

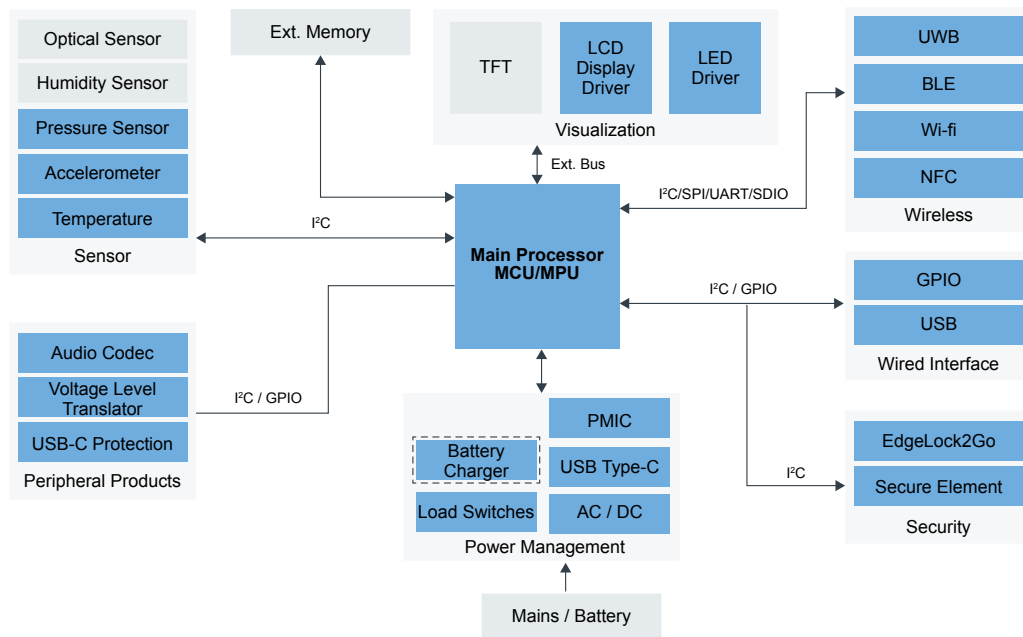


Patient Monitor

Last Updated: Feb 26, 2025

Patient monitors can measure a patient's vital signs, display it on a monitor and transmit this data to a network. NXP products and solutions are capable of processing the received signals to help with their interpretation along with their display in a graphical interface. With our connectivity solutions, it is possible to securely store this data in the patient's physician medical profile.

Patient Monitor Block Diagram



■ NXP Technology ■ Non NXP Technology □ Optional Technology

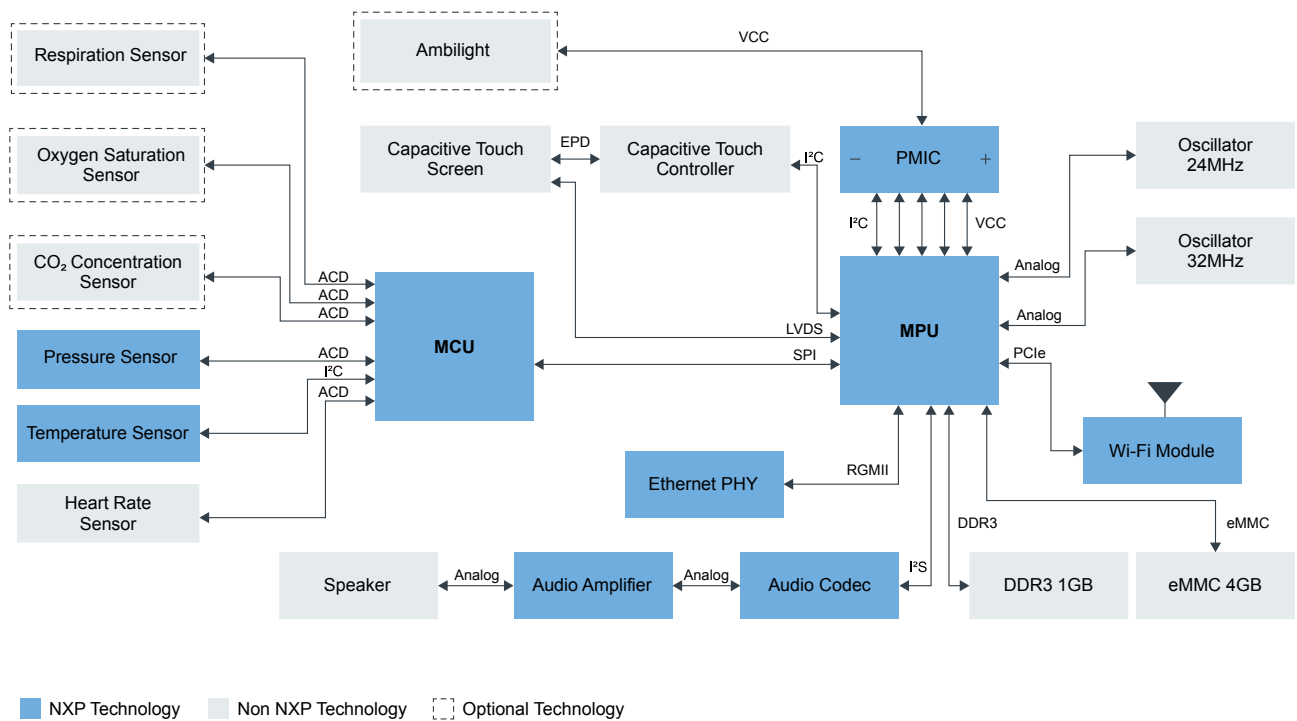
Recommended Products for Patient Monitor

Main Processor MCU/MPU	<ul style="list-style-type: none"> • NHS52S04: NHS52S04: Ultra-Low-Power Bluetooth® Low Energy Solution With Arm® Cortex®-M33 TrustZone® for Medical IoT • LPC553x: LPC553x/S3x: Advanced Analog Arm®Cortex®-M33-Based MCU Family • i.MX8M: i.MX 8M Family - Arm® Cortex®-A53, Cortex-M4, Audio, Voice, Video • KV3x: Kinetis® KV3x-100–120 MHz, Advanced 3ph FOC / Sensorless Motor Control MCUs based on Arm® Cortex®-M4
Pressure Sensor	<ul style="list-style-type: none"> • MPXx4006: Differential and Gauge, Integrated Pressure Sensor (0 to 6 kPa)
Accelerometer	<ul style="list-style-type: none"> • FXLS8974CF: ±2g/±4g/±8g/±16g, Low-Power 12-Bit Digital IoT Accelerometer • FXLS8971CF: ±2g/±4g/±8g/±16g, Low Power 12-Bit Digital Accelerometer
Temperature Sensor	<ul style="list-style-type: none"> • P3T1035xUK: I3C, I²C-Bus, ±0.5 °C Accuracy, Digital Temperature Sensor • P3T2030xUK: I3C, I²C-Bus, 2.0 °C Accuracy, Digital Temperature Sensor • SA56004X: SMBus-Compatible, 8-Pin, Remote/Local Digital Temperature Sensor
Audio Codec	<ul style="list-style-type: none"> • SGTL5000: Ultra-Low-Power Audio Codec
Voltage Level Translator	<ul style="list-style-type: none"> • Voltage Level Translators: Voltage Level Translators
USB-C Protection	<ul style="list-style-type: none"> • NX20P0477: USB Type-C CC Smart Protection
Battery Charger	<ul style="list-style-type: none"> • MC34673: 1.2 A Single-Cell Li-Ion / Li-Polymer Battery Charger
Load Switches	<ul style="list-style-type: none"> • Load Switches: Load Switches
PMIC	<ul style="list-style-type: none"> • PF81-PF82: 12-Channel Power Management Integrated Circuit (PMIC) for High-Performance Processing Applications • PCA9420-PCA9421: PMIC for Low Power Applications
USB Type-C	<ul style="list-style-type: none"> • USB Type C: USB Type-C Plug'n Play: Efficient Data and Power Delivery • NX20P0477: USB Type-C CC Smart Protection
AC/DC	<ul style="list-style-type: none"> • AC-DC Solutions: AC-DC Solutions
LCD Display Driver	<ul style="list-style-type: none"> • PCF8551: Universal 36 × 4 LCD Segment Driver
LED Driver	<ul style="list-style-type: none"> • PCA9956BTW: 24-Channel Fm+ I²C-Bus 57 mA/20 V Constant-Current LED Driver
UWB	<ul style="list-style-type: none"> • Trimention® UWB: Trimention® Ultra-Wideband (UWB)
BLE	<ul style="list-style-type: none"> • NHS52S04: NHS52S04: Ultra-Low-Power Bluetooth® Low Energy Solution With Arm® Cortex®-M33 TrustZone® for Medical IoT

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Air Conditioning GPIO	<ul style="list-style-type: none"> • PCAL9714: 14-Bit SPI I/O Expander with Agile I/O Features • PCAL9722: 22-Bit SPI I/O Expander with Agile I/O Features
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Air Conditioning GPIO	<ul style="list-style-type: none"> • MCX-A13X-A14X-A15X: MCX A13x, 14x, 15x MCUs with Arm® Cortex® M33, Scalable Device Options, Low Power and Intelligent Peripherals • MCX-N94X-N54X: MCX N94x/54x Highly Integrated Multicore MCUs with On-Chip Accelerators, Intelligent Peripherals and Advanced Security • PCAL9714: 14-Bit SPI I/O Expander with Agile I/O Features • PCAL9722: 22-Bit SPI I/O Expander with Agile I/O Features

Patient Monitor V2 Block Diagram



Recommended Products for Patient Monitor V2

Pressure Sensor	<ul style="list-style-type: none"> • MPXx5050: Differential and Gauge Pressure Sensor (-50 to 50 kPa)
Temperature Sensor	<ul style="list-style-type: none"> • PCT2075: I²C-Bus Fm+, 1 Degree C Accuracy, Digital Temperature Sensor and Thermal Watchdog
MCU	<ul style="list-style-type: none"> • KM1x: 50 MHz, Mainstream Precision Metrology Microcontrollers based on Arm[®] Cortex[®]-M0+
Audio Amplifier	<ul style="list-style-type: none"> • TDF8530TH: I²C-Bus Controlled Quad Channel 45 W / 2 Ω Class-D Power Amplifier with Full Diagnostics

Ethernet PHY	<ul style="list-style-type: none"> • TJA1101: TJA1101B, IEEE 100BASE-T1 Compliant Automotive Ethernet PHY Transceiver
Audio Codec	<ul style="list-style-type: none"> • SGTL5000: Ultra-Low-Power Audio Codec
MPU	<ul style="list-style-type: none"> • i.MX8MPLUS: i.MX 8M Plus – Arm® Cortex®-A53, Machine Learning, Vision, Multimedia and Industrial IoT • i.MX8MMINI: i.MX 8M Mini - Arm® Cortex®-A53, Cortex-M4, Audio, Voice, Video
PMIC	<ul style="list-style-type: none"> • MMPF0100: 14-Channel Configurable PMIC
Wi-Fi Module	<ul style="list-style-type: none"> • 88W8897: 2.4/5 GHz Dual-Band 2x2 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.0 Solution

View our complete solution for [Patient Monitor](#).

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