

Smart Lock

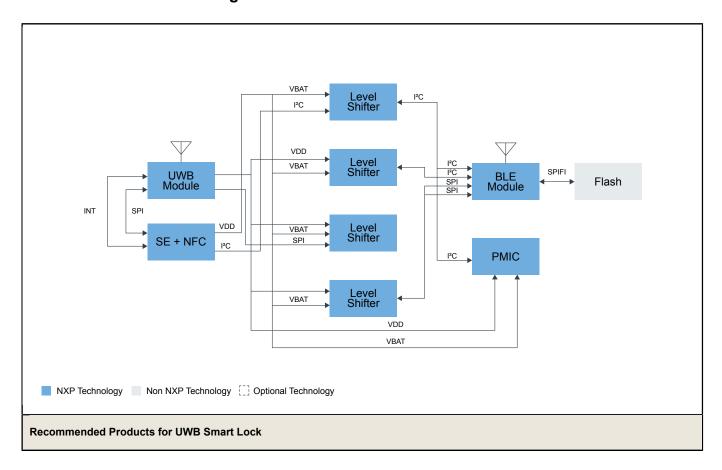
Last Updated: Dec 6, 2023

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.

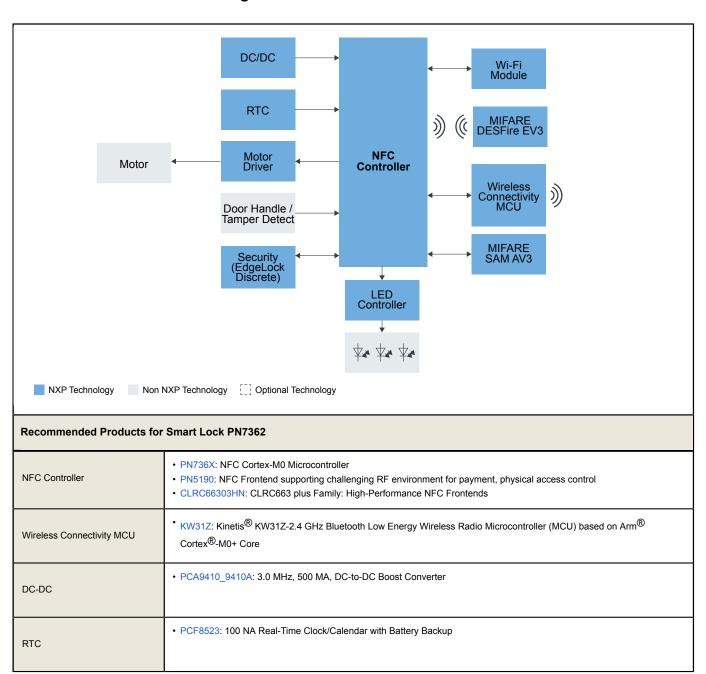
NXP provides a variety of connectivity options like low-power NFC, Bluetooth Low Energy or UWB. We also have analog components to complete the design of the smart lock.

UWB Smart Lock Block Diagram



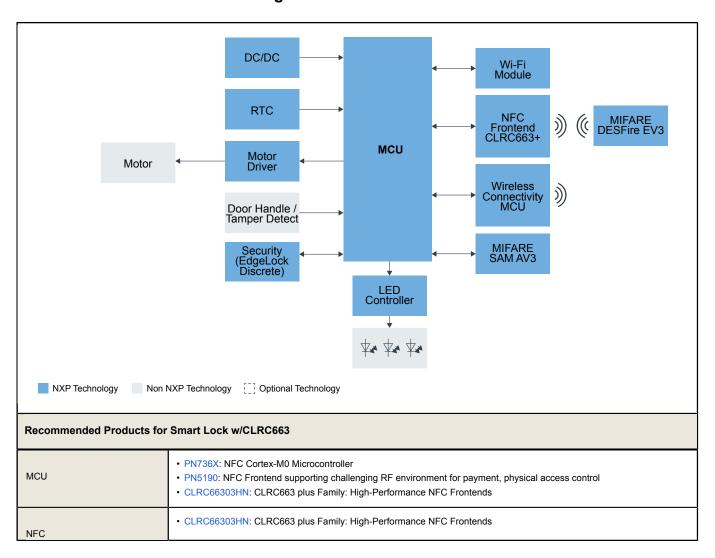
UWB Module	* SR150: Trimension [™] SR150: Secure UWB Solution for IoT Devices
Level Shifter	NTS0102: Dual-Supply Translating Transceiver (Open-Drain, Auto-Direction Sensing) NTB0104: Dual-Supply Translating Transceiver (Auto-Direction Sensing, Three-State)
BLE Module	 QN9090-30: QN9090/30: Bluetooth 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



LED Controller	PCA9956BTW: 24-Channel Fm+ I ² C-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



	PN736X: NFC Cortex-M0 Microcontroller PN5190: NFC Frontend supporting challenging RF environment for payment, physical access control
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+ I ² C-Bus 57 MA/20 V Constant-Current LED Driver
MIFARE DESFire EV3	MF3DHx3: MIFARE® DESFire® EV3: High-Security IC for Contactless Smart City Services
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View our complete solution for Smart Lock.

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

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