



life.augmented

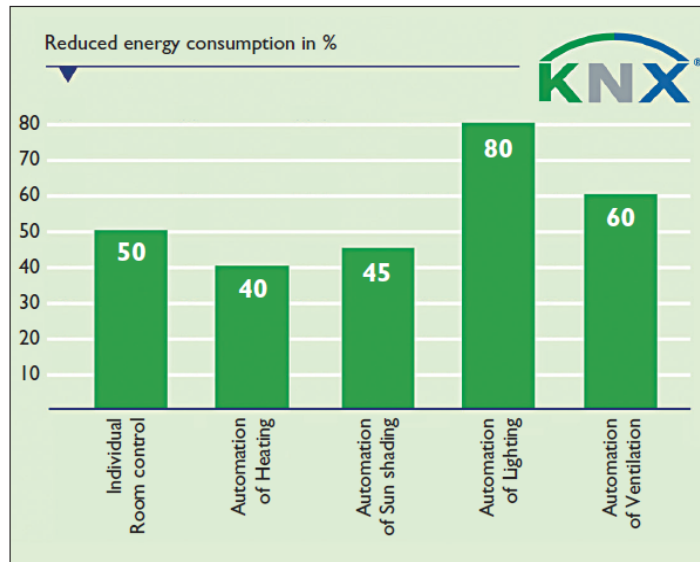
# Home & Building Automation STKNX

Industrial  
Automation  
Competence Center

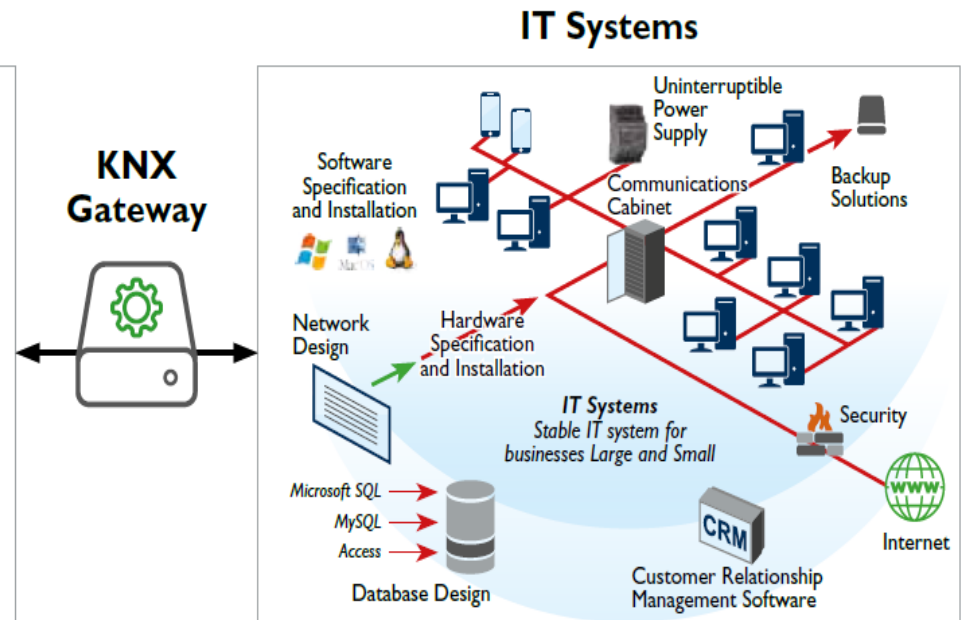
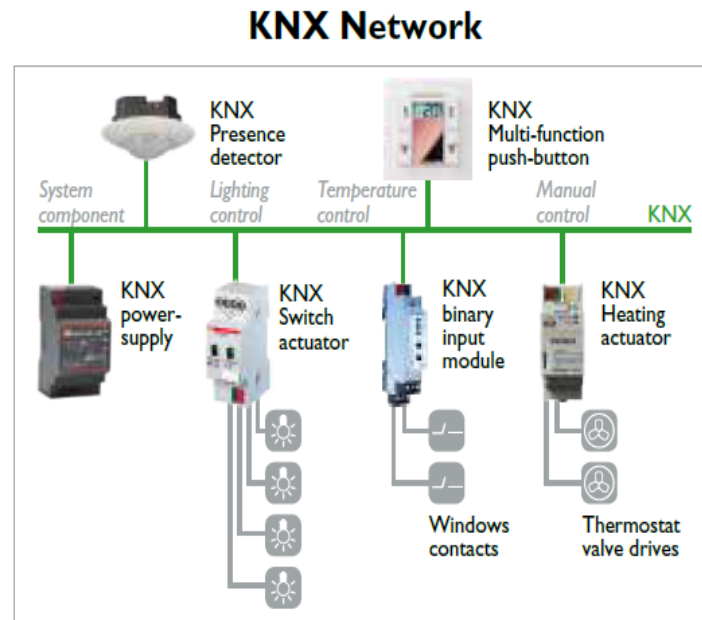


## Low power consumption and compatible with IT systems

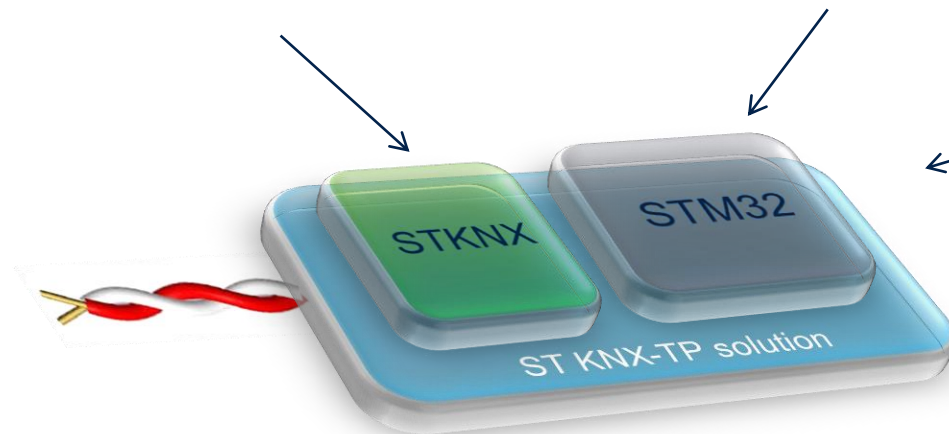
### \* KNX Energy Reduction



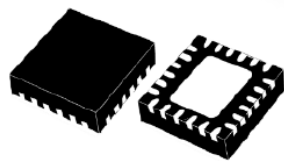
\*Data Source: [www.knx.org](http://www.knx.org) < [KNX-Basics\\_en.pdf](#) >



# STKNX total solution



- STKNX third party partners
- Provide KNX protocol stack development support
- KNX product certification test



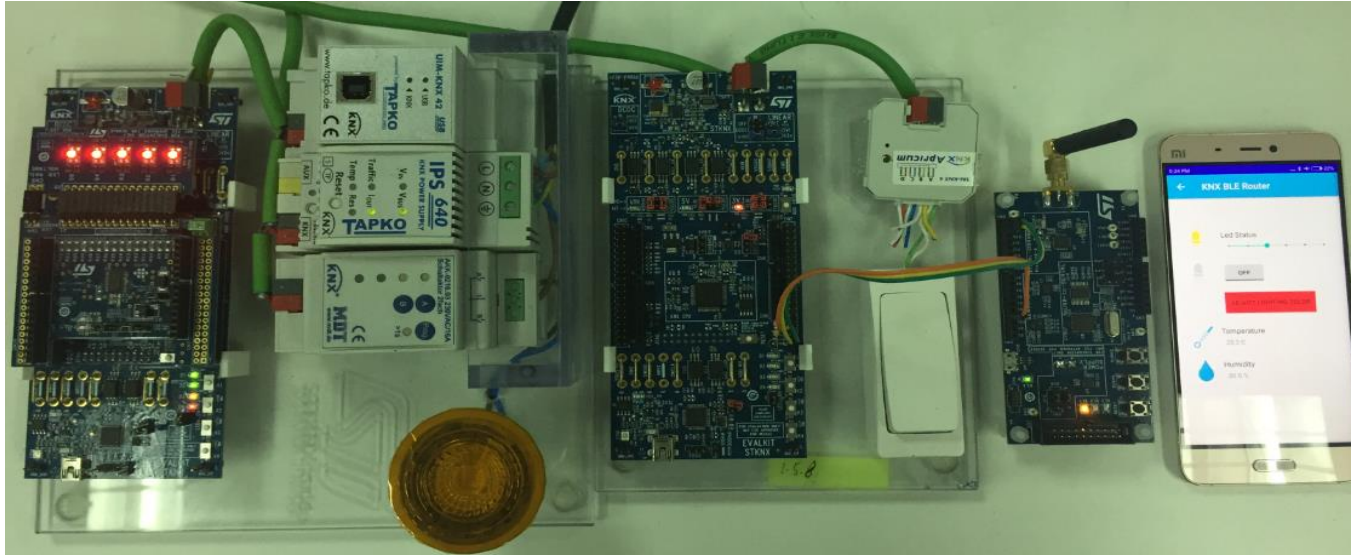
4\*4\*1mm, 0.5mm Pitch



UFQFPN32  
5 × 5 mm

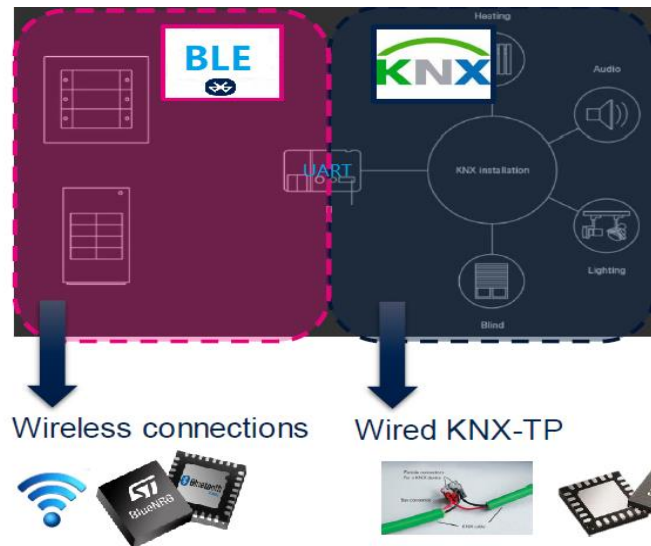


# A KNX-TP and BLE integration system for remote lighting control Via mobile APP

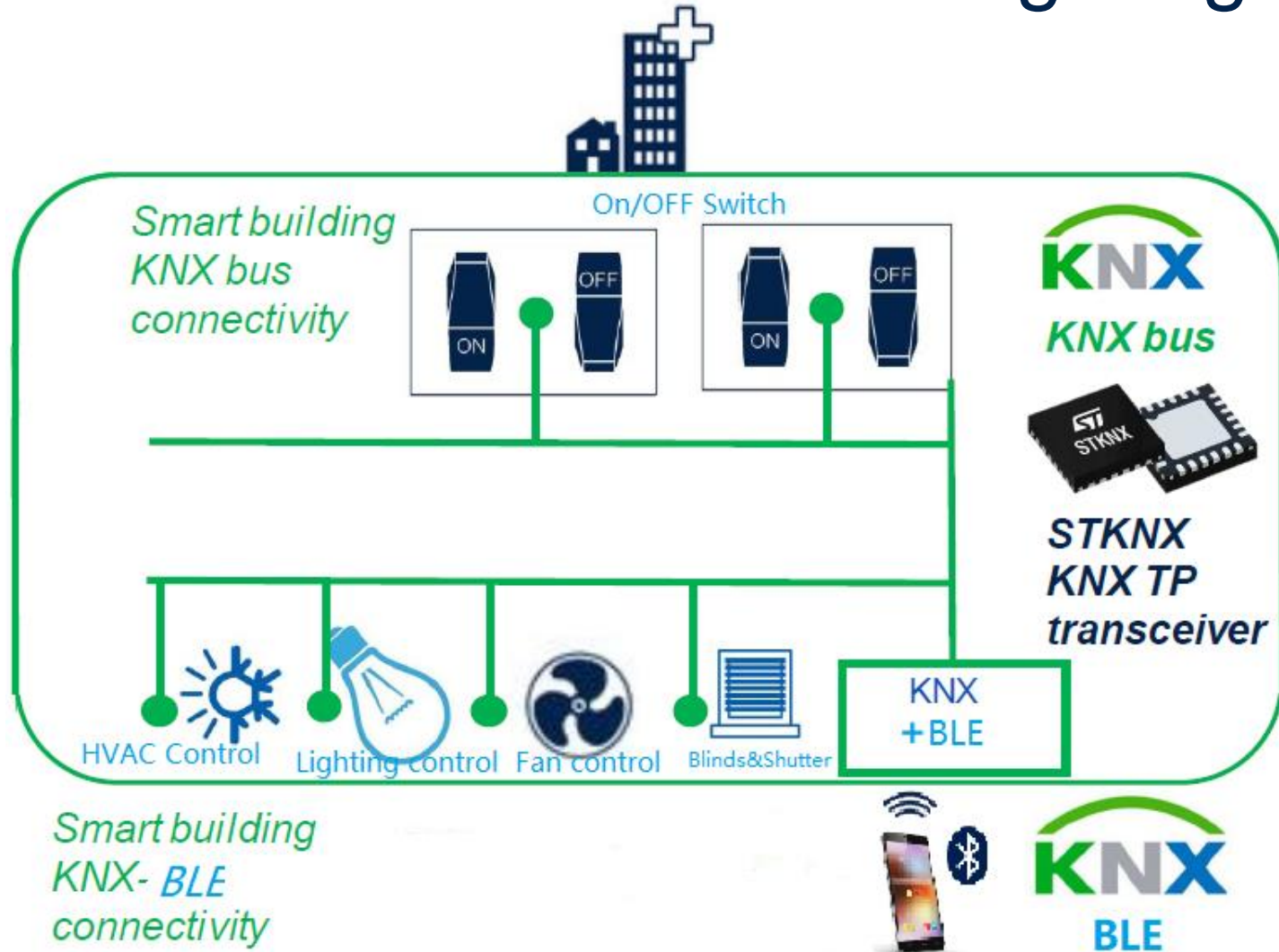


## The system includes three parts:

- Mobile App is designed to switch on/off of the light and adjust its brightness and color via dimmer function. App can also display the value from the onboard temperature and humidity sensor.
- BLE device is a BlueNRG-2 evaluation board (STEVAL-IDB008V2). The BLE device receives commands from APP, and then send them to STKNX sensor board via UART port. Through the BLE device, KNX TP was extended to a wireless system.
- KNX TP system is a small KNX system consists of KNX power, KNX sensor and on/off dimmer KNX actuator. Besides lighting control system, it can also be extended to demonstrate other KNX building systems such as HVAC, Blind & Shutters etc.



# A KNX-TP and BLE integration system for remote lighting control Via mobile APP



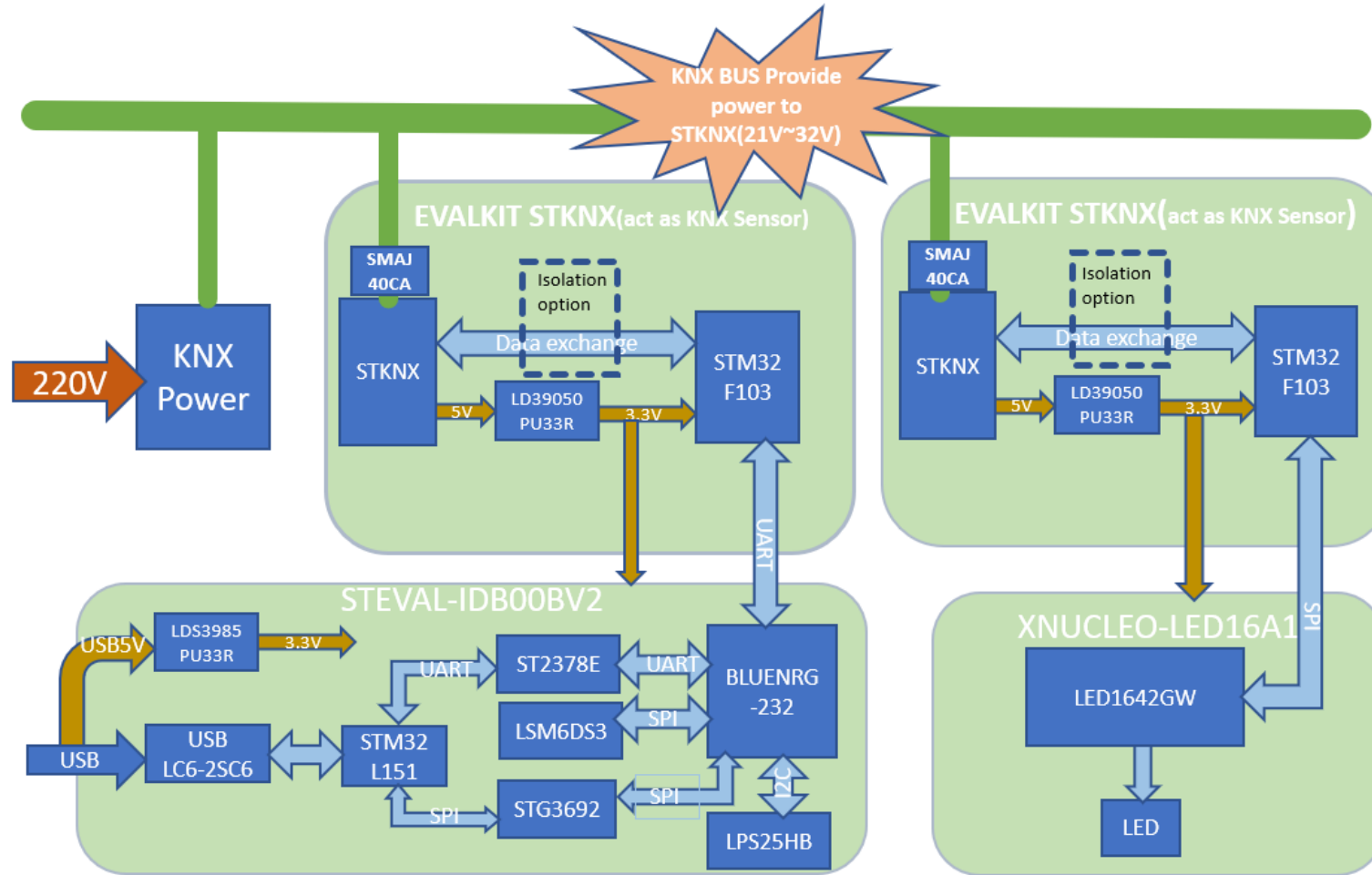
## Features

- On/off Light control via mobile app and button.
- Dimmer lighting brightness and color adjust via mobile app.
- Environment temperature measure and display.
- Able to Integrate with other KNX equipment and system.
- Associated demo kit SW package includes four firmware for additional function extension.

## Application

- Lighting control system.
- HVAC control system
- Blinds & Shutters control
- Switch on/off control
- Intelligent wireless home control system

# BLUEKNX demo kit Block Diagram



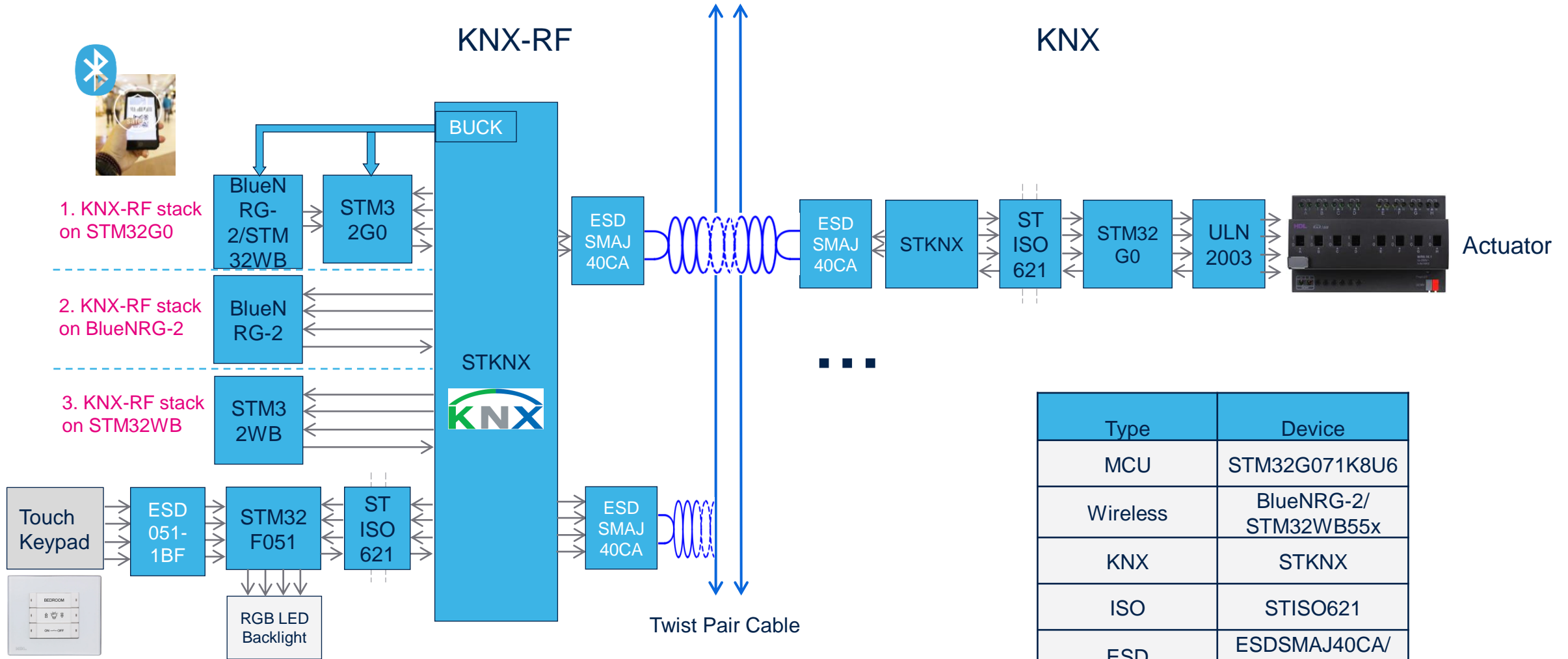
## Product List

- STKNX
- STM32F103
- SMAJ40CA
- STM32L151
- BlueNRG-232
- LD1117S50TR
- LD39050PU33R
- LDS3985PU33R
- LED1642GW
- LSM6DS3
- LPS25HB
- USBLC6-2SC6
- ST2378E
- STG3692

## Used Demo Board List

- EVALKITSTKNX
- STVAL-IDB00BV2
- XNUCLEO-LED16A1
- TAPKO-IPS640
- TAPKO UIM-KNX 42
- MDT AKK-0216.03

# KNX-RF block diagram

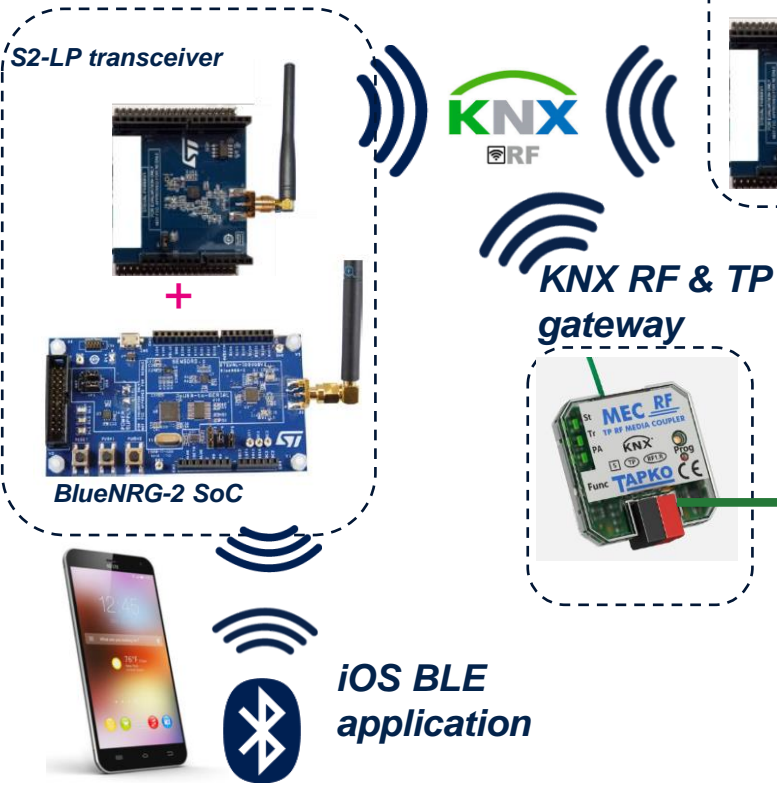


| Type     | Device                     |
|----------|----------------------------|
| MCU      | STM32G071K8U6              |
| Wireless | BlueNRG-2/<br>STM32WB55x   |
| KNX      | STKNX                      |
| ISO      | STISO621                   |
| ESD      | ESDSMAJ40CA/<br>ESD051-1BF |
| Driver   | ULN2003                    |

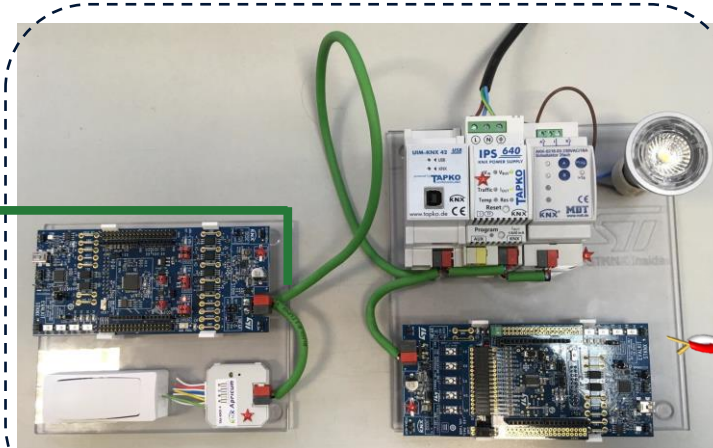


# KNX ecosystem demo setup proposal

## KNX-RF radio switch Settings using BLE

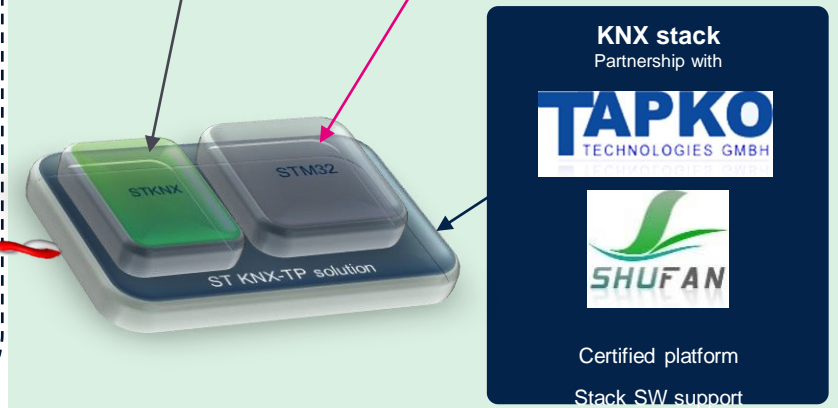


## KNX-RF LED application



**STKNX demo included**

## STKNX solution







life.augmented

Please Scan the QR Codes  
and Stay Tuned with Us.



PDSA Wechat Subscription



Power & SPIN Microsite



# Thank you

© STMicroelectronics - All rights reserved.

ST logo is a trademark or a registered trademark of STMicroelectronics International NV or its affiliates in the EU and/or other countries.

For additional information about ST trademarks, please refer to [www.st.com/trademarks](http://www.st.com/trademarks).

All other product or service names are the property of their respective owners.



life.augmented