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# 智能電子鎖方案

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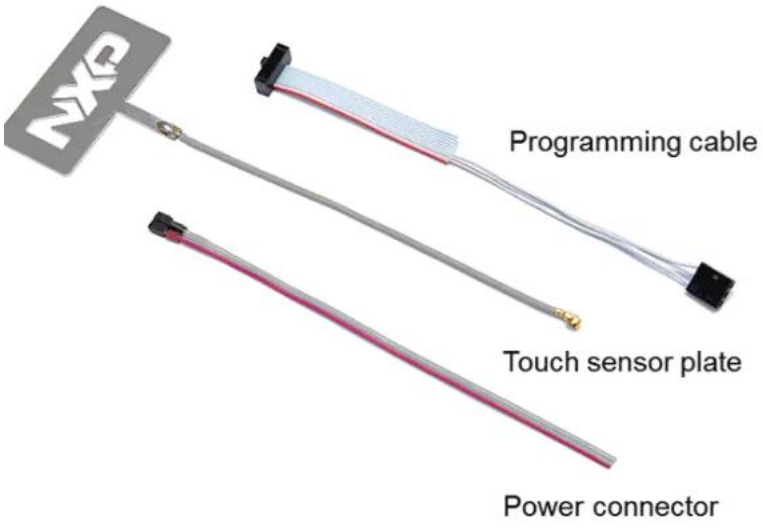
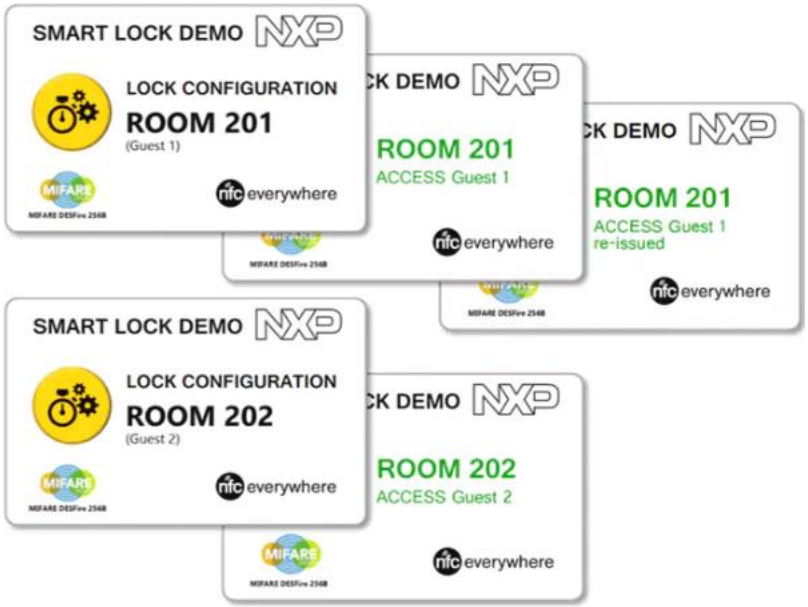
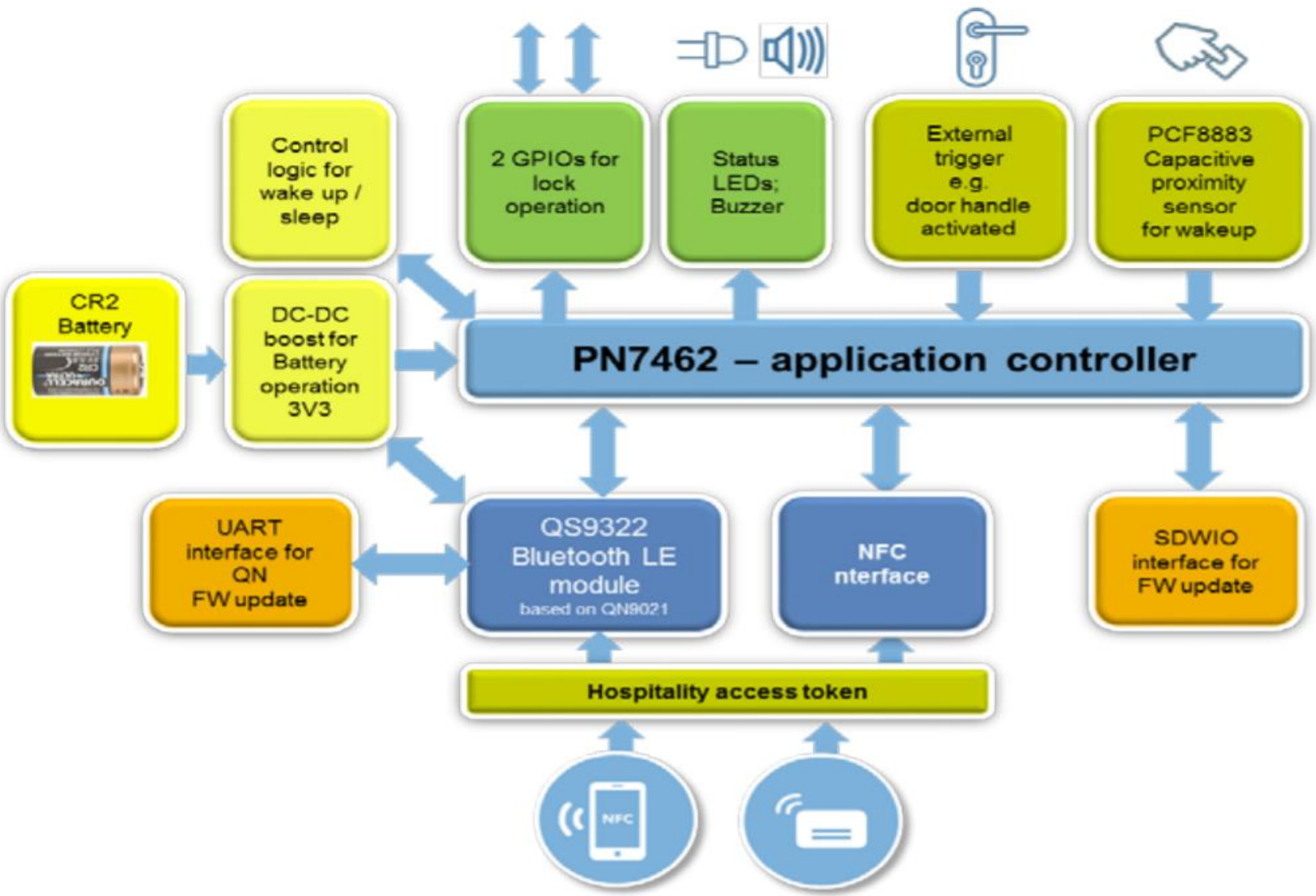
# OM27642 Smart Lock KIT

# Main building blocks



# NFC Reader: PN7462 family

## Characteristics

**Key features**
- 20 MHz Cortex M0 core with 12 kB RAM and 4 kB EEPROM
- 160/80 kB user Flash
- 250mA maximum operating transmitter current with Dynamic Power Control
- Power supply from 2.7 to 5.5V
- GPIOs, master/slave SPI and I²C, host USB and HSUART
- Protected firmware download in flash
- Extended operating temperature range: -40 to +85°C

**Ease of integration**
- Multiple SW examples provided for several use cases
- EMVCo validated and NFC Forum compliant libraries
- Usage of standard development tools

## Optional Contact Reader (PN7462AU)

- Class A, B, C cards supported (PN7462AUHN only)
- Fully integrated ISO/IEC 7816-3&4 UART
- Baud rate up to 1 Mbit/s
- Capability to drive external contact reader frontends for SAMs

## Supported RF protocols

**Reader and Writer mode**
- ISO/IEC 14443A/MIFARE
- ISO/IEC 14443B
- JIS X 6319-4 (comparable with FeliCa1 scheme)
- ISO/IEC 15693 (ICODE-SLIX/SLIX2, ICODE-DNA)
- ISO/IEC 18000-3 mode 3/ EPC Class-1 HF (ICODE-ILT)

**Card emulation**
- ISO/IEC 14443-4 with Active and Passive load modulation support

**Peer to Peer mode**
- Active and passive initiator and target according to ISO/IEC 18092

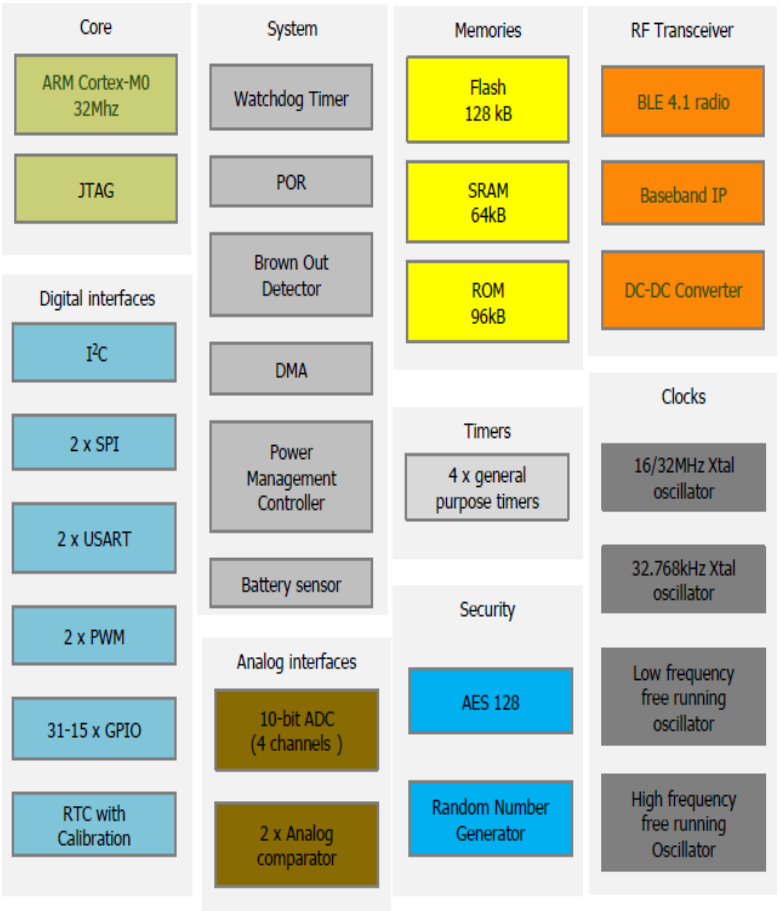
**Allows to read and write**
- Complete MIFARE® and DESFIRE® families
- Complete NTAG® family e.g. NTAG I²C *plus*
- Complete ICODE® family and SmartMX® family

## Packages

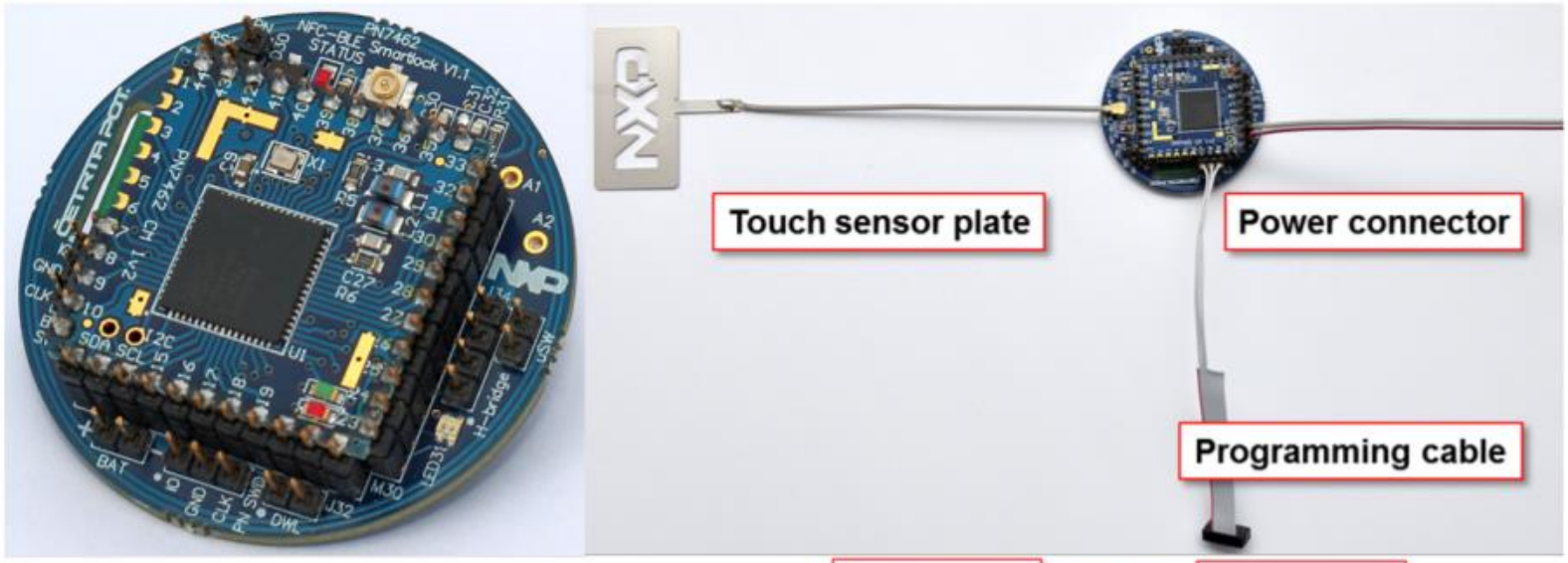
- HVQFN64 (9x9 mm²)
- VFBGA64 (4.5x4.5 mm²)

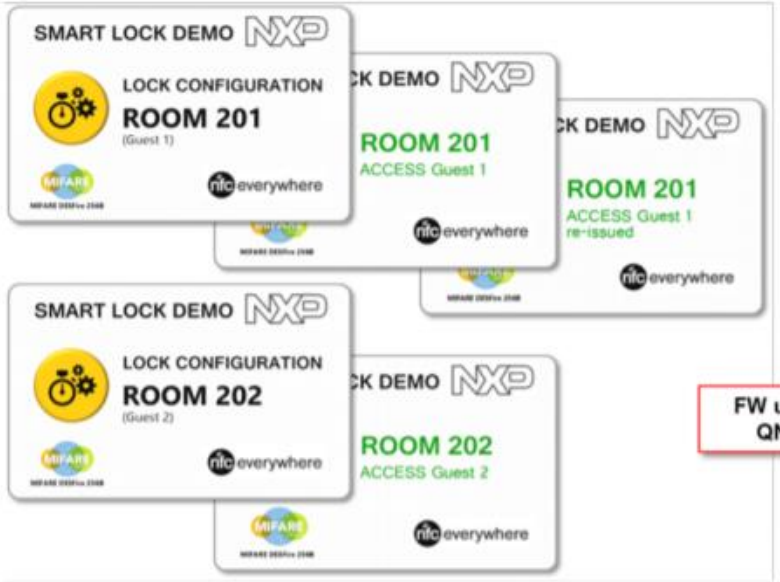
# BLE: QN902x

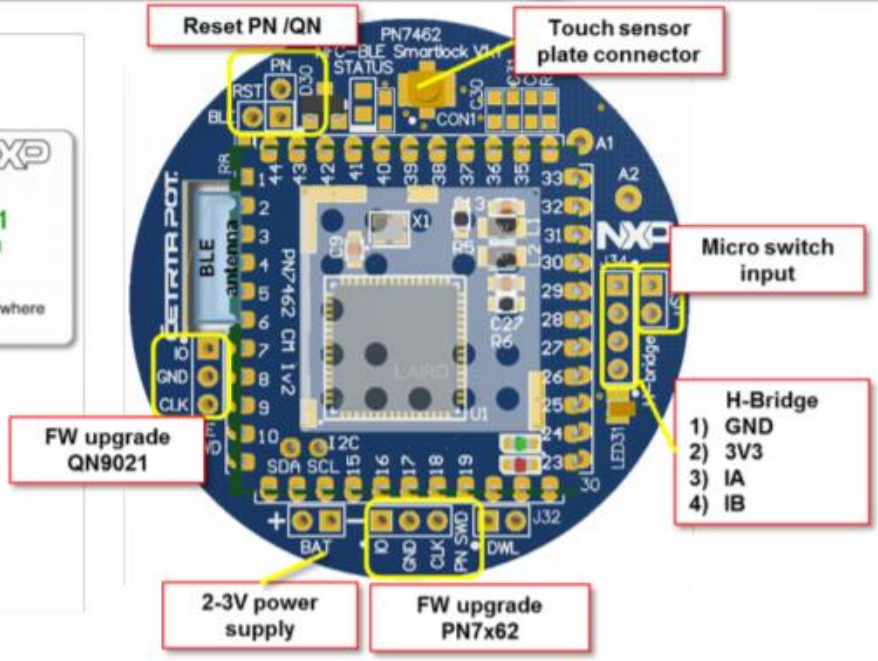
- **CPU**
  - 32 MHz ARM Cortex-M0 core
  - 128 kB Flash & 64 kB RAM & 96kB ROM
- **2.4 GHz radio transceiver**
  - Bluetooth 4.0 LE single mode
  - Support master and slave roles
  - Programmable output power :
    -20 to +4 dBm
  - -95 dBmRX sensitivity (Bluetooth Smart)
  - Peak typical current w/ MCU:
    8.8mA TX @+0dBm
    9.25mA RX with DC/DC activated
- **Security**
  - Cryptoengine: AES-128, RNG
- **System**
  - DC/DC  working from 2.4V to 3.6V
  - Ambient temperature: -40°C to +85°C
  - QFN48 6x6mm, QFN32 5x5mm



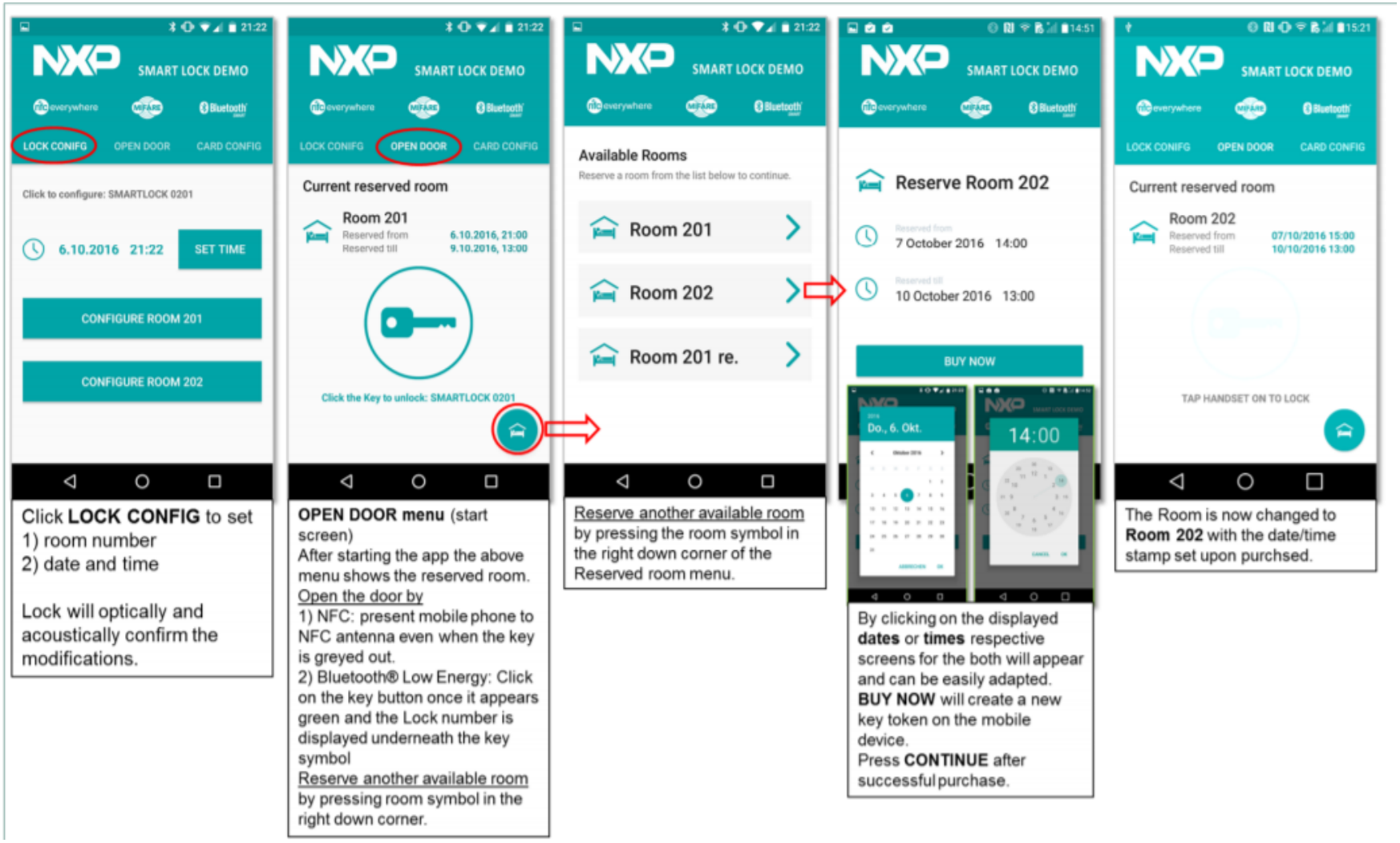
# Smart Lock KIT Content



# Application screenshots




Click **LOCK CONFIG** to set
1) room number
2) date and time

Lock will optically and acoustically confirm the modifications.

**OPEN DOOR menu** (start screen)
After starting the app the above menu shows the reserved room.
Open the door by
1) NFC: present mobile phone to NFC antenna even when the key is greyed out.
2) Bluetooth® Low Energy: Click on the key button once it appears green and the Lock number is displayed underneath the key symbol
Reserve another available room by pressing room symbol in the right down corner.

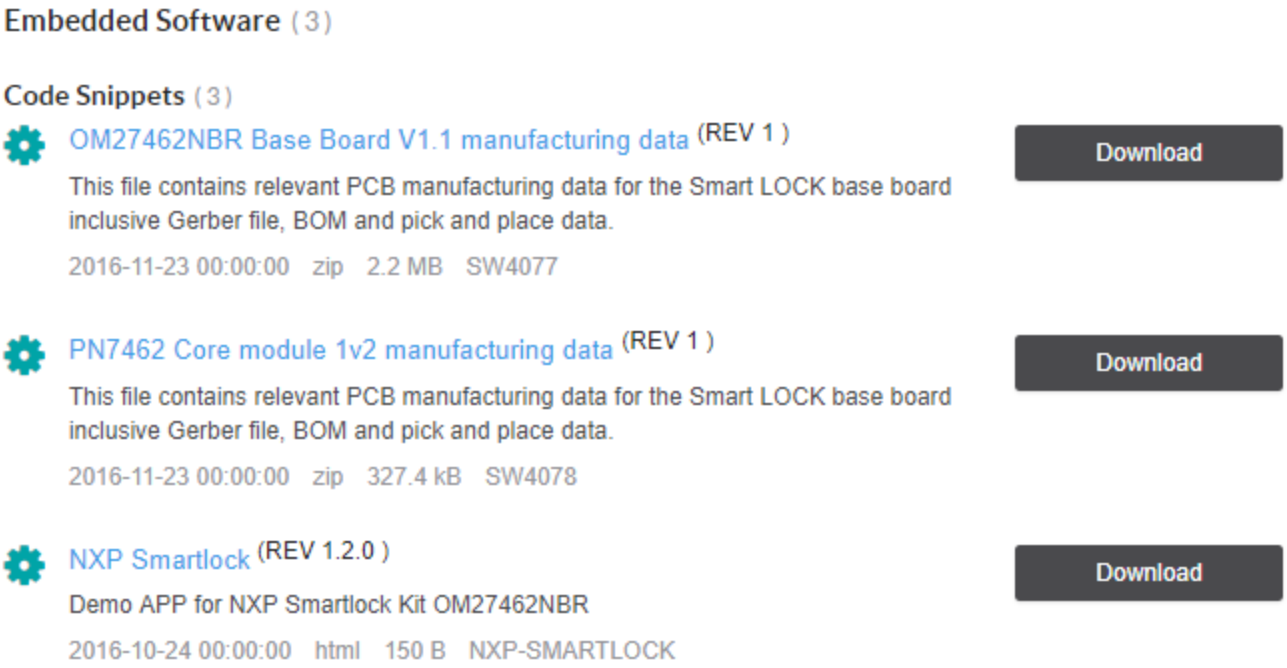
Reserve another available room by pressing the room symbol in the right down corner of the Reserved room menu.

By clicking on the displayed **dates** or **times** respective screens for the both will appear and can be easily adapted.
**BUY NOW** will create a new key token on the mobile device.
Press **CONTINUE** after successful purchase.

The Room is now changed to **Room 202** with the date/time stamp set upon purchsed.

# *Support Resource*

Website: [OM27462NBR: NFC-Bluetooth® Low Energy smart lock kit]



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# *Thank you*

The Benchmark of Distribution