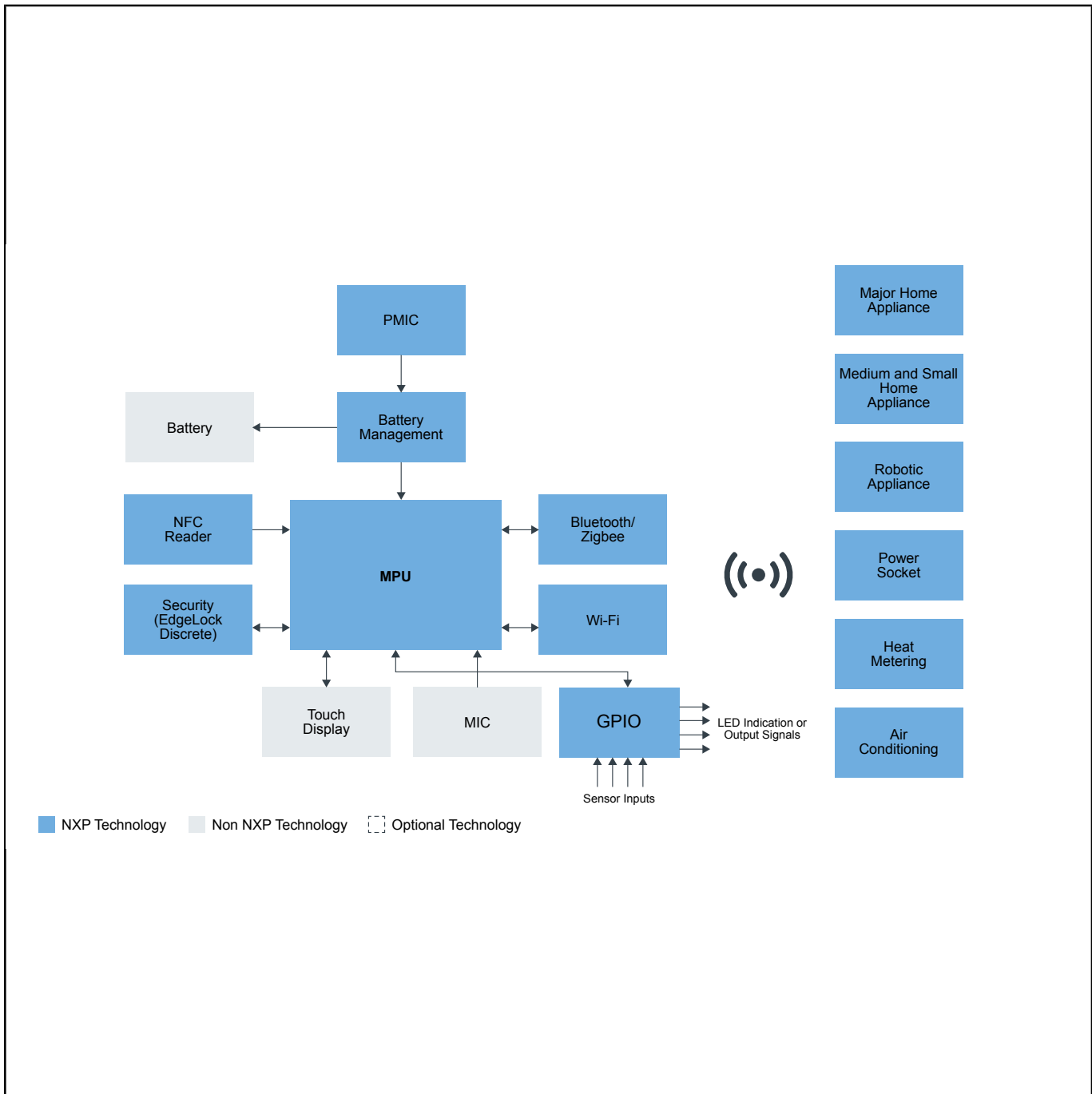# Home Control Panel

Last Updated: Dec 6, 2023

Appliances are smarter than before. With the help of sensors and connectivity they can do more for their owners: be activated by voice or face recognition, work when electricity peaks are low or even send information to the manufacturer to create a preventive maintenance appointment. With NXP´s secure connectivity applications, you can have a centralized control panel that cannot just work for appliances, but also for smart devices throughout your home.

Home Control Panel Block Diagram

Recommended Products for Home Control Panel	
MPU	• i.MX8MMINI: i.MX 8M Mini - Arm® Cortex®-A53, Cortex-M4, Audio, Voice, Video
PMIC	• PCA9450: Power Management IC (PMIC) for i.MX 8M Mini/Nano/Plus
Battery Management	• Battery Management: Battery Management
Security (EdgeLock Discrete)	• SE050: EdgeLock® SE050: Plug and Trust Secure Element Family – Enhanced IoT security with high flexibility • EDGELOCK-A5000: EdgeLock® A5000 Plug and Trust Secure Authenticator: Authentication Made Secure, Scalable and Easy
NFC Reader	• PN7160: NFC Plug and Play Controller with Integrated Firmware and NCI Interface
Bluetooth Zigbee	• K32W061_41: K32W061/41: High-Performance, Secure and Ultra-Low-Power MCU for Zigbee®,Thread™, and Bluetooth® LE 5.0 with Built-In NFC Option
Wi-Fi	• 88MW32X 802.11n Wi-Fi® Microcontroller SoC • IW416: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution
Major Home Appliance	• Major Home Appliances: Major Home Appliances
Small and Medium Appliance	• Small and Medium Appliances: Small and Medium Appliances
Robotic Appliances	• Robotic Appliance: Robotic Appliance
Power Socket	• Smart Power Socket and Light Switch: Smart Power Socket and Light Switch
Heat Metering	• Heat Metering: Heat Metering
Air Conditioning	• Air Conditioning (AC): Air Conditioning (AC)
Air Conditioning GPIO	• PCAL9714: 14-Bit SPI I/O Expander with Agile I/O Features • PCAL9722: 22-Bit SPI I/O Expander with Agile I/O Features
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Air Conditioning GPIO	• MCX-A14X-A15X: MCX A14x/15x MCUs with Arm$^®$ Cortex$^®$ M33, Scalable Device Options, Low Power and Intelligent Peripherals • MCX-N94X-N54X: MCX N94x/54x Highly Integrated Multicore MCUs with On-Chip Accelerators, Intelligent Peripherals and Advanced Security • PCAL9714: 14-Bit SPI I/O Expander with Agile I/O Features • PCAL9722: 22-Bit SPI I/O Expander with Agile I/O Features

View our complete solution for Home Control Panel.

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