



Smart Lock

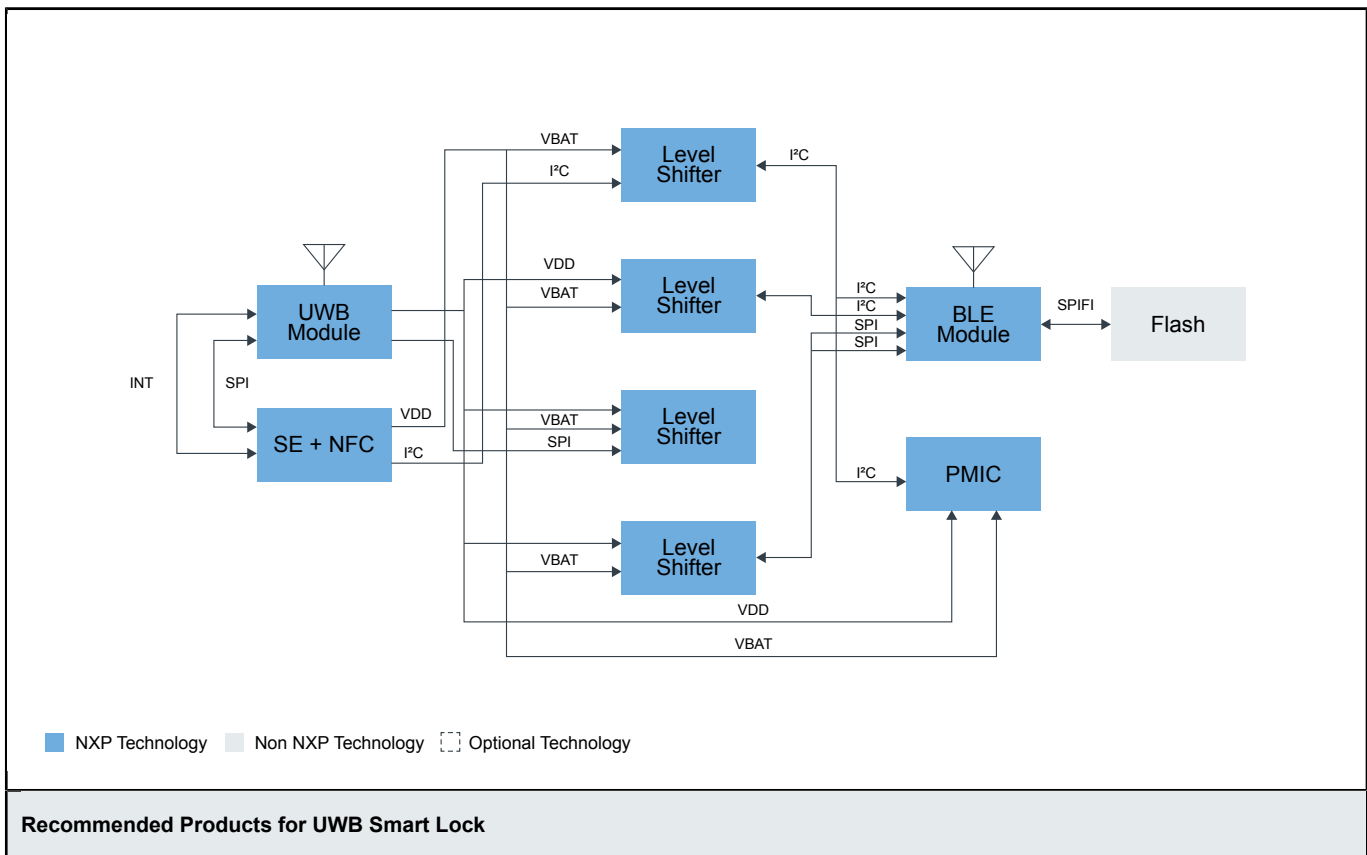
Last Updated: Oct 13, 2023

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.

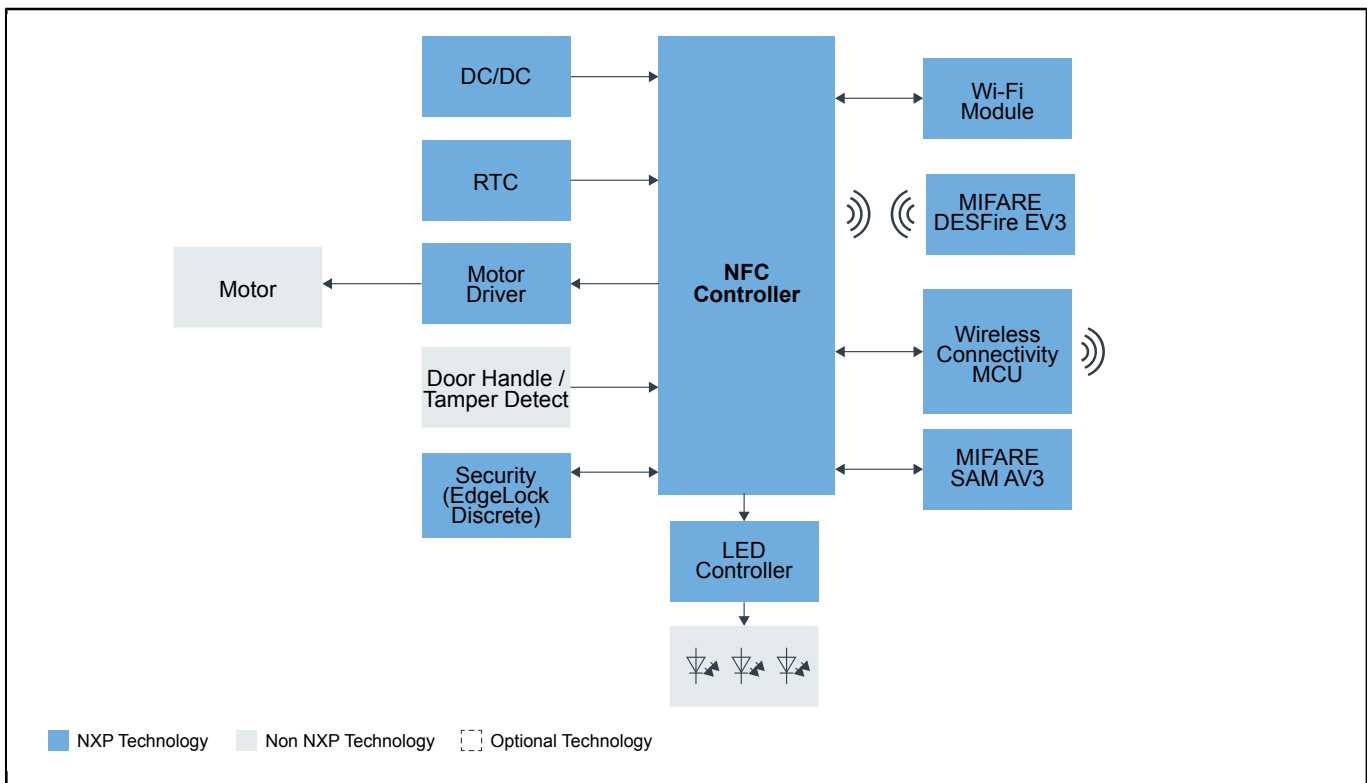
NXP provides a variety of connectivity options like low-power NFC, Bluetooth Low Energy or UWB. We also have analog components to complete the design of the smart lock.

UWB Smart Lock Block Diagram



UWB Module	<ul style="list-style-type: none"> • Trimention™ SR150: Secure UWB Solution for IoT Devices
Level Shifter	<ul style="list-style-type: none"> • NTS0102: Dual-Supply Translating Transceiver (Open-Drain, Auto-Direction Sensing) • NTB0104: Dual-Supply Translating Transceiver (Auto-Direction Sensing, Three-State)
BLE Module	<ul style="list-style-type: none"> • QN9090/30: Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option
PMIC	<ul style="list-style-type: none"> • PF1510: Power Management Integrated Circuit (PMIC) for Low Power Application Processors

Smart Lock PN7362 Block Diagram

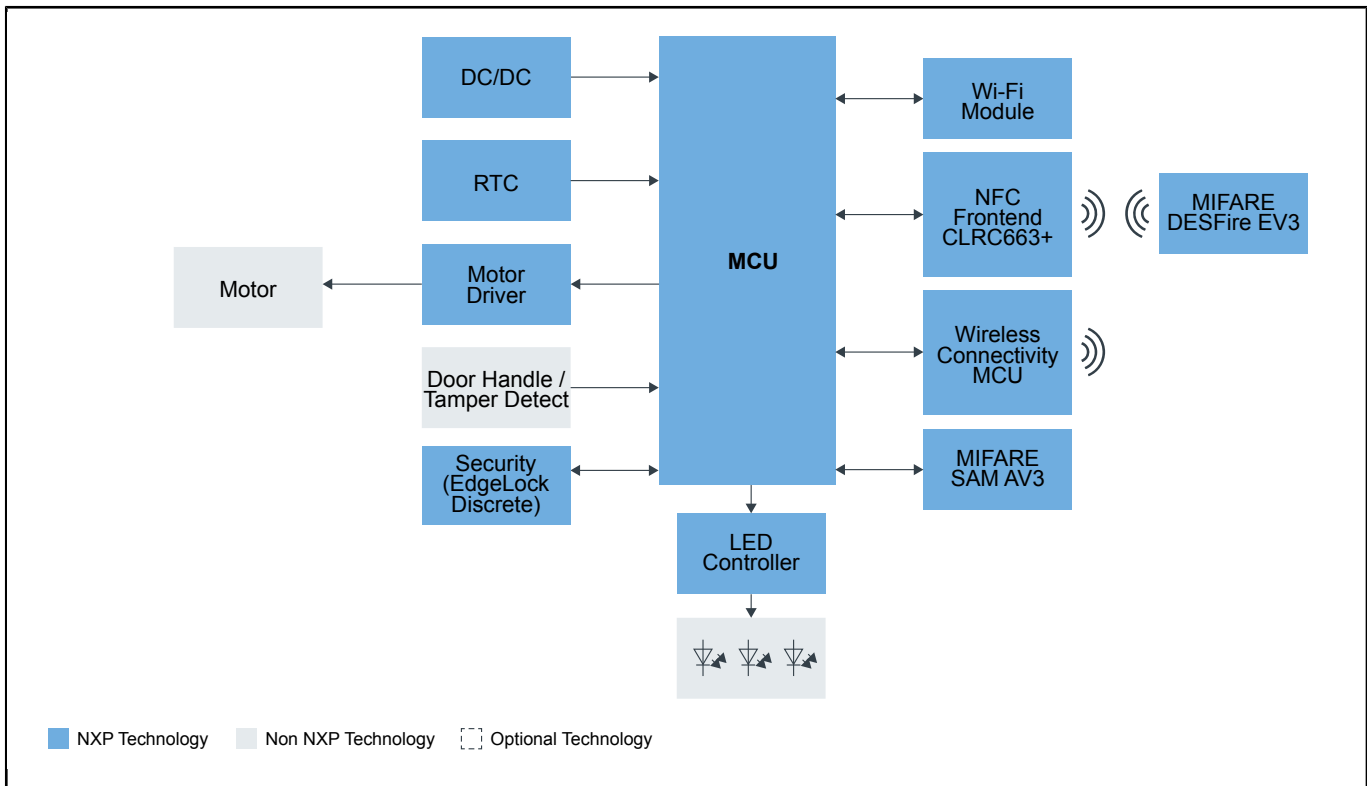


Recommended Products for Smart Lock PN7362

NFC Controller	<ul style="list-style-type: none"> • PN736X: NFC Cortex-M0 Microcontroller • PN5190: NFC Frontend supporting challenging RF environment for payment, physical access control • CLRC663 plus Family: High-Performance NFC Frontends
Wireless Connectivity MCU	<ul style="list-style-type: none"> • KW31Z: Kinetis® KW31Z-2.4 GHz Bluetooth Low Energy Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core
DC-DC	<ul style="list-style-type: none"> • PCA9410_9410A: 3.0 MHz, 500 MA, DC-to-DC Boost Converter
RTC	<ul style="list-style-type: none"> • PCF8523: 100 NA Real-Time Clock/Calendar with Battery Backup

LED Controller	<ul style="list-style-type: none"> • PCA9956BTW: 24-Channel Fm+ I²C-Bus 57 MA/20 V Constant-Current LED Driver
MIFARE DESFire EV3	<ul style="list-style-type: none"> • MIFARE[®] DESFire[®] EV3: High-Security IC for Contactless Smart City Services
Motor Driver	<ul style="list-style-type: none"> • MPC17510: H-Bridge, Brushed DC Motor Driver, 2-15 V, 3.8 A, 200 kHz
Secure Element	<ul style="list-style-type: none"> • MIFARE SAM AV3 • EdgeLock[®] SE050: Plug and Trust Secure Element Family – Enhanced IoT security with high flexibility
Wi-Fi	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • EdgeLock[®] SE050: Plug and Trust Secure Element Family – Enhanced IoT security with high flexibility • EdgeLock[®] SE051: Proven, Easy-to-Use IoT Security Solution with Support for Updatability and Custom Applets • 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

MCU	<ul style="list-style-type: none"> • PN736X: NFC Cortex-M0 Microcontroller • PN5190: NFC Frontend supporting challenging RF environment for payment, physical access control • CLRC663 plus Family: High-Performance NFC Frontends
NFC	<ul style="list-style-type: none"> • CLRC663 plus Family: High-Performance NFC Frontends

	<ul style="list-style-type: none"> • PN736X: NFC Cortex-M0 Microcontroller • PN5190: NFC Frontend supporting challenging RF environment for payment, physical access control
Wireless Connectivity MCU	<ul style="list-style-type: none"> • KW31Z: Kinetis[®] KW31Z-2.4 GHz Bluetooth Low Energy Wireless Radio Microcontroller (MCU) based on Arm[®] Cortex[®]-M0+ Core
DC-DC	<ul style="list-style-type: none"> • PCA9410_9410A: 3.0 MHz, 500 MA, DC-to-DC Boost Converter
RTC	<ul style="list-style-type: none"> • PCF8523: 100 NA Real-Time Clock/Calendar with Battery Backup
LED Controller	<ul style="list-style-type: none"> • PCA9956BTW: 24-Channel Fm+ I²C-Bus 57 MA/20 V Constant-Current LED Driver
MIFARE DESFire EV3	<ul style="list-style-type: none"> • MIFARE[®] DESFire[®] EV3: High-Security IC for Contactless Smart City Services
Motor Driver	<ul style="list-style-type: none"> • MPC17510: H-Bridge, Brushed DC Motor Driver, 2-15 V, 3.8 A, 200 kHz
Secure Element	<ul style="list-style-type: none"> • MIFARE SAM AV3 • EdgeLock[®] SE050: Plug and Trust Secure Element Family – Enhanced IoT security with high flexibility
Wi-Fi	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • EdgeLock[®] SE050: Plug and Trust Secure Element Family – Enhanced IoT security with high flexibility • EdgeLock[®] SE051: Proven, Easy-to-Use IoT Security Solution with Support for Updatability and Custom Applets • EdgeLock[®] A5000 Plug and Trust Secure Authenticator: Authentication Made Secure, Scalable and Easy

View our complete solution for [Smart Lock](#).

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