

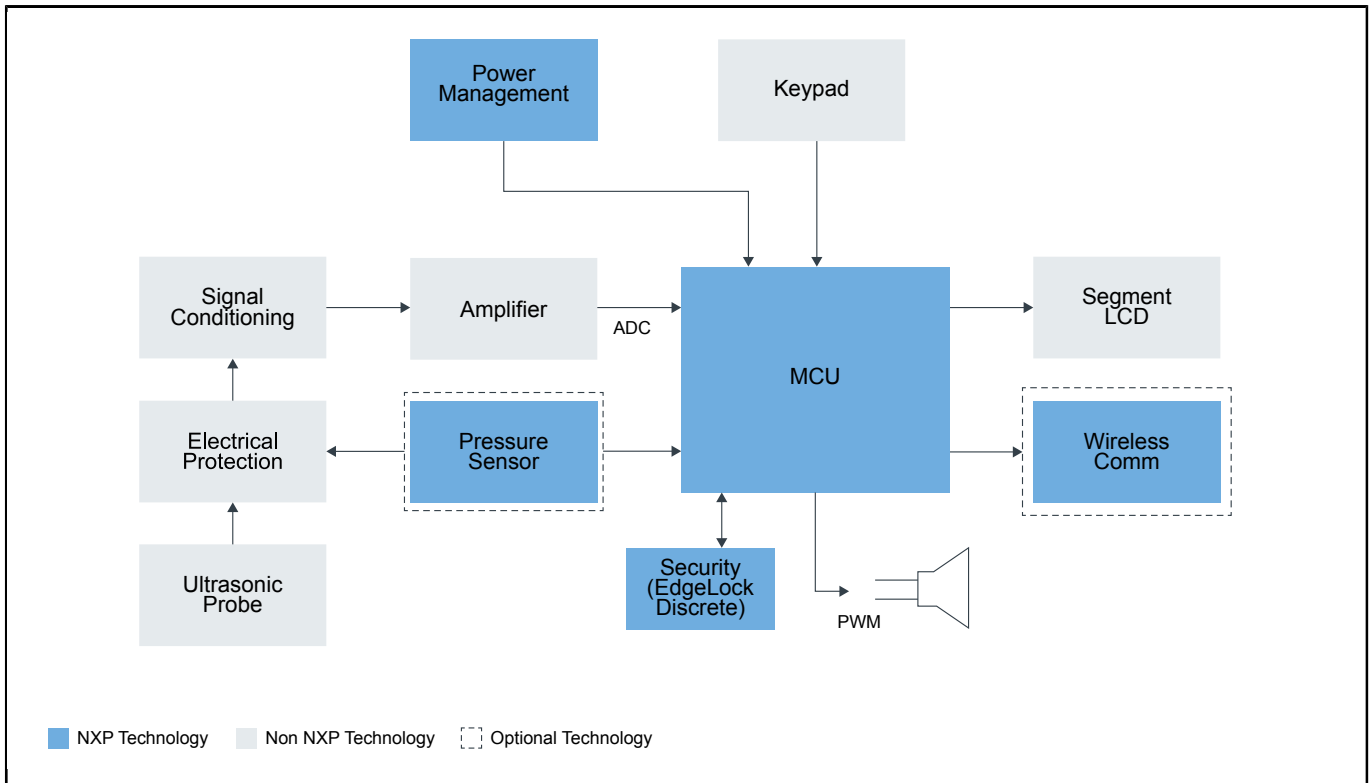


Heart Monitors

Last Updated: Apr 6, 2022

NXP® technology powers heart rate monitors by using transducers that can measure and amplify a heartbeat, this can be used to detect a heartbeat during exercise or to amplify a prenatal infant’s heartbeat by using the Doppler Effect. The function-specific sensor measures the heart signals and then, sends the data to a smartphone to, later on, analyze the data for medical or healthcare purposes.

Fetal Heart Rate Monitors Block Diagram

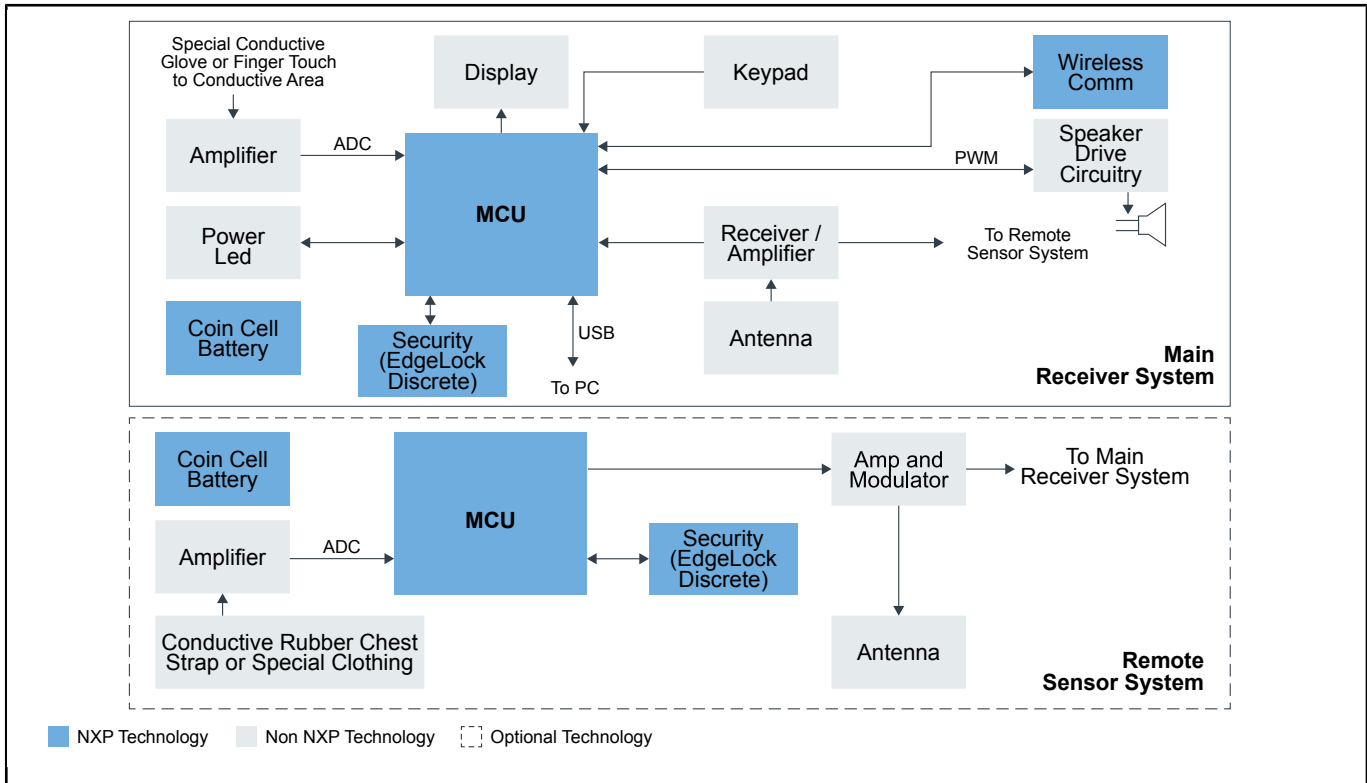


Recommended Products for Fetal Heart Rate Monitors

MCU/MPU	<ul style="list-style-type: none"> • LPC546XX: Power-Efficient Microcontrollers (MCUs) With Advanced Peripherals Based on Arm® Cortex®-M4 Core • i.MX RT1050 Crossover MCU with Arm® Cortex®-M7 Core
Pressure Sensors	<ul style="list-style-type: none"> • MPL3115A2: 20 to 110 kPa, Absolute Digital Pressure Sensor
Power Management	<ul style="list-style-type: none"> • MC34673: 1.2 A Single-Cell Li-Ion/Li-Polymer Battery Charger

Wireless Communication	<ul style="list-style-type: none"> • QN908x: Ultra-Low-Power Bluetooth Low Energy System on Chip Solution • KW36/35/34: Arm® Cortex®-M0+ Kinetis® KW36/35/34 Bluetooth Low Energy 32-bit MCUs NXP • QN9090/30: Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option • 88W8987: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.2 Solution • IW416: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution • 88W8977: 2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution • 88W8801: 2.4 GHz Single-Band 1x1 Wi-Fi® 4 (802.11n) Solution
Security (EdgeLock Discrete)	<ul style="list-style-type: none"> • EdgeLock® SE050: Plug & Trust Secure Element Family – Enhanced IoT security with high flexibility • EdgeLock® A5000 Plug & Trust Secure Authenticator: Authentication Made Secure, Scalable and Easy

Heart Rate Monitors Block Diagram



Recommended Products for Heart Rate Monitors

Microcontroller (MCU)	<ul style="list-style-type: none"> • K50_100: Kinetis® K50-100 MHz, USB Microcontrollers (MCUs) based on Arm® Cortex®-M4 Core • K53_100: Kinetis® K53-100 MHz, USB, Segment LCD, Ethernet Microcontrollers (MCUs) based on Arm® Cortex®-M4 Core
Wireless Communication	<ul style="list-style-type: none"> • QN908x: Ultra-Low-Power Bluetooth Low Energy System on Chip Solution • KW36/35/34: Arm® Cortex®-M0+ Kinetis® KW36/35/34 Bluetooth Low Energy 32-bit MCUs NXP • QN9090/30: Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option • 88W8987: 2.4/5 GHz Dual-Band 2x2 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.0 Solution
Coin Cell Battery	<ul style="list-style-type: none"> • MC34671: 600 mA Single-cell Li-Ion/Li-Polymer Battery Charger
Security (EdgeLock Discrete)	<ul style="list-style-type: none"> • EdgeLock® SE050: Plug & Trust Secure Element Family – Enhanced IoT security with high flexibility

View our complete solution for [Heart Monitors](#).

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

www.nxp.com

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2022 NXP B.V.