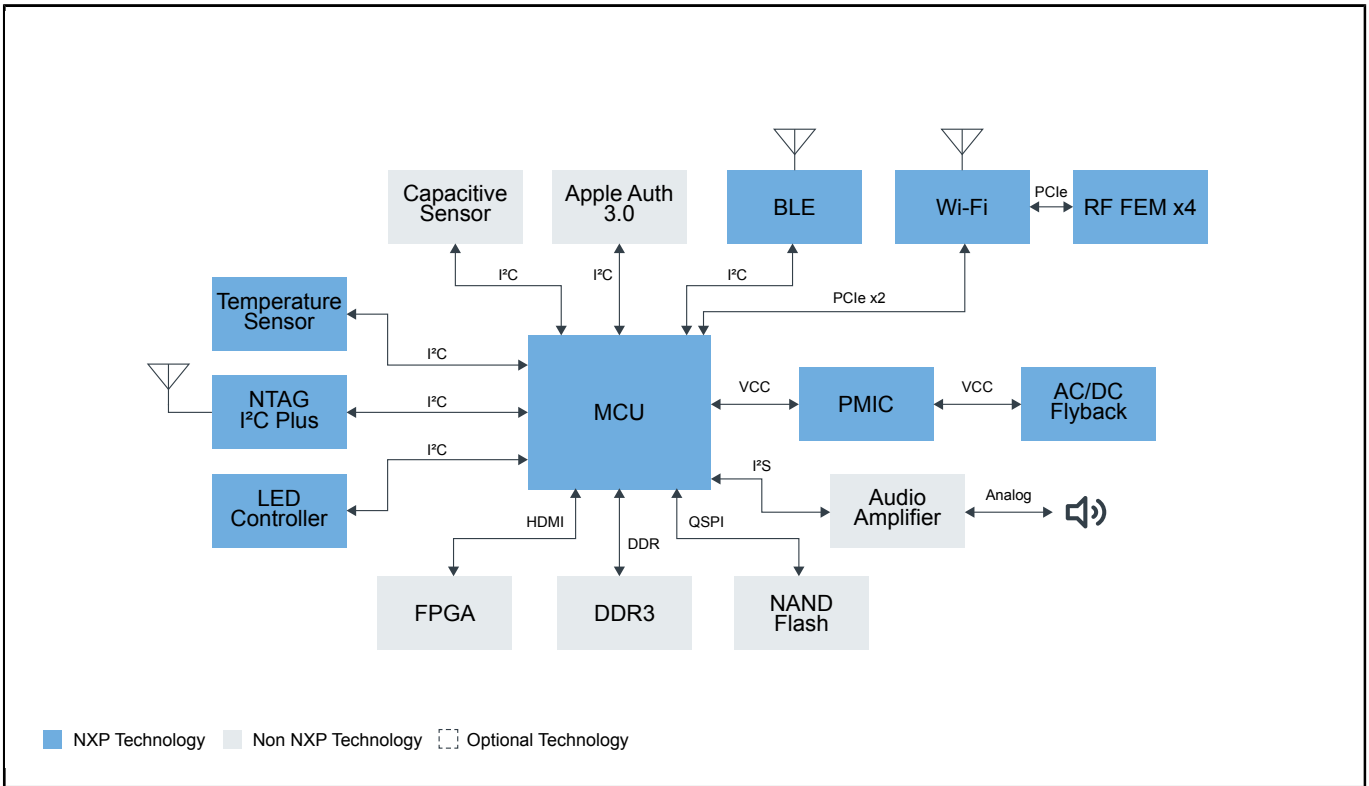
Smart Speaker

Last Updated: Nov 22, 2023

NXP smart speaker is based on an i.MX 8M processor and provides a Class-D audio amplifier with a SpeakerBoost acoustic enhancement and protection algorithm in on-chip DSP with temperature and excursion protection. By using an internal adaptive DC-to-DC converter, you get ample headroom for major improvements in audio quality.

The i.MX 8M processor provides advanced audio, voice and video processing, and low-power capabilities that create scalable, safe and secure applications.

Smart Speaker Block Diagram



Recommended Products for Smart Speaker	
MCU	• i.MX8M: i.MX 8M Family - Arm® Cortex®-A53, Cortex-M4, Audio, Voice, Video

Bluetooth low energy	• QN9090-30: QN9090/30: Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option
Wi-Fi	• 88W8987: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution
NTAG I2C Plus	• NTAG_I2C: NTAG I²C Plus 2K: NFC Forum Type 2 Tag with I²C Interface
AC/DC Flyback	• TEA1833LTS: GreenChip SMPS Control IC
Power Management	• PCA9450: Power Management IC (PMIC) for i.MX 8M Mini/Nano/Plus
RF FEM x4	• BGS8324: WLAN LNA + Switch
Temperature Sensor	• PCT2075: I²C-Bus Fm+, 1 Degree C Accuracy, Digital Temperature Sensor and Thermal Watchdog
LED Controller	• PCA9955BTW: 16-Channel Fm+ I²C-Bus 57 MA/20 V Constant-Current LED Driver

View our complete solution for Smart Speaker.

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