Smart Lock

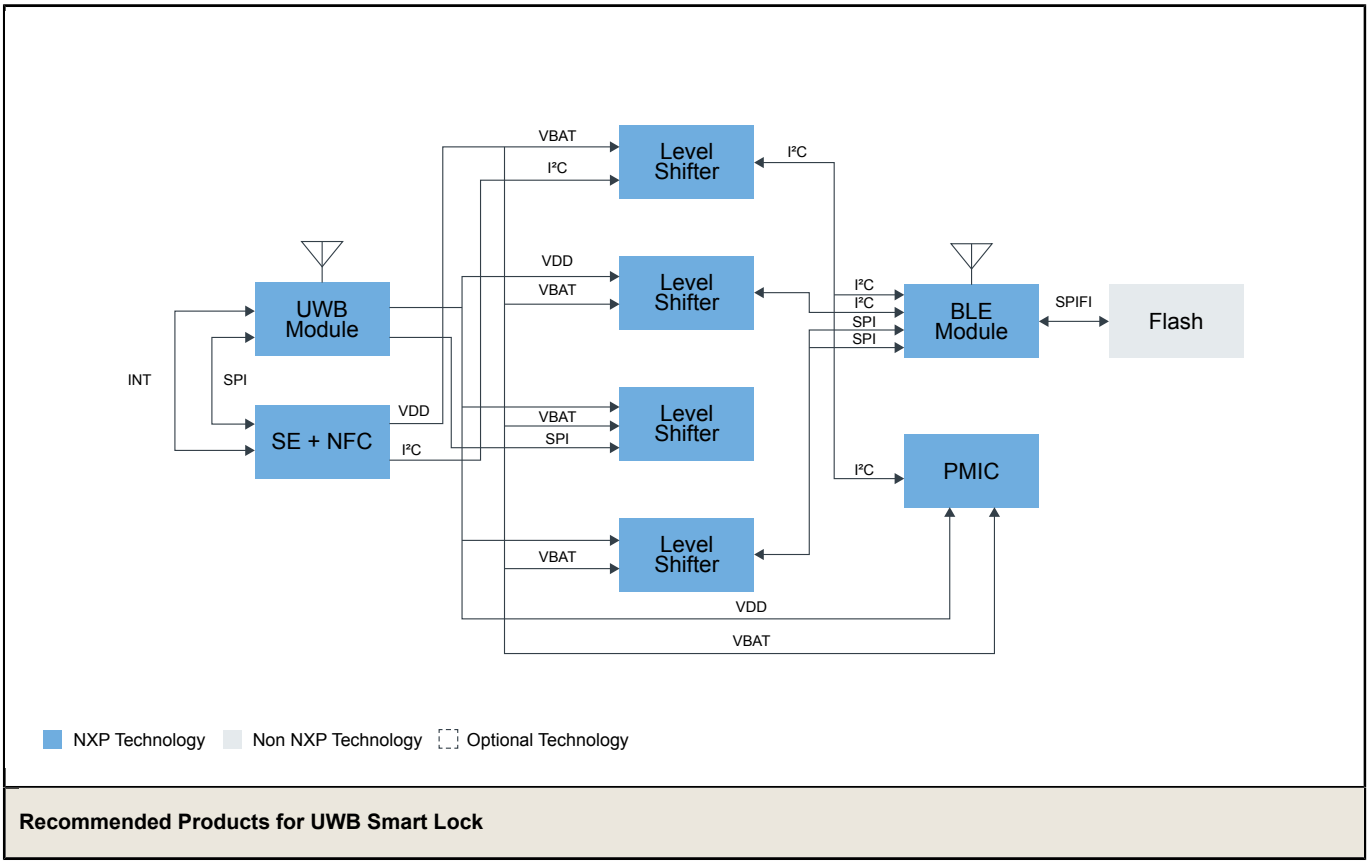
Last Updated: Dec 6, 2023

Physical and information security is a growing concern in the connected world. Smart locks are one piece of the puzzle in controlling access to both information and physical spaces.

A smart lock can be accessed via NFC contact or contactless technology and use Bluetooth® low energy or ultra-wide band(UWB) to communicate with a user's smartphone, adding an additional level of security. Interaction with smart locks can range from something as simple as status LEDs to LCD panels with touchscreen control.

NXP provides a variety of connectivity options like low-power NFC, Bluetooth Low Energy or UWB. We also have analog components to complete the design of the smart lock.

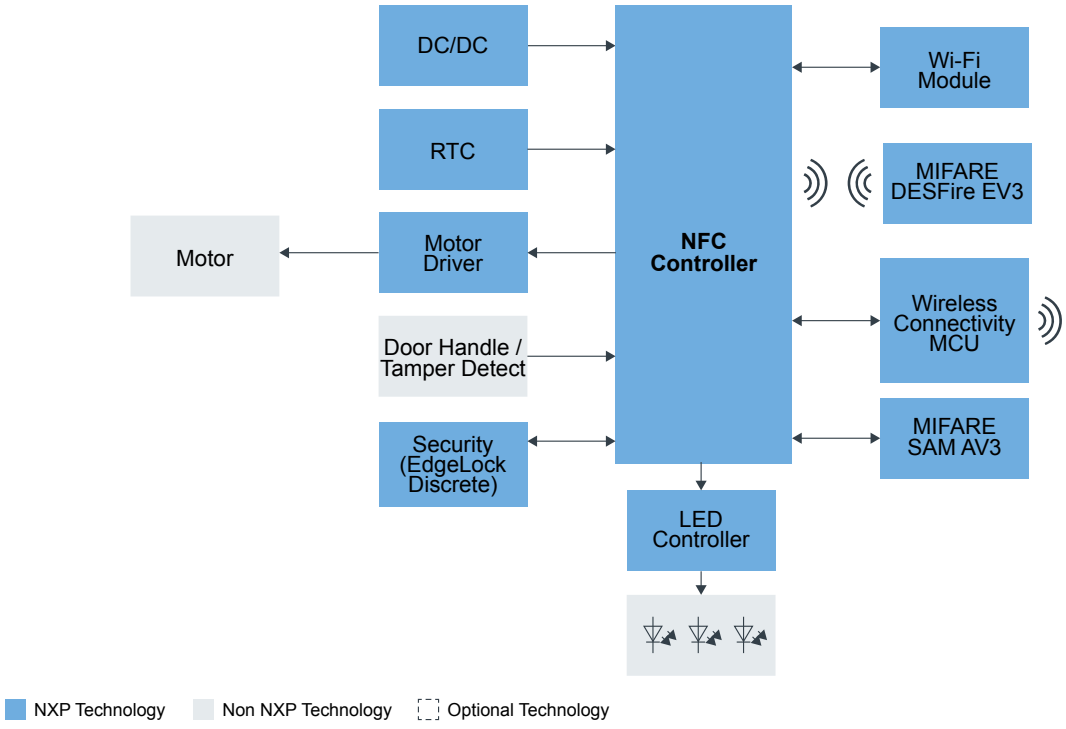
UWB Smart Lock Block Diagram



Recommended Products for UWB Smart Lock

UWB Module	• SR150: Trimension™ SR150: Secure UWB Solution for IoT Devices
Level Shifter	• NTS0102: Dual-Supply Translating Transceiver (Open-Drain, Auto-Direction Sensing) • NTB0104: Dual-Supply Translating Transceiver (Auto-Direction Sensing, Three-State)
BLE Module	• QN9090-30: QN9090/30: Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option
PMIC	• PF1510: Power Management Integrated Circuit (PMIC) for Low Power Application Processors

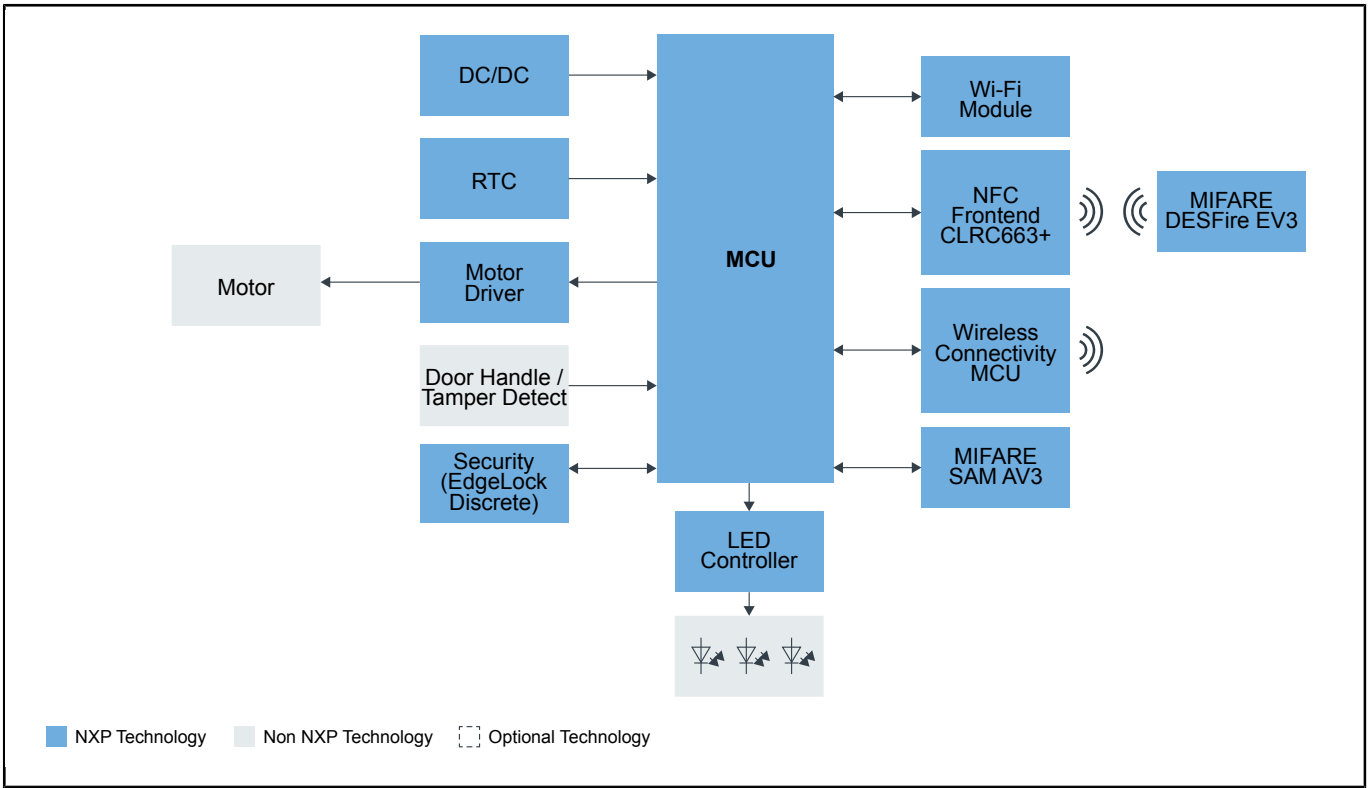
Smart Lock PN7362 Block Diagram



Recommended Products for Smart Lock PN7362	
NFC Controller	• PN736X: NFC Cortex-M0 Microcontroller • PN5190: NFC Frontend supporting challenging RF environment for payment, physical access control • CLRC66303HN: CLRC663 plus Family: High-Performance NFC Frontends
Wireless Connectivity MCU	• KW31Z: Kinetis® KW31Z-2.4 GHz Bluetooth Low Energy Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core
DC-DC	• PCA9410_9410A: 3.0 MHz, 500 MA, DC-to-DC Boost Converter
RTC	• PCF8523: 100 NA Real-Time Clock/Calendar with Battery Backup

LED Controller	• PCA9956BTW: 24-Channel Fm+ I²C-Bus 57 MA/20 V Constant-Current LED Driver
MIFARE DESFire EV3	• MF3DHx3: MIFARE® DESFire® EV3: High-Security IC for Contactless Smart City Services
Motor Driver	• MC33926: H-Bridge, Brushed DC Motor Driver, 5-28 V, 5 A, 20 kHz
Secure Element	• MIFSAMAV3: MIFARE SAM AV3 • SE050: EdgeLock® SE050: Plug and Trust Secure Element Family – Enhanced IoT security with high flexibility
Wi-Fi	• IW416: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution • 88MW32X 802.11n Wi-Fi® Microcontroller SoC
Security (EdgeLock Discrete)	• SE050: EdgeLock® SE050: Plug and Trust Secure Element Family – Enhanced IoT security with high flexibility • SE051: EdgeLock® SE051: Proven, Easy-to-Use IoT Security Solution with Support for Updatability and Custom Applets • EDGELOCK-A5000: EdgeLock® A5000 Plug and Trust Secure Authenticator: Authentication Made Secure, Scalable and Easy

Smart Lock w/CLRC663 Block Diagram



Recommended Products for Smart Lock w/CLRC663	
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View our complete solution for Smart Lock.

Note: The information on this document is subject to change without notice.