

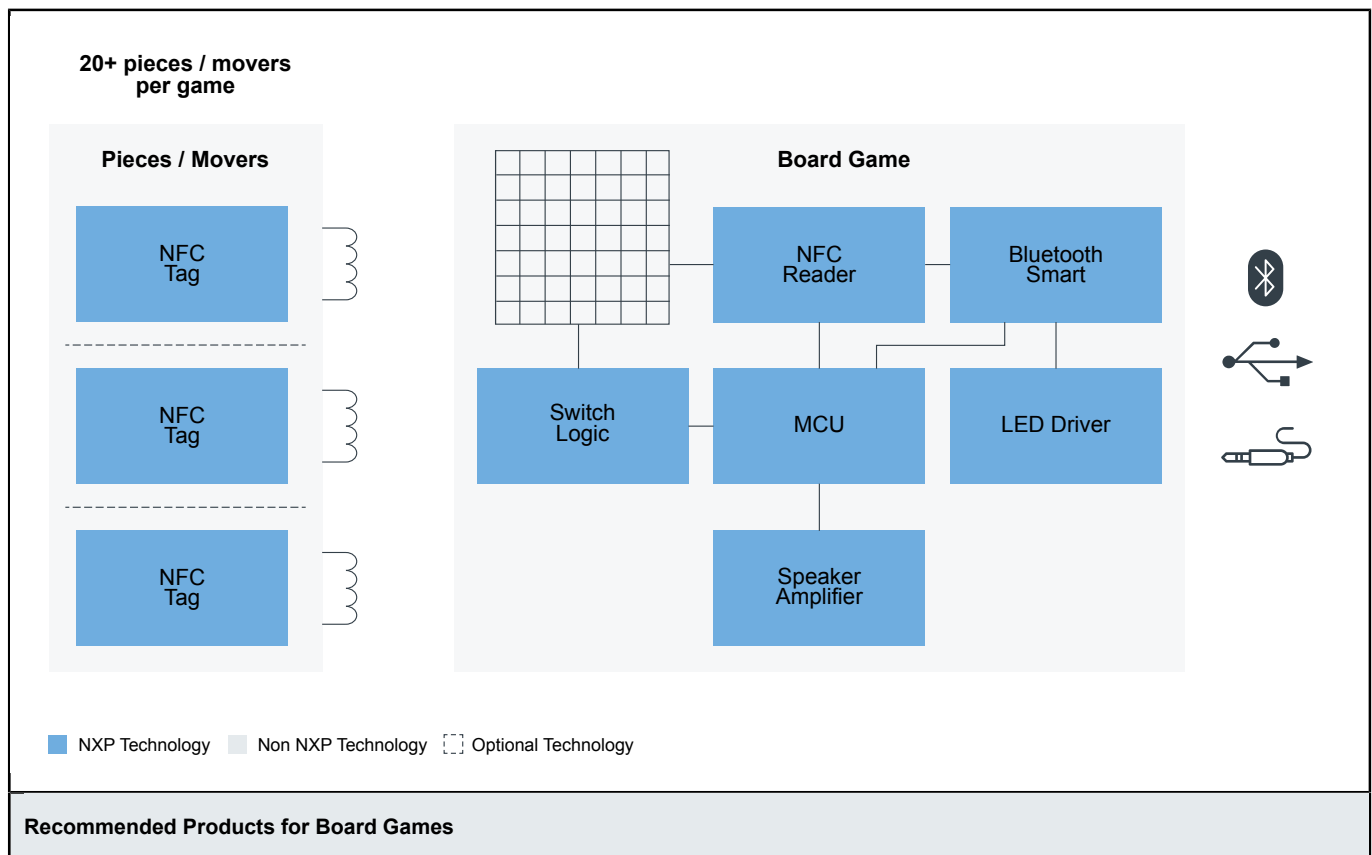


Toys and Board Games

Last Updated: Nov 12, 2021

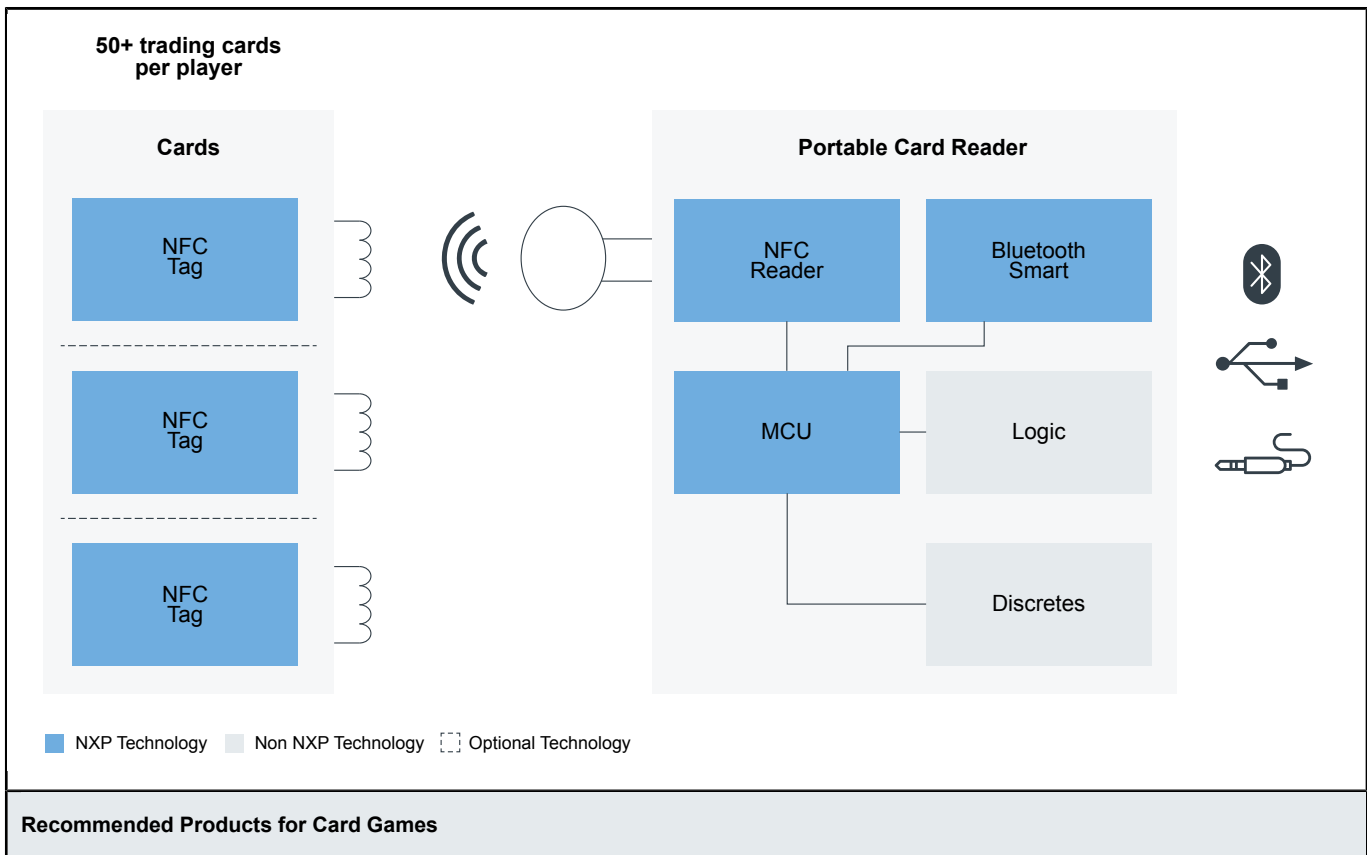
The use of NFC on toys and games opens a new world of opportunities for manufacturers. NXP® NFC technology bridges accessories and games. Host interfaces range from Bluetooth® Low Energy and USB right through to the humble earphone jack. The MCU and NFC reader manage communication with the game pieces, gamepads, switches antennas and tracks their position on the board. Gameplay results are processed to create relevant visual or sound stimuli, or sent to the players' mobile devices. Data can be transmitted via Bluetooth to apps on the players' phones, presenting further possibilities.

Board Games Block Diagram



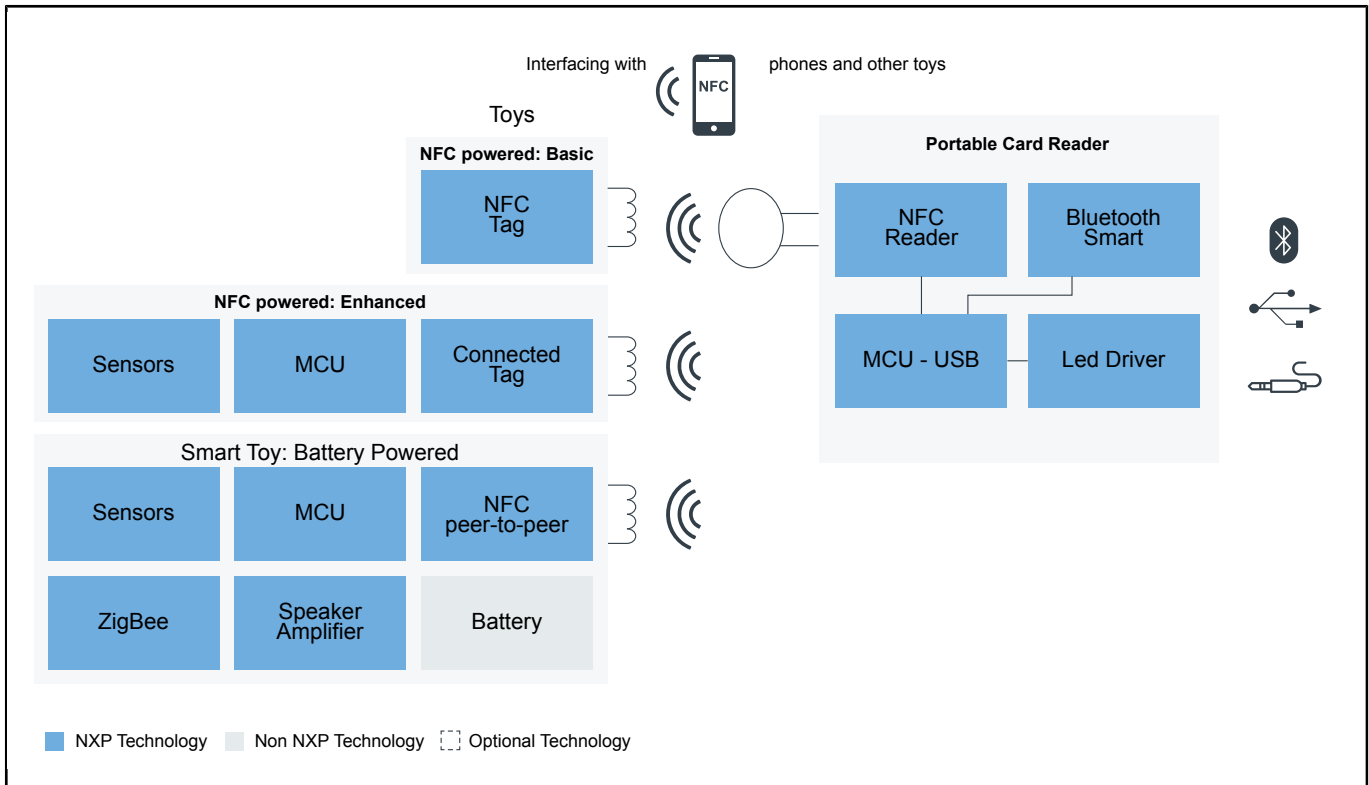
| | |
|-------------------|--|
| BLE MCU | <ul style="list-style-type: none"> • Bluetooth Low Energy: Bluetooth® Smart/Bluetooth Low Energy |
| MCU | <ul style="list-style-type: none"> • KL2x: Kinetis® KL2x-72/96 MHz, USB Ultra-Low-Power Microcontrollers (MCUs) based on Arm® Cortex®-M0+ Core |
| NTAG | <ul style="list-style-type: none"> • NFC Tags for Electronics: NFC Tags for Electronics • NTAG: NTAG® |
| ICODE | <ul style="list-style-type: none"> • SL2S1402_SL2S1502_SL2S1602: ICODE ILT • SL2S2602: ICODE® SLIX2 NFC Forum Type 5 Tag with Originality Signature • ICODE: ICODE® |
| NFC Reader | <ul style="list-style-type: none"> • MFRC630: High-performance frontend for MIFARE® and NTAG® products in access control • CLRC663 plus Family: High-Performance NFC Frontends |
| LED Driver | <ul style="list-style-type: none"> • PCA9634: 8-Bit Fm+ I²C-Bus LED Driver |
| Speaker amplifier | <ul style="list-style-type: none"> • SA58672: 3.0 W mono class-D audio amplifier • Portable Device Amplifiers: Portable Device Amplifiers |
| Switch Logic | <ul style="list-style-type: none"> • PCA9543A_43B: Two-Channel I²C-Bus Switch with Interrupt Logic and Reset |

Card Games Block Diagram



| | |
|------------|--|
| BLE MCU | <ul style="list-style-type: none"> • Bluetooth Low Energy: Bluetooth® Smart/Bluetooth Low Energy |
| MCU | <ul style="list-style-type: none"> • KL2x: Kinetis® KL2x-72/96 MHz, USB Ultra-Low-Power Microcontrollers (MCUs) based on Arm® Cortex®-M0+ Core |
| NTAG | <ul style="list-style-type: none"> • NFC Tags for Electronics: NFC Tags for Electronics • NTAG: NTAG® |
| ICODE | <ul style="list-style-type: none"> • SL2S1402_SL2S1502_SL2S1602: ICODE ILT • SL2S2602: ICODE® SLIX2 NFC Forum Type 5 Tag with Originality Signature • ICODE: ICODE® |
| NFC Reader | <ul style="list-style-type: none"> • MFRC630: High-performance frontend for MIFARE® and NTAG® products in access control • CLRC663 plus Family: High-Performance NFC Frontends |

Smart Toys Block Diagram



Recommended Products for Smart Toys

| | |
|---------|---|
| MCU | <ul style="list-style-type: none"> • LPC800 Cortex-M0+ : LPC800 Series: Low-Cost Microcontrollers (MCUs) based on Arm® Cortex®-M0+ Cores |
| MCU-USB | <ul style="list-style-type: none"> • K2x USB: Kinetis® K2x USB Microcontrollers (MCUs) based on Arm® Cortex®-M4 Core |
| NFC Tag | <ul style="list-style-type: none"> • NTAG: NTAG® |

| | |
|-------------------|---|
| NFC peer-to-peer | <ul style="list-style-type: none"> • PN512: Standard NFC Frontend |
| Zigbee | <ul style="list-style-type: none"> • Zigbee: Zigbee |
| Speaker amplifier | <ul style="list-style-type: none"> • SA58672: 3.0 W mono class-D audio amplifier |
| NFC Reader | <ul style="list-style-type: none"> • NFC Readers: NFC Readers |
| Bluetooth | <ul style="list-style-type: none"> • Bluetooth Low Energy: Bluetooth® Smart/Bluetooth Low Energy |
| LED Driver | <ul style="list-style-type: none"> • PCA9634: 8-Bit Fm+ I²C-Bus LED Driver |
| Sensor | <ul style="list-style-type: none"> • Sensors: Sensors |
| NFC Tag | <ul style="list-style-type: none"> • NFC (HF): NFC - Near Field Communication |

View our complete solution for [Toys and Board Games](#).

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

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