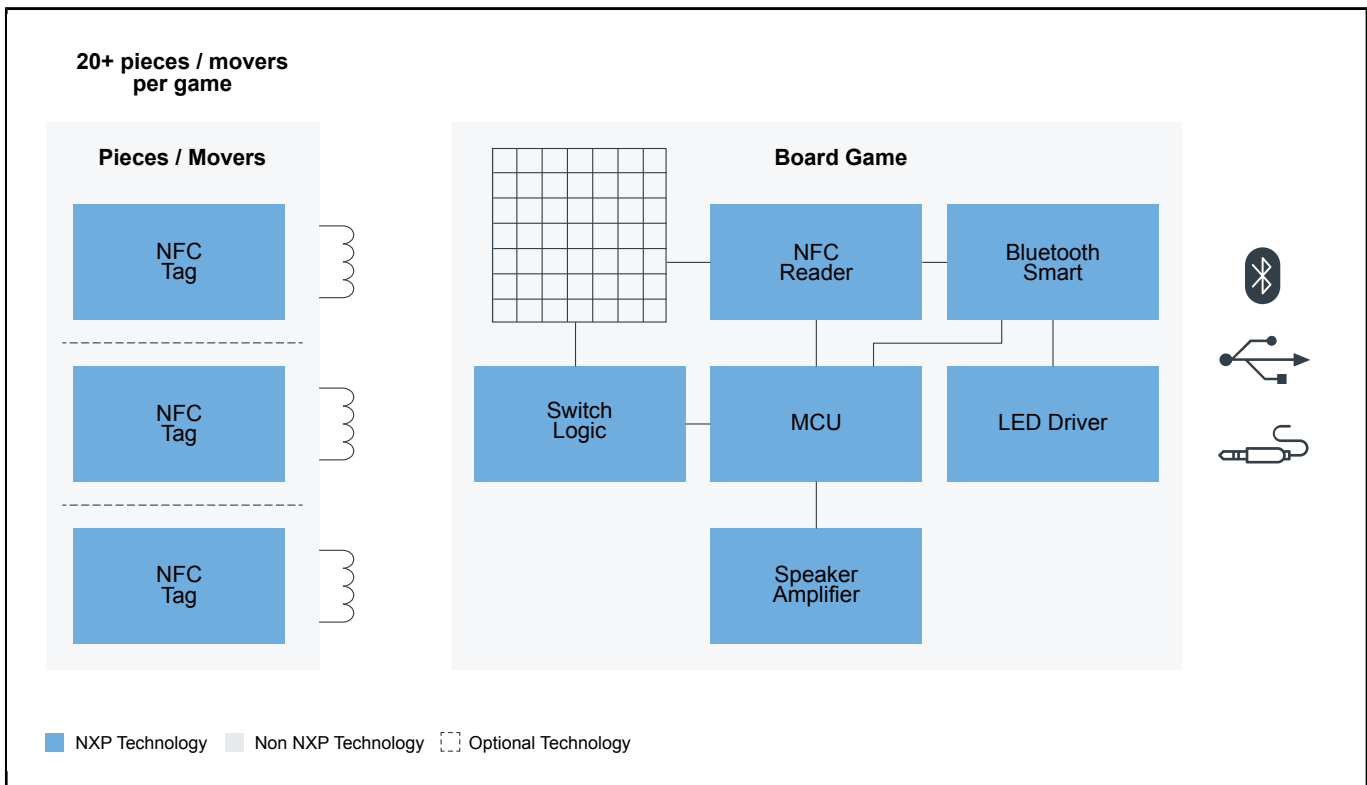# Toys and Board Games

Last Updated: Oct 12, 2022

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.
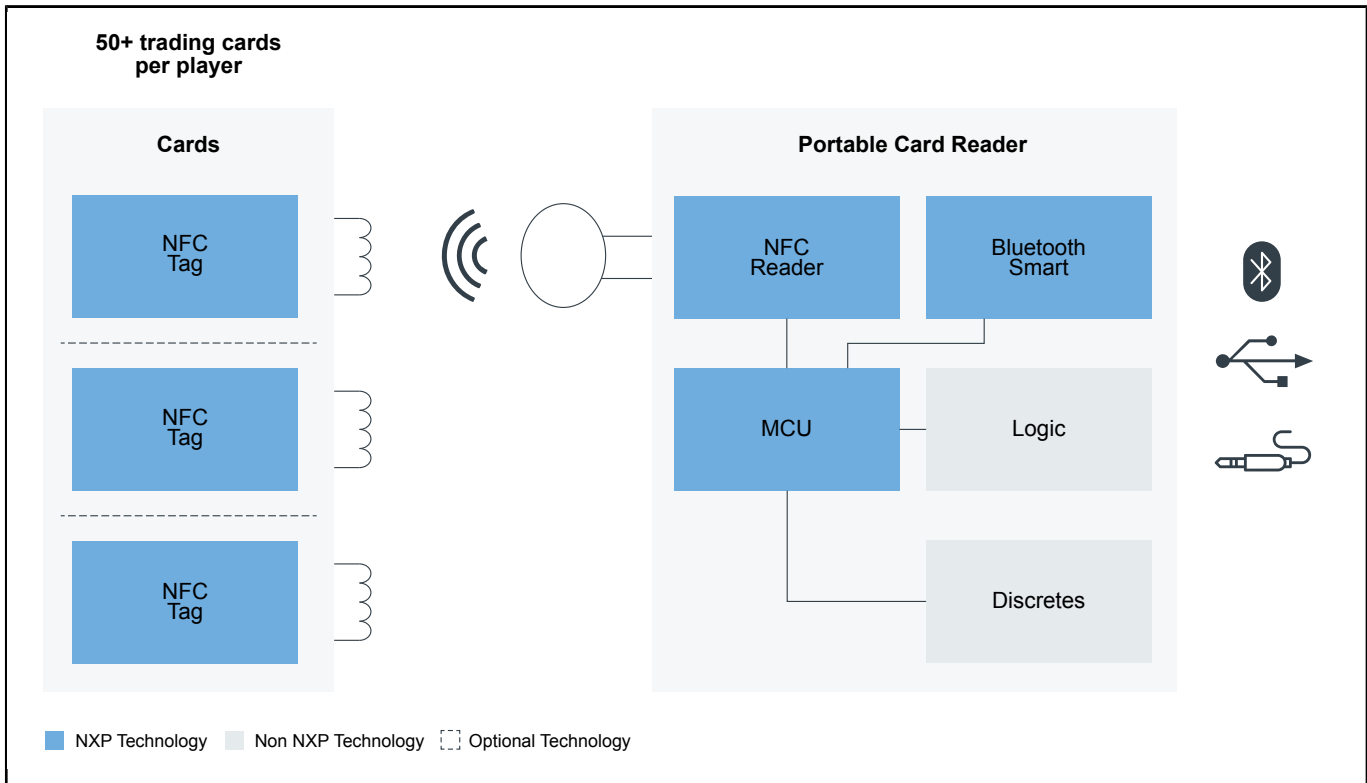
Board Games Block Diagram

Recommended Products for Board Games	
BLE MCU	• **Bluetooth Low Energy**: Bluetooth® Smart/Bluetooth Low Energy

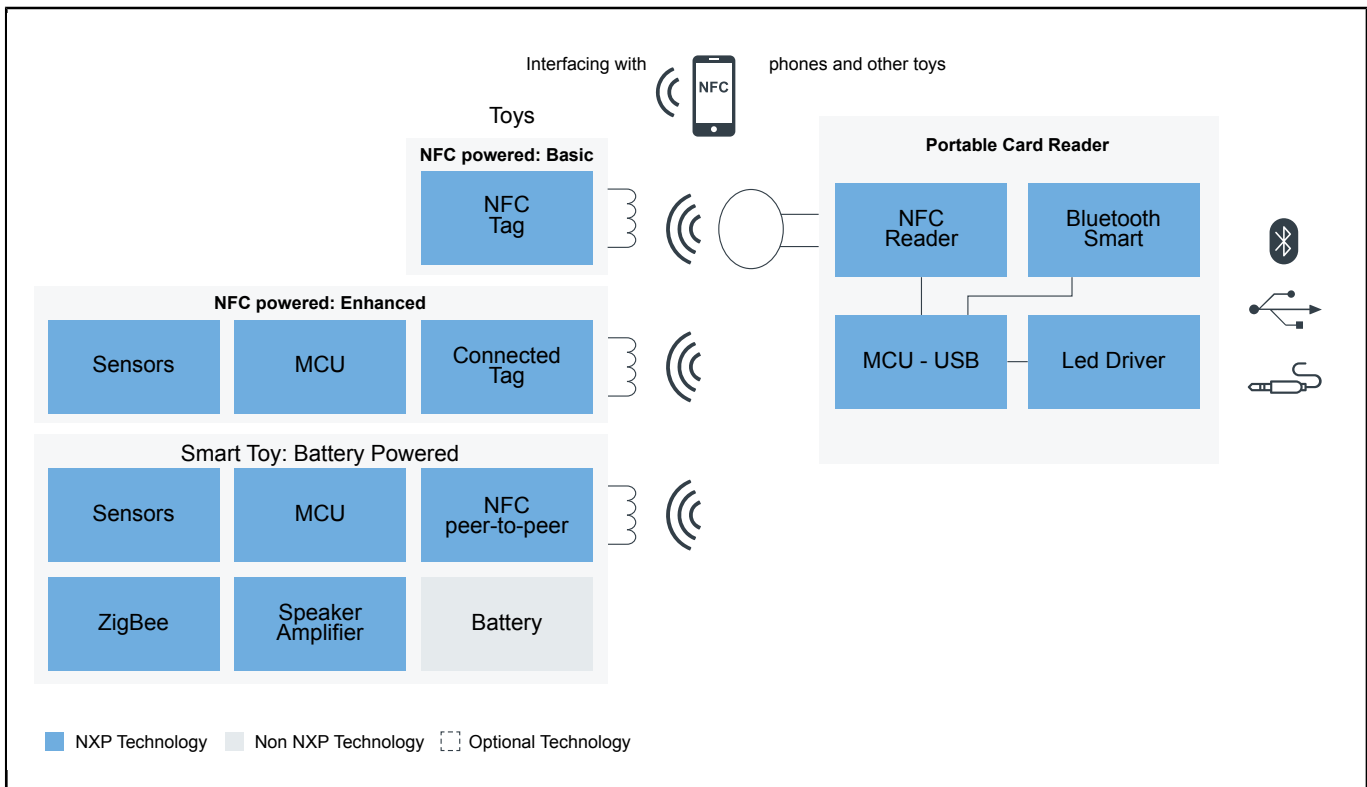|	
MCU	• KL2x: Kinetis® KL2x-72/96 MHz, USB Ultra-Low-Power Microcontrollers (MCUs) based on Arm® Cortex®-M0+ Core
NTAG	• Connected NFC Tags: Connected NFC Tags • NTAG: NTAG®
ICODE	• SL2S1402_SL2S1502_SL2S1602: ICODE® ILT • SL2S2602: ICODE® SLIX2 NFC Forum Type 5 Tag with Originality Signature • ICODE: ICODE®
NFC Reader	• CLRC66303HN: CLRC663 plus Family: High-Performance NFC Frontends
LED Driver	• PCA9634: 8-Bit Fm+ I²C-Bus LED Driver
Speaker amplifier	• Portable Device Amplifiers: Portable Device Amplifiers
Switch Logic	• PCA9543A_43B: Two-Channel I2C-Bus Switch with Interrupt Logic and Reset

Card Games Block Diagram

Recommended Products for Card Games

BLE MCU	• Bluetooth Low Energy: Bluetooth® Smart/Bluetooth Low Energy

MCU	• [KL2x](): Kinetis® KL2x-72/96 MHz, USB Ultra-Low-Power Microcontrollers (MCUs) based on Arm® Cortex®-M0+ Core
NTAG	• [Connected NFC Tags](): Connected NFC Tags • [NTAG](): NTAG®
ICODE	• [SL2S1402_SL2S1502_SL2S1602](): ICODE® ILT • [SL2S2602](): ICODE® SLIX2 NFC Forum Type 5 Tag with Originality Signature • [ICODE](): ICODE®
NFC Reader	• [CLRC66303HN](): CLRC663 plus Family: High-Performance NFC Frontends

Smart Toys Block Diagram

Recommended Products for Smart Toys	
MCU	• [LPC800 Arm Cortex-M0+]() : LPC800 Series: Low-Cost Arm® Cortex®-M0+-Based MCUs
MCU-USB	• [K2x / KS2x USB](): Kinetis® K2x USB Microcontrollers (MCUs) Based on Arm® Cortex®-M4 Core
NFC Tag	• [NTAG](): NTAG®
NFC peer-to-peer	• [PN512](): Standard NFC Frontend

Zigbee	• Zigbee: Zigbee
Speaker amplifier	• SA58672: 3.0 W mono class-D audio amplifier
NFC Reader	• NFC Readers: EdgeVerse™ NFC Readers
Bluetooth	• Bluetooth Low Energy: Bluetooth® Smart/Bluetooth Low Energy
LED Driver	• PCA9634: 8-Bit Fm+ I²C-Bus LED Driver
Sensor	• Sensors: Sensors
NFC Tag	• 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.