and output in a small dimension with only 1 module installation width. Depending on the model comprising up to four inputs and two outputs for e.g. controlling lights, blinds and heating valves. Manual operation is done via a simple yet powerful user concept with the help of two buttons and three multi-colour LEDs on the front panel. Due to the low space requirement the new KNX IO series allows a high degree of flexibility in planning and assembling of the electric distribution cabinet.

Contact: www.weinzierl.de



Alfred

WEXCEDO Alfred is a completely new solution for extending your KNX home network to the global world of IoT. It consists of two main pieces: a new device that connects directly to the KNX bus and a software platform that allows end users to manipulate KNX devices. The visual interface of the platform allows creating new logical automation for these buildings. The main added value, in this solution, is that the standard KNX telegrams travel safely through the Internet, end to end. Alfred also implements, out of the box, all necessary solutions for bidirectional connection without requiring any configuration of the existing LAN equipment. Two Alfred devices can be used to couple the KNX bus of two different sites.

Contact: www.hialfred.com

SMI Gateway and Fan Coil Actuator

WIELAND ELECTRIC GMBH The modular device series gesis® FLEX has been significantly expanded. In addition to standard features such as binary inputs, outputs for light and shutter automation, valve and DALI control the series has been expanded with SMI and fan coil functionalities. The SMI-KNX Gateway can control eight SMI drives and report back their status. The fan coil base module is sufficient for simple heating or cooling applications and to control a 3-stage fan. If the control of a 4-pipe system or an additional relay, potential-free contacts or a temperature sensor has to be integrated, an add-on module is available. *Contact: www.wieland-electric.com*



Interra Mini



YÖNNET Yonnet is introducing a new product in Interra touch panel series, Interra mini with unique abilities. Imini is developed on proven premium hardware that are used in 7" and 10.1" TouchPanels. Imini has a decent dual-core processor, abundant memory and storage, and highly optimized Android OS. Imini has 6,5" high quality capacitive touch screen and a more flexible user interface. Moreover, Imini incorporates built-in temperature, proximity and ambient light sensors. Also, Imini can control split climates and other devices via Infrared by IR sender. As usual, all automation controls are supported. Imini can communicate directly with KNX bus and has also sockets for RJ45, external IR unit, hotel DND units. *Contact: www.yonnet.com.tr*

DALIBOX Interface 64/32 1CH

ZENNIO Zennio expands its catalogue for lighting control with this KNX/DALI interface to control up to 64 DALI-ballasts in an independent way (on/off control, 4-bits regulation and 1 byte regulation). Ballast can be associated in up to 32 groups thanks to the display and buttons for easy addressing when a ballast is replaced. Up to 16 scenes and/or sequences can be configured to create customised atmospheres. Errors in each ballast are detected and indicated through KNX bus and LED in enclosure. It supports 110 V AC and 230 V AC main power. *Contact: www.zennio.com*





National Groups



KNX Argentina at BIEL light+building 2015

ARGENTINA In collaboration with its members ABB, Jung, the KNX TC CTF and FACTUM, KNX Argentina participated at BIEL 2015. The stand served as a meeting point for visitors generally interested in KNX, as well as the actions of the National Group. Seminars were also organized, which ended with a visit to the booth and a demonstration of KNX technology. This set the basis for future milestones in Argentina.

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

KNX Booth image just before the opening of the trade show: BIEL 2015

Integrate Expo 2015

AUSTRALIA This year KNX Australia debuted a custom built stand at Integrate Expo with the support of Members – ABB, Hager Electro, mySmartCTI, Somfy and Wago. Visitors were treated to displays of KNX products, as well as projects by Associate members. The final day featured a seminar on smart building technology hosted by KNX and included how KNX can assist in green buildings and the benefits of standardisation.

Contact: Ian Richardson | infoknx.org.au | www.knx.org.au



Debut of custom built stand at Integrate Expo



KNX Austria invites its community to celebrate

AUSTRIA With a massive event, KNX Austria celebrated the 25th anniversary of the worldwide STANDARD for home and building control at the AUDIOVERSUM in Innsbruck. Presentations delivered by KNX Members and Partners not only contributed to the festivities, but also to a better understanding of KNX, making this event informative and exciting at the same time.

Contact: Ernst Windhager | ernst.windhager@siemens.com
www.knxaustria.at

Representatives of KNX Austria (Innsbruck) during the KNX day

First Belgian Energy Efficiency Award

BELGIUM CDI-Projects is the proud winner of the first Belgian Energy Efficiency Award. The award ceremony, organised by KNX Belgium in cooperation with other institutions, was the contribution to the 20th of October 2015, the biggest day in the history of home and building control. The success of this award greatly raised the awareness of KNX, and the next award is already planned.

Contact: Hannelore Verdonckt | info@knx.be | www.knx.be



Start of the Belgian celebration for the 25th birthday



LEEDS presentation at CasaE Basf

Positive feedback for KNX Brazil

BRASIL Growing awareness for the environment motivated representatives from various fields to visit the 25th anniversary of KNX in Sao Paulo. Organised by KNX Brazil, the event was held at CasaE Basf, providing not only the perfect venue for the delivered presentations, but also as a networking place for the celebrations.

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

KNX Chile sounds the bell for the last round

CHILE KNX Chile welcomed participants from various fields to the Chilectra Santiago Smart City Showroom, and this event was again a major success for the local KNX community. Having a time difference of four hours to KNX headquarters in Brussels, this event contributed the last tweets to the KNX Social Media wall, concluding the 25th anniversary of KNX.

Contact: Gerald Esparza | gerald.esparza@gmail.com
www.knx.cl

Celebrating the last event of the 25th anniversary of KNX

KNX Technical Seminar at SIBT

KNX China successfully participates in SIBT

CHINA As in previous years, KNX was once again the focus of the Shanghai Intelligent Building Technology. The KNX China booth did not only provide the newest solutions by national and international KNX members, but also underlined the successful strategy of KNX China. Experience has shown that KNX is the right technology for the challenging Chinese market.

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

#KNXis25 in Bogota is a major success

COLOMBIA KNX Colombia impressively organised not only a contribution to the 25th anniversary of KNX, but also an event to remember! Presentations from various manufacturers and integrators made this one of the most interesting events which has ever been organised in Colombia, and proves that the 25 years of success has also arrived in Colombia and the whole region of Latin America.

Contact: Haiber Roland | haiberjimenezb@misena.edu.co
www.knx.co



Happy participants in Bogota



Discussions beyond the 25th anniversary



KNX Croatia invites in-depth discussion

CROATIA The Croatian community gathered for in-depth discussions and a networking party at the University of Split. KNX Croatia introduced the worldwide STANDARD for home and building control and participants engaged in a spontaneous question and answer session, making this event a success for everybody. A networking party concluded the event, leaving high expectations for the next 25 years of KNX.

Contact: Ana Tomić | info@knx.hr
www.knx.hr

Technical University of Brno opens its doors for KNX

CZECH REPUBLIC For the 25th anniversary of the worldwide STANDARD for home and building control KNX Czech Republic invited industry representatives and also students to its celebration. Characterised by a high interest amongst the younger generation, this event again reflected the high potential for KNX in the Czech Republic.

Contact: Josef Kunc | eibsyst@volni.cz
www.knx.org



Winner of the ETSS Professional License



An unforgettable day for KNX Finland



KNX Finland invites the world to #KNXis25

FINLAND With constant Tweets, regular Facebook updates and an online stream, KNX Finland invited the world to participate in its contribution to the 25th anniversary of KNX. The world had the opportunity to witness the various presentations from members of KNX Finland, making this event a truly unforgettable day for the whole KNX community, not only for the many participants on site.

Contact: Johan Stigzelius | jstigzelius@gmail.com
www.knx.fi

KNX France celebrates at Université de Rennes

FRANCE A great exhibition, informative presentations and an after show party – all led to a full house for the 25th anniversary festivities of KNX France. With live KNX installations, outstanding presentations and a delicious buffet, all participants enjoyed an unforgettable day, which not only reflected on 25 years of success, but also promised a great future for KNX.

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



KNX France at its best for KNXis25



Participants at the colloquium

25th anniversary at the KNX Germany Colloquium

GERMANY Under the framework of the 25th anniversary, KNX Germany organised its annual colloquium in Frankfurt. In addition to the review of 25 years of success, the main focus was drawn to the future of KNX including the ubiquitous trend of the "Internet of Things". The presented solutions were very well received, making the German community excited about the upcoming future of building automation.

Contact: Hajo Deul | knx@zvei.org | www.knx.de

KNX Hungary celebrates the 25th anniversary

HUNGARY The Lurdy Conference and Event Center was the location for the Hungarian celebrations of the 25th anniversary of KNX. The event attracted representatives from various fields from all over the country. KNX Hungary did not only organise a successful 25th anniversary event, but also one of the most successful KNX events held in the country, leaving the community looking forward to more.

Contact: Zoltan Balogh | bz@knxhungary.eu
www.knxhungary.eu



Participants from all over Hungary



Party atmosphere in India

Cake at KNX India's 25th anniversary event

INDIA KNX India celebrated the 25th birthday of KNX with a cake and a great event. All members of KNX India participated in the day-long event in Mumbai, shedding a completely new light on the worldwide STANDARD for home and building control. The presentations and concurrent KNX exhibition, will have a long-lasting effect, and greatly raised the awareness of KNX in India.

Contact: Bhavesh Doshi | info@knx.in | www.knx.in

KNX Italy takes KNX to the next level at the Milan Expo

ITALY KNX Italy successfully organised the Italian KNX Day 2015 at the World Expo in Milan allowing the event to be open to visitors from all over the world. The many guest speakers from various fields, together with the prestigious venue of the Milan Expo, raised the awareness of KNX to the next level, making the whole Italian community excited about upcoming KNX events.

Contact: Tiziana Arioli | segreteria@konnex.it
www.knx.it



Panel discussion during KNX Day (Picture by Ekinex)



Sold-out event in Tokyo



25th anniversary ushered in by KNX Event in Japan

JAPAN The biggest event in the history of home and building control was ushered in by the KNX Forum organised by KNX Japan. The 3rd and again sold-out event in Tokyo attracted a big crowd, thanks to the successful activities of KNX Japan, which included the invitation of a guest speaker from the Green University of Tokyo Project, the leading science project for building automation in Japan.

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

5th Technical KNX Forum by KNX Korea

KOREA Seoul Riverside Hotel was venue for the 5th Technical KNX Forum organised by KNX Korea. Celebrating the 25th anniversary, this successful KNX Forum benefited from a diverse audience, as well as extensive media coverage. Highlighting the success of KNX, the Korean community is preparing itself for KNX to be the leading technology in its domestic market.

Contact: Daniel Lee | info@knx.or.kr
www.knx.or.kr



Introduction to KNX in Korean



One of the many activities of KNX Luxembourg



KNX Luxembourg celebrates across the whole country

LUXEMBOURG Under the umbrella of the 25th anniversary of KNX, KNX Luxembourg organised workshops and events in various venues. KNX Members and Partners were invited to discover more about KNX technology at their premises, allowing participants to learn about all the different aspects of KNX. The day was a major success for the whole country.

Contact: Alfonse Massad | Alfonse.Massard@cnfpc.lu
www.knx.org/lu-fr and www.knx.org/lu-de

KNX Mexico hosts KNX Technical Workshop

MEXICO The first KNX National Group on the Northern American continent organised a KNX Workshop in honour of the 25th anniversary of KNX. Participants were able to learn first-hand, how KNX works and also how to use the worldwide STANDARD for home and building control. This event helped everyone to understand the potential of the technology and share the knowledge with the Mexican KNX community.

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



Workshop's participants





KNX and SEWA sign MoU agreement
(Picture by Alwatan Newspaper)



KNX chosen for UAE Sharjah City of Conservation

MIDDLE EAST In the search for a suitable technology for the United Arab Emirates, the Sharjah Electricity and Water Authority (SEWA) chose KNX for its major project of the 'Sharjah City of Conservation', a worldwide direction-giving project for smart cities. The decisive factor in choosing KNX was its openness and the guaranteed interoperability of certified devices from different manufacturers using the KNX technology.

Contact: Tarek Zakaria | info@knx.ae | www.knx.ae

Active exchange of ideas in building automation

NETHERLANDS In November 2015 KNX Netherlands organised a network meeting in cooperation with the Dutch Trade Association for Building Automation. The two-day conference was about 'Bits, Bricks & Behaviour 2.0', in other words: the relationship between functionality, buildings and men. The event led to an interesting exchange of knowledge and the creation of new networks. In this way the event theme 'sharing knowledge' showed itself to be the best benefit for all.

Contact: Rob van Mil | info@knx.nl | www.knx.nl



Audience on the first day of the conference



Winner of an ETS5 Professional license lottery at the KNX booth



Celebrations at Facilities Integrate 2015

NEW ZEALAND The booth of KNX New Zealand at Facilities Integrate 2015 drew an incredible amount of attention thanks to the ongoing 25th anniversary of KNX. The fact that KNX had not only survived for the last 25 years, but is also dominating the worldwide market of building automation, was reason enough for many visitors to have a look at the booth of KNX New Zealand and celebrate the 25th anniversary.

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

KNX Poland delivers KNX city to Architects

POLAND KNX Poland celebrated the 25th anniversary of KNX in a very special way. It dedicated its show to architects with an invitation to drinks, food and an exhibition. KNX Poland gave an explanation of how the worldwide STANDARD for home and building control supports the architects' needs and how KNX contributes to the future or smart cities, thanks to the innovative KNX city.

Contact: Jan Worobiec
jan.worobiec@schneider-electric.com | www.knxpolska.pl



Polish delegates during the KNX Association President's speech



Participants at the ATEC KNX Training Centre



KNX Portugal hosts workshops, presentations and an exhibition

PORTUGAL KNX Portugal successfully organised a whole-day event for the 25th anniversary of KNX, providing participants from all over the country with information about all aspects of KNX. The event took place at the ATEC KNX Training Centre, and with presentations, hands-on sessions and an exhibition, the participants were left well-informed. Follow-up activities are already planned underlining the success of this event.

Contact: Rui Horta Carneiro | rui.carneiro@knx.pt
www.knx.pt

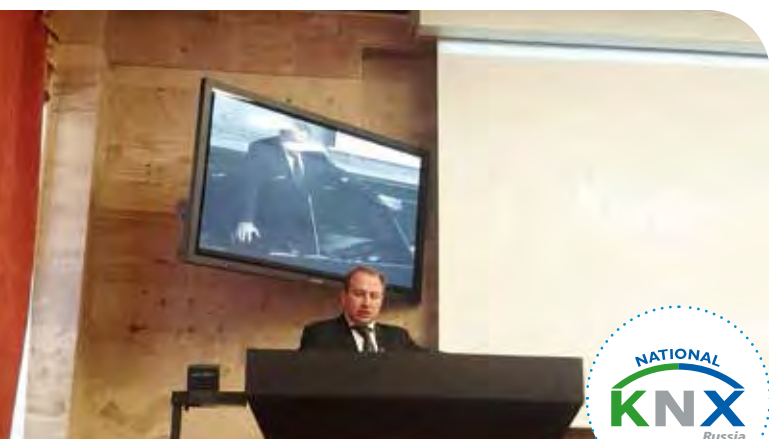
KNX Romania celebrates #KNXis25 with three events

ROMANIA Many Tweets and Facebook updates were posted on the social wall of KNX Romania, which was no surprise, since it organised three events in order to celebrate the 25th anniversary of KNX. With events for beginners and experts, spread all over the country, the KNX National Group greatly contributed to a better understanding of KNX in Romania.

Contact: Marian Simtinica | info@knx.ro
www.knx.ro



The President's Speech in Romania



Smart City experience in Russia



KNX Russia focuses on the "Smart City"

RUSSIA KNX Russia, in cooperation with the KNX User-club CIS and Baltics as well as its KNX Training Center, celebrated the special day of #KNXis25 in the Smart City Lab of Moscow State University. The 25th anniversary event focused on the KNX city theme, and this successful event allowed the audience to learn more about how KNX adds value to the cities of the future.

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

KNX South East Asia celebrates at Raffles Hotel

SINGAPORE After a successful performance at BEX Asia, the leading fair for home and building control in South East Asia, KNX South East Asia invited the whole community to celebrate the 25th anniversary of KNX at Raffles Hotel, the most prestigious venue in Singapore. All members participated, making this event again a demonstration of the strength of the first Asian KNX National Group.

Contact: Celine Cheong | info@knx.asia
www.knx.asia



Networking session with live-demonstration



High interest in the main presentation of the event



#KNXis25 celebrations in South Africa

SOUTH AFRICA The auditorium of the Inner City Ideas Cartel in Cape Town was the venue of the celebrations for the only KNX National Group in Africa. KNX South Africa invited various consultants, architects and integrators to learn more about the 25 years of success that KNX has had all over the world, and how this technology can help to overcome challenges in the South African market.

Contact: Matthew Carter | matt@knxsa.com
www.knx.org/za

KNX Spain celebrates with four events

SPAIN With four events, KNX Spain organised the biggest contribution to the 25th anniversary. The theme was ETSS, and the workshops and training sessions, as well as the special surprises made the Spanish festivities memorable for the whole community all over the country. The resulting positive audience feedback confirmed the success of the events and the correct strategy of KNX Spain.

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



ETSS Workshop in Malaga for #KNXis25



KNX 25th anniversary in Sweden, 70 people participated on a full day with seminars.



Scandic Star Hotel opens its doors for KNX Sweden

SWEDEN KNX Sweden celebrated the 25th anniversary of KNX by organising its event at the famous Scandic Star Hotel. With presentations by KNX Members and Partners, all participants from various fields had the perfect opportunity to get a deeper insight of KNX, leaving no questions unanswered. To conclude the day, KNX Sweden also had a draw to give away ETSS Professional licenses to three lucky attendees!

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

KNX city focus of the 25th anniversary of KNX Switzerland

SWITZERLAND The focus on the KNX city at the 25th anniversary contribution by KNX Switzerland made an unforgettable impression, even beyond this event. Live KNX demonstrations, presentations, workshops, catering and a nationally famous stand-up comedian put the worldwide STANDARD for home and building control in a special light, and also presented the success of the activities by KNX Switzerland.

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



Presentation of KNX Switzerland



KNX Taiwan presenting smart building concept



KNX Taiwan and TÜV Rheinland – A strong partnership

TAIWAN KNX Taiwan and TÜV Rheinland joined forces to organise their successful contribution to the 25th anniversary of KNX. Presentations by KNX Members and Partners, as well as by TÜV Rheinland, a newly KNX Accredited Test Lab, made the event not only informative, but also highlighted the advantages of an open standard for the whole Taiwanese and Chinese market.

Contact: Samuel Yang | samuelyang@sekta-taiwan.com
www.knx.org/tw

KNX UK cuts the #KNXis25 cake

UK To celebrate the #KNXis25 day, KNX UK invited all its members, partners and delegates to participate in an event that included presentations and discussions covering the latest information about KNX and the market developments, as well as a splendid KNX birthday cake. After reviewing the past 25 years, the outlook for the future left the audience even more excited about the prospects for KNX.

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



Cutting the KNX birthday cake



KNX USA members at CEDIA Expo



KNX USA – one year, two fairs, two major successes!

USA KNX USA has elevated KNX to the next level in less than one year of being active. It participated at CEDIA Expo, the global showcase for the home technology, where it gained attention due to the interoperability of KNX, as well as solutions offered by various manufacturers. The great performance of KNX USA points to KNX being the right technology for the dynamic market requirements in the USA.

Contact: M. Miccelli | jma.miccelli@knx.us
www.knx.us

KNX Userclub / Professionals



KNX Professionals Germany organises first online conference

KNX Professionals Germany found the perfect solution for its celebration of the 25th anniversary of KNX without making the presenters and the participants travel long distances. For the first time, the group organised an online conference, which gathered its community together for presentations on the newest developments of KNX. This success has already led to the organisation of the next online conference.

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



All benefits of smart real estate in the KNX app Smart Inside



KNX webinar on the KNX website

The Dutch association of KNX Professionals launched the new free app Smart Inside that demonstrates numerous examples of KNX automated homes and buildings. This APP (for iOS and Android) shows dozens of examples of KNX automated project in homes, restaurants, offices, healthcare facilities... With the service, KNX Professionals want to inspire the market, particularly architects, consultants and clients, to get more out of their real estate.

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



KNX at "Targi Dom Inteligentny 2015"

KNX Professionals Polska, in collaboration with KNX Poland, participated at "Targi Dom Inteligentny" in Warsaw. This 3-day event was a great meeting point for designers, architects and installers and allowed them to find out about new technologies in smart homes. KNX Poland had the opportunity to present KNX and the KNX city concept at the KNX area, as well as during several seminars.

Contact: Andrzej Stachno | info@knxpolska.org
www.knxprofessionals.pl

KNX Professionals Polska in Warsaw





KNX Userclub Austria holds its 11th theme night

Magician Tonio Vesarri offered his villa for KNX Userclub Austria to organise its 11th theme night. Besides a focus on the openness and easy interfacing possibilities with the worldwide STANDARD for home and building control, the audience also enjoyed a review on the 25 years of success of KNX. The night was concluded with a delicious dinner and networking session.

Contact:

Andreas Fabitsch | info@knx-professionals.at | www.knx-professionals.at



KNX Userclub France merges with KNX National Group



KNX France invited the KNX Userclub France, the national platform for integrators and installers, to become part of the KNX National Group and use the currently existing infrastructure for its administration. This merger helps the KNX Userclub France to be active from the very beginning and to focus on organising events specifically for KNX users.

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

Official announcement of merger



KNX Userclub Hong Kong and TÜV Rheinland join forces

As a new KNX test lab and strong supporter of the KNX Userclub in Hong Kong, TÜV Rheinland offered its premises in order to celebrate the 25th anniversary of KNX. With a focus on device development, the presentations hit the spot for the attendees. The advantages of an open technology were instantly compelling to the participants, so we can expect increased development in this region.

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



TÜV Rheinland presents the advantages of an open technology



KNX Userclub Korea first event celebrates 25th anniversary of KNX

The newly founded KNX Userclub Korea made history by celebrating the 25th anniversary of KNX as its first event. This event was also one of the biggest events in the history of home and building control in Korea and attracted both professionals and installers. Presentations and a hands-on session contributed to a better understanding in a market with skyrocketing demand for KNX.

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

Presentations and hands-on session



Highlights from KNX Userclub Malaysia celebrations



KNX Userclub Malaysia organises massive event

KNX Userclub Malaysia sent out an invitation and everyone came! With an international audience, KNX Userclub Malaysia celebrated the 25th anniversary of KNX by putting on an outstanding show, award ceremonies and of course in-depth information about KNX. By emphasising the advantages of KNX, the audience was able to see the potential of KNX and the KNX Userclub Malaysia.

Contact: GP Chandran | gphand@zmc.net.my



B.s Systems

Israel

naor@bs-systems.co.il
www.Bs-Systems.co.il



CERISIC

Belgium

nicolas.velings@cerisic.be
www.cerisic.be



Domoconsulting

France

formations@domoconsulting.com
www.formation-domotique.com



Domoconsulting - Centre de formation Corse

France

domoconcept@domoconsulting.com
www.formation-domotique.com



DomoGenius Formation – Nice

France

formation-nice@domogenius.fr
www.domogenius.fr



FEELSMART.

FEELSMART GmbH

Germany

willian.vent@feelsmart.de
www.feelsmart.de



FiTh Elektrotechnik e.U.

Austria

schulung@fith-et.at
www.fith-et.at



Hager ME FZE

United Arab Emirates

arunn.rathinamuthu@hager.com
www.hager.ae



Jörg Sicherheitstechnik UG

Germany

joerg.sicherheitstechnik@web.de
www.sicherheitstechnik-joerg.de



JPG Hardware House Ltda

Brazil

joseanio@jpghh.com.br
www.jpghh.com.br



Quartz

Jordan

rozana_areeda@yahoo.com



Smarthouse

Ukraine

leonid@smarthouse.in.ua
www.eib-info.kiev.ua



Studio Tecno

Italy

g.capri@studiotecno.net
www.knxitalia.it



The Electrical Training Company Limited

New Zealand

peterr@etco.co.nz
www.etco.co.nz



ZENNIO COLOMBIA

Colombia

janobel@msn.com
www.zennio.co

More info:

Visit our Website:
www.knx.org





ESPRIT - Ecole Supérieure Privée d'ingénierie et de Technologies

Tunisia

kbrahim@de.intellixx.com
www.esprit.ens.tn



h_da

HOCHSCHULE DARMSTADT
UNIVERSITY OF APPLIED SCIENCES

Hochschule Darmstadt

Germany

www.h-da.de



Universidad de Sevilla

Spain

adica@us.es
www.us.es



THM

TECHNISCHE HOCHSCHULE MITTELHESSEN

**CAMPUS
FRIEDBERG**

IEM

Informationstechnik-
Elektrotechnik-Mechatronik

Technische Hochschule Mittelhessen

Germany

thomas.petrasch@iem.thm.de
www.thm.de

IES DE CASTUERA

Spain

adressb2010@gmail.com

KNX at International Conferences and Fairs



KNX chosen technology at WorldSkills São Paulo 2015

BRAZIL In August 2015, São Paulo hosted the “WorldSkills Competition”, the competition of the best international trainees is the biggest vocational education and skills excellence event in the world. For the discipline of Electrical Installation, KNX was again selected as the only technology to be used. KNX Association would like to congratulate all participants for their great achievements during competition.

Contact: info@knx.org

Winners from Brazil, China and Japan

KNX Roadshow Japan – 3 cities, 8 events

JAPAN The successful KNX Roadshows arrived in the next country: Japan! Organised by KNX National Group Japan, the KNX forums, workshops and training sessions attracted 400 participants for two days each in Tokyo, Osaka and Fukuoka. KNX Japan started its activities mainly in the Tokyo area, so the success of the events in the other business hubs in Japan exceeded all expectations.

Contact: info@knx.org

KNX and ETS Training in Osaka



Training Centre hands out 2000th KNX certificate

BELGIUM The VDAB KNX Training Centre proudly handed out the 2000th KNX certificate to its trainee, Nick Redant, during the KNX Training Centre Conference in Bruges. After changing his career and founding his own company, Nick Redant now concentrates on KNX-related projects and he has also participated in the KNX advanced course at VDAB. The KNX Association would like to congratulate this success.

Contact: info@knx.org

Nick Redant receiving the 2000th certificate





Focus on KNX Security

GERMANY In November, KNX Association organised the 3rd KNX PlugFest in Germany. The event delivered the latest updates about system and stack development for the ETS Developer community. Thanks to progress in regards to KNX security, the KNX Association will further improve and extend the level of security in future KNX installations. Do not miss the presentation at the upcoming Light+Building fair. *Contact: info@knx.org*

Good mood due to positive KNX developments

KNX National Group Conference in Athens

GREECE KNX Association invited the representatives from all KNX National Groups to attend the annual KNX National Group Conference. The conference was held at Hotel Grande Bretagne, Athens' oldest and most prestigious hotel, from October 29th – 30th 2015. With information about the upcoming KNX strategy for this decade, the conference programme delivered the revolutionary future of KNX. *Contact: info@knx.org*

KNX National Group Conference during 2nd session



KNX introduced at Japan's top University Waseda

JAPAN Initiated by the government, the R&D team of Waseda University, one Japan's finest universities, was researching different technologies for building automation, and subsequently the attention of the team was drawn to KNX. After introducing the advantages regarding the unique openness of the KNX standard to the universities' representatives, the decision to make KNX the leading technology was immediate. *Contact: info@knx.org*

Introduction of KNX at Waseda University



KNX Training Centre Conference held in Bruges

BELGIUM The 2015 KNX Training Centre Conference took place in Bruges on October 23rd and was hosted by the VDAB training centre. More than 70 representatives from different training centres received information on trending topics, and the main focus of this year's conference was the training centre management tool, which was introduced in June 2015. Solutions for online training were also presented. *Contact: info@knx.org*

KNX training centre representatives at VDAB





KNX succeeds at Interlight Moscow

RUSSIA This year Interlight Moscow, powered by Light + Building, attracted 519 companies from 21 countries to take part. With 15 KNX members at the KNX City booth, many new applications and products were exhibited, and visitors also had the opportunity to test their knowledge at the KNX contest area. In addition, the KNX Association participated at the Building Automation and Energy Efficiency Forum. *Contact: info@knx.org*

The KNX city booth at Interlight Moscow

Second PlugFest in Russia is a major success

RUSSIA The second KNX PlugFest attracted 110 specialists. The combined forces of KNX Russia, CIS and Baltic, as well as the KNX Userclub Russia, Moscow State University of Civil Engineering and Messe Frankfurt made this event even bigger than the first PlugFest. Thanks to the support of 17 KNX Member companies, the participants were given the opportunity to get a deeper insight into KNX. *Contact: info@knx.org*

Specialists getting stuck-in at Plugfest



KNX Sweden welcomes new KNX Tutors

SWEDEN From November 30th to December 2nd, KNX Sweden organised a KNX Tutor Course, welcoming five new KNX Tutors to the growing KNX Training community. Thanks to the thorough preparation offered by KNX Association, all participants successfully passed the course, allowing them to either set up new KNX Training Centres or conduct training in those that already exist. *Contact: info@knx.org*

KNX Tutor Course Exam in Goteborg



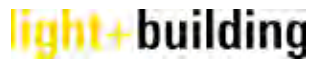
KNX South East Asia at BEX Asia

SINGAPORE All members of KNX South East Asia gathered in order to participate at BEX Asia, the leading fair for home and building control in Singapore. Due to the raised interest in KNX, the exhibits again attracted an unexpected high number of visitors. The continuous participation at BEX Asia and the many activities of KNX South East Asia has made KNX the leading technology in this growing region. *Contact: info@knx.org*

Continuous success at BEX Asia



Events and Fairs Schedule



light + building 2016

13. – 18. 3. 2016

Frankfurt (Germany)

The world's leading trade fair for architecture and technology

www.light-building.messefrankfurt.com



ISH China 2016

30. 5 – 1. 6. 2016

Beijing (China)

China International Trade Fair for Sanitation, Heating, Ventilation & Air-conditioning

www.ishc-cihe.hk.messefrankfurt.com/beijing/en/visitors/welcome.html



China Shanghai Intelligent Building Technology 2016

31. 8 – 2. 9. 2016

Shanghai (China)

China's premier platform for intelligent building technology

www.shanghai-intelligent-building-technology.hk.messefrankfurt.com/shanghai/en/visitors/welcome.html



Energy Efficiency World

15. – 16. 3. 2016

Johannesburg (South Africa)

Conference provides energy efficiency solutions to all the stake holders across all the relevant sectors.

www.terrapinn.com/exhibition/power-electricity-world-africa/index.stm



Eliaden 2016

1. – 3. 6. 2016

Oslo (Norway)

The industrial event where the entire electrical engineering industry will meet up

www.eliaden.no



BEX Asia 2016

7. – 9. 9. 2016

Marina Bay Sands (Singapore)

BEX Asia is the global business sourcing, networking and knowledge-sharing platform for the sustainable built environment in Southeast Asia.

www.bex-asia.com



2016 Lightfair International

26. – 28. 4. 2016

San Diego (USA)

World's largest annual architectural and commercial lighting trade show and conference.

www.lightfair.com



Predialtec 2016

12. – 14. 7. 2016

Sao Paulo (Brazil)

The biggest Brazilian trade show focused on audio and video control as well as home and building automation

www.predialtec.com



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



EL & TEKNIK 2016

10. – 12. 5. 2016

Odense (Denmark)

Exhibition for electrical distribution, electrical equipment, lighting and ICT.

www.elogteknikmessen.dk



Integrate 2016

23. – 25. 8. 2016

Sydney (Australia)

Integrate is Australia's largest industry event for leaders and professionals in AV and Systems Integration.

www.integrate-expo.com



Elmässan 2016 (EasyFairs)

19. – 20. 10. 2016

Stockholm (Sweden)

The electrical installers best known event in Sweden.

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



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



HI-TECH Building

1. – 3. 11. 2016

Moscow (Russia)

Trade show with focus on building automation and smart home systems

www.En.hitechbuilding.ru



Beurs Domotica & Slim Wonen

23. – 24. 11. 2016

Eindhoven (The Netherlands)

Trade show mainly based on home and building electronic systems

www.smart-homes.nl



Facilities Integrate 2016

3. – 4. 11. 2016

Auckland (New Zealand)

Trade exhibition for the facilities management and system integration industries

www.facilitiesintegrate.nz



Euroskills 2016

1. – 3. 12. 2016

Gothenburg (Sweden)

Europe's largest international skills competition

www.euroskills.org

Imprint

KNX Journal international

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

Distribution

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

Online Distribution

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

Editor

KNX Association cvba
De Kleetlan 5 Bus 11
B-1831 Diegem - Brussels, Belgium
Phone: +32 (0) 2 775 85 90
Fax: +32 (0) 2 675 50 28
Email: info@knx.org
URL: www.knx.org

Editorial Office

Redaktion KNX Journal
Friedrich-Wolf-Str. 16 A
12527 Berlin
Germany
Phone: +49 (0) 30 64 32 62 79
Fax: +49 (0) 30 64 32 62 78
Email: knx-journal@knx.org
URL: www.knx.org/news-press/knx-journal/

ISSN

2033-7396

Print edition

80,000 copies

Picture credits

KNX Association cvba, editorial office and specified companies

Copyright

Reproduction of contributions only with permission of the publishing house under detailed source data. For unsolicited sent-in manuscripts and entries the publishing house does not take any responsibility. The photos are provided from the respective companies. Brands used in this magazine without guarantee of the free usefulness. Texts, illustrations and technical data are carefully compiled, nevertheless errors cannot completely be excluded. The publishing house and the authors can neither take a legal responsibility nor any adhesion for incorrect data.

KNX® and ETS® are registered trademark of KNX Association cvba, Belgium.

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



Casto Canavate
Marketing Manager

✉ casto.canavate@knx.org
☎ +32 (0)2 775 85 91



André Hänel
System & Tool Manager

✉ andre.haenel@knx.org
☎ +32 (0)2 775 85 90



Ufuk Unal
Certification Manager

✉ ufuk.unal@knx.org
☎ +32 (0)2 775 86 53



Angelique De Scheemaeker
Sales

✉ sales@knx.org
☎ + 32 (0)2 775 85 90



Thibaut Hox
Marketing

✉ thibaut.hox@knx.org
☎ + 32 (0)2 775 85 99



Steven de Bruyne
System Architect

✉ steven.debruyne@knx.org
☎ +32 (0)2 775 86 47



Ulrike Eggers
Sales & Administration

✉ ulrike.eggers@knx.org
☎ + 32 (0)2 775 85 90



Christian Stahn
Marketing

✉ christian.stahn@knx.org
☎ +32 (0)2 775 86 48



Vassilios Lourdas
System Engineer

✉ vassilios.lourdas@knx.org
☎ +32 (0)2 775 86 40



Jesús Arias
KNX Solutions

✉ jesus.arias@knx.org
☎ +32 (0)2 775 85 90



Christophe Parthoens
Support Engineer

✉ support@knx.org
☎ +32 (0)2 775 85 90

Follow us:



SALES

KNX Tools Online Shop
<https://my.knx.org>



TOOL SUPPORT

KNX Online Support
<https://my.knx.org>

The worldwide STANDARD for home and building control

- One Standard (ISO/IEC 14543)
- One Tool (ETS)
- All Media:
 - Ethernet (IP)
 - Twisted Pair (TP)
 - Radio Frequency (RF)
 - Powerline (PL)

AFRICA • ALBANIA • ANDORRA • ANGOLA • ARGENTINA • ARMENIA • AUSTRALIA • AUSTRIA • AZERBAIJAN • BAHRAIN • BANGLADESH • BELARUS • BELGIUM • BOLIVIA • BOSNIA AND HERZEGOVINA • BRAZIL • BRUNEI DARUSSALAM • BRITISH VIRGIN ISLANDS • BULGARIA • CANADA • CHILE • CHINA • CHINA - HONG KONG SPECIAL ADMINISTRATIVE REGION • COLOMBIA • COSTA RICA • CROATIA • CYPRUS • CZECH REPUBLIC • DENMARK • DOMINICAN REPUBLIC • ECUADOR • EGYPT • ESTONIA • ETHIOPIA • FAEROE ISLANDS • FINLAND • FRANCE • FRENCH POLYNESIA • FRENCH SOUTHERN TERRITORIES • GEORGIA • GERMANY • GIBRALTAR • GREECE • GUADELOUPE • GUA-TEMALA • HUNGARY • ICELAND • INDIA • INDONESIA • IRAN, ISLAMIC REPUBLIC OF • IRELAND • ISRAEL • ITALY • JORDAN • KAZAKHSTAN • KOREA, REPUBLIC OF • KOSO-VO • KUWAIT • KYRGYZSTAN • LATVIA • LEBANON • LIECHTENSTEIN • LITHUANIA • LUXEMBOURG • MACEDONIA • MALAYSIA • MALDIVES • MALTA • MARTINIQUE • MAURITANIA • MAURITIUS • MEXICO • MONACO • MONTENEGRO • MOROCCO • MY-ANMAR • NAMIBIA • NEPAL • NETHERLANDS • NEW CALEDONIA • NEW ZEALAND • REPUBLIC • DENMARK • DOMINICAN REPUBLIC • ECUADOR • EGYPT • ESTONIA • ETHIOPIA • FAEROE ISLANDS • FINLAND • FRANCE • FRENCH POLYNESIA • FRENCH SOUTHERN TERRITORIES • GEORGIA • GERMANY • GIBRALTAR • GREECE • GUADE-LOUPE • GUATEMALA • HUNGARY • ICELAND • INDIA • INDONESIA • IRAN, ISLAMIC REPUBLIC OF • IRELAND • ISRAEL • ITALY • JORDAN • KAZAKHSTAN • KOREA, RE-PUBLIC OF • KOSOVO • KUWAIT • KYRGYZSTAN • LATVIA • LEBANON • LIECHTEN-STEIN • LITHUANIA • LUXEMBOURG • MACEDONIA • MALAYSIA • MALDIVES • MALTA • MARTINIQUE • MAURITANIA • MAURITIUS • MEXICO • MONACO • MONTENEGRO • MOROCCO • MYANMAR • NAMIBIA • NEPAL • NETHERLANDS • NEW CALEDONIA • NEW ZEALAND • NIGERIA • NORWAY • OMAN • PAKISTAN • PALESTINE • PANAMA • PARAGUAY • PERU • PHILIPPINES • POLAND • PORTUGAL • QATAR • REUNION • RO- MANIA • RUSSIAN FEDERATION • SAUDI ARABIA • SERBIA • SINGAPORE • SLOVAKIA • SLOVENIA • SOUTH AFRICA • SPAIN • SURINAME • SWAZILAND • SWEDEN • SWIT- ZERLAND • SYRIA • TAIWAN • THAILAND • TUNISIA • TURKEY • UKRAINE • UNITED ARAB EMIRATES • UNITED KINGDOM • UNITED STATES • URUGUAY • VENEZUELA • VIET NAM • YEMEN ALBANIA • ALGERIA • ANDORRA • ANGOLA • ARGENTINA • ARME- NIA • AUSTRALIA • AUSTRIA • AZERBAIJAN • BAHRAIN • BANGLADESH • BELARUS • BELGIUM • BOLIVIA • BOSNIA AND HERZEGOVINA • BRAZIL • BRUNEI DARUSSALAM • BRITISH VIRGIN ISLANDS • BULGARIA • CANADA • CHILE • CHINA • CHINA - HONG KONG SPECIAL ADMINISTRATIVE REGION • COLOMBIA • COSTA RICA • CROATIA • CYPRUS • CZECH REPUBLIC • DENMARK • DOMINICAN REPUBLIC • ECUADOR • EGYPT • ESTONIA • ETHIOPIA • FAEROE ISLANDS • FINLAND • FRANCE • FRENCH POLYNESIA • FRENCH SOUTHERN TERRITORIES • GEORGIA • GERMANY • GIBRALTAR • GREECE • GUADELOUPE • GUATEMALA • HUNGARY • ICELAND • INDIA • INDONESIA • IRAN, ISLAMIC REPUBLIC OF • IRELAND • ISRAEL • ITALY • JORDAN • KAZAKHSTAN • KOREA, REPUBLIC OF • KOSOVO • KUWAIT • KYRGYZSTAN • LATVIA • LEBANON • LIECHTEN- STEIN • LITHUANIA • LUXEMBOURG • MACEDONIA • MALAYSIA • MALDIVES • MALTA • MARTINIQUE • MAURITANIA • MAURITIUS • MEXICO • MONACO • MONTENEGRO • MOROCCO • MYANMAR • NAMIBIA • NEPAL • NETHERLANDS • NEW CALEDONIA • NEW ZEALAND • NIGERIA • NORWAY • OMAN • PAKISTAN • PALESTINE • PANAMA • PARAGUAY • PERU • PHILIPPINES • POLAND • PORTUGAL • QATAR • REUNION • RO- MANIA • RUSSIAN FEDERATION • SAUDI ARABIA • SERBIA • SINGAPORE • SLOVAKIA • SLOVENIA • SOUTH AFRICA • SPAIN • SWAZILAND • SWEDEN • SWITZER- LAND • SYRIA • TAIWAN • THAILAND • TUNISIA • TURKEY • UKRAINE • UNITED ARAB EMIRATES • UNITED KINGDOM • UNITED STATES • URUGUAY • VENEZUELA • VIET NAM • YEMEN ALBANIA • ALGERIA • ANDORRA • ANGOLA • ARGENTINA • ARME- NIA • AUSTRALIA • AUSTRIA • AZERBAIJAN • BAHRAIN • BANGLADESH • BELARUS • BELGI- UM • BOLIVIA • BOSNIA AND HERZEGOVINA • BRAZIL • BRUNEI DARUSSALAM • BRI- TISH VIRGIN ISLANDS • BULGARIA • CANADA • CHINA • CHINA - HONG KONG



MEMBER

 400 Manufacturers
 in 38 Countries
 7000 Certified Products

PARTNER

 50.000 Partners
 in 138 Countries

TRAINING

 350 Training Centers
 in 59 Countries

NATIONAL

 44 National Groups

SCIENTIFIC

 121 Scientific Partners
 in 32 Countries

ASSOCIATED

 7 Associated Partners

PROFESSIONALS

 16 Userclubs /
 Professionals
 in 15 Countries

USERCLUB

 14 Test Labs

TEST LAB

 14 Test Labs





The worldwide STANDARD for home and building control

KNX members

400 manufacturers from 38 countries

