Hearing Aids and Cochlear Implants

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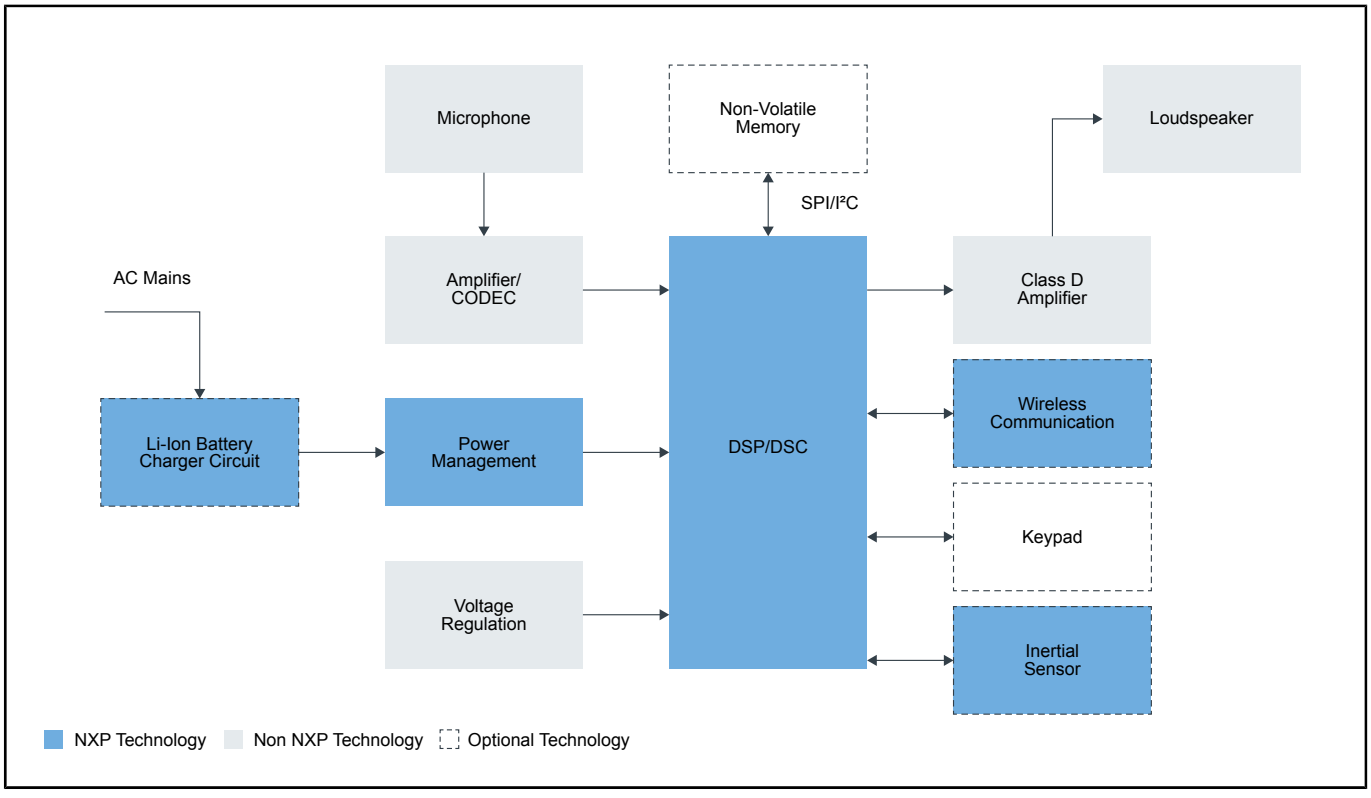
Hearing loss causes a great impact in the patient's life, from relationships and emotional well-being. A hearing aid is a battery-powered electronic device designed to improve hearing lossby carrying sound from the environment into your ear (for example through the canal or behind the ear). Cochlear implants, on the other hand, are small electronic devices that stimulate the cochlear nerve, and allow deaf people to receive and process sounds and speech.

NXP solutions support the next generation of electronic hearing aid designs, improving functionality and battery life of those devices.

Hearing Aids Block Diagram



Recommended Products for Hearing Aids	
DSP/DSC	• i.MX-RT1010: i.MX RT1010 Crossover MCU with Arm® Cortex®-M7 Core Operating Up to 500 MHz • i.MX-RT500: i.MX RT500 Crossover MCU with Arm® Cortex®-M33, DSP and GPU Cores • i.MX-RT600: i.MX RT600 Crossover MCU with Arm® Cortex®-M33 and DSP Cores
Power Management	• PCA9420-PCA9421: PMIC for Low Power Applications • MC34VR500: Multi-Output DC/DC Regulator • MMPF0100: 14-Channel Configurable PMIC • PF3000: 12-Channel Configurable PMIC for i.MX6 and i.MX7 Application Processors
Li-Ion Batter Charger Circuit	• MC34671: 600 mA Single-Cell Li-Ion / Li-Polymer Battery Charger
Wireless Communication	• NXH2004: Ultra-Low Power Hearing Aid SoC Solution over Bluetooth® LE Audio • QN9090-30: QN9090/30: Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option • NXH3675: Ultra-Low Power Bluetooth Low Energy Audio Solution with Integrated Flash • KW39-38-37: KW39/38/37: 32-Bit Bluetooth 5.0 Long-Range MCUs with CAN FD and LIN Bus Options, Arm® Cortex®-M0+ Core • IW416: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution • 88MW32X 802.11n Wi-Fi® Microcontroller SoC
Inertial Sensor	• FXLS8962AF: ±2g/±4g/±8g/±16g, Low Power 12-bit Digital Accelerometer • FXLS8974CF: ±2g/±4g/±8g/±16g, Low-Power 12-Bit Digital IoT Accelerometer • FXLS8971CF: ±2g/±4g/±8g/±16g, Low Power 12-Bit Digital Accelerometer

View our complete solution for Hearing Aids and Cochlear Implants.

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