



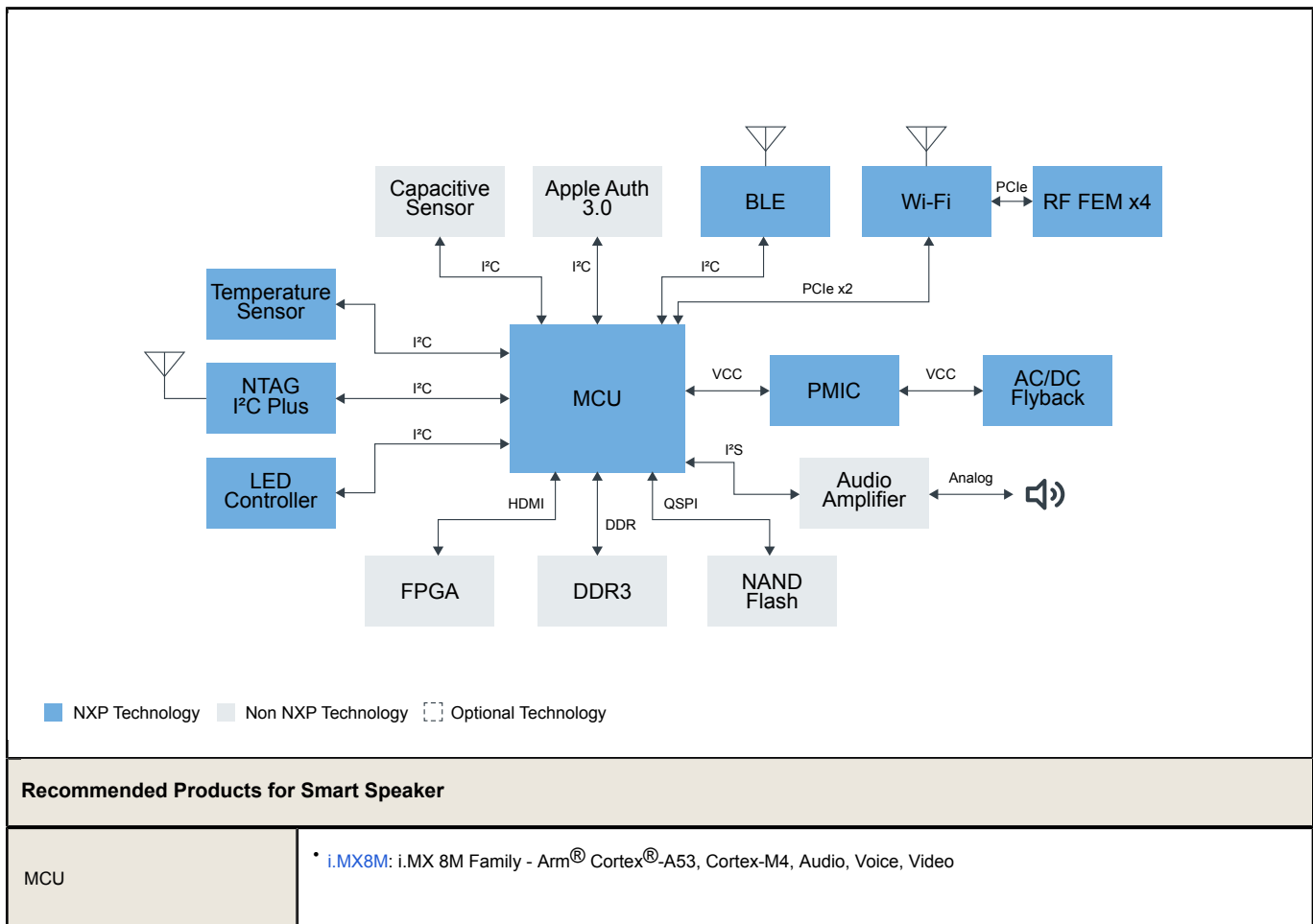
Smart Speaker

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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



Bluetooth low energy	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 88W8987: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution • IW611: 2.4/5GHz Dual-band 1x1 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.4 Solution • IW612: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 6 (802.11ax) + Bluetooth® 5.4 + 802.15.4 Tri-Radio Solution • IW610: 2.4/5GHz Dual-Band 1x1 Wi-Fi® 6 + Bluetooth Low Energy 5.4 + 802.15.4 Tri-Radio Solution • IW416: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution • 88W8997: 2.4/5 GHz Dual-Band 2x2 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.3 Solution
NTAG I2C Plus	<ul style="list-style-type: none"> • NTAG_I2C: NTAG I²C Plus 2K: NFC Forum Type 2 Tag with I²C Interface
AC/DC Flyback	<ul style="list-style-type: none"> • TEA1833LTS: GreenChip SMPS Control IC
Power Management	<ul style="list-style-type: none"> • PCA9450: Power Management IC (PMIC) for i.MX 8M Mini/Nano/Plus
RF FEM x4	<ul style="list-style-type: none"> • BGS8324: WLAN LNA + Switch
Temperature Sensor	<ul style="list-style-type: none"> • PCT2075: I²C-Bus Fm+, 1 Degree C Accuracy, Digital Temperature Sensor and Thermal Watchdog
LED Controller	<ul style="list-style-type: none"> • 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.

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