

Hearing Aids and Cochlear Implants

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Hearing loss causes a great impact in the patient's life, from relationships and emotional wellbeing. 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: 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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