



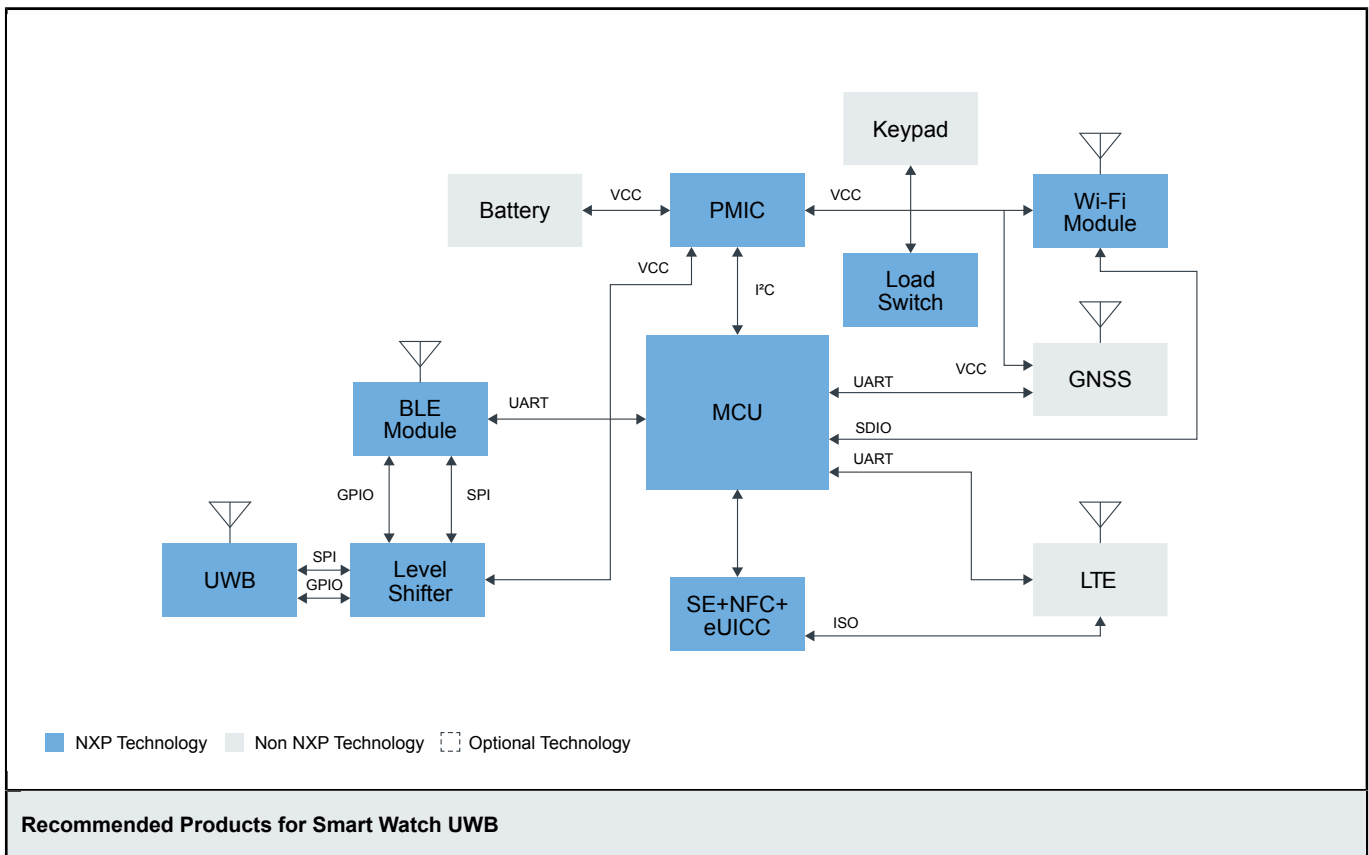
# Smart Watch

Last Updated: Feb 9, 2023

Comfort, compact, fashionable, rich user experience, low power consumption and performance efficiency are just a few requirements of smart watch designers.

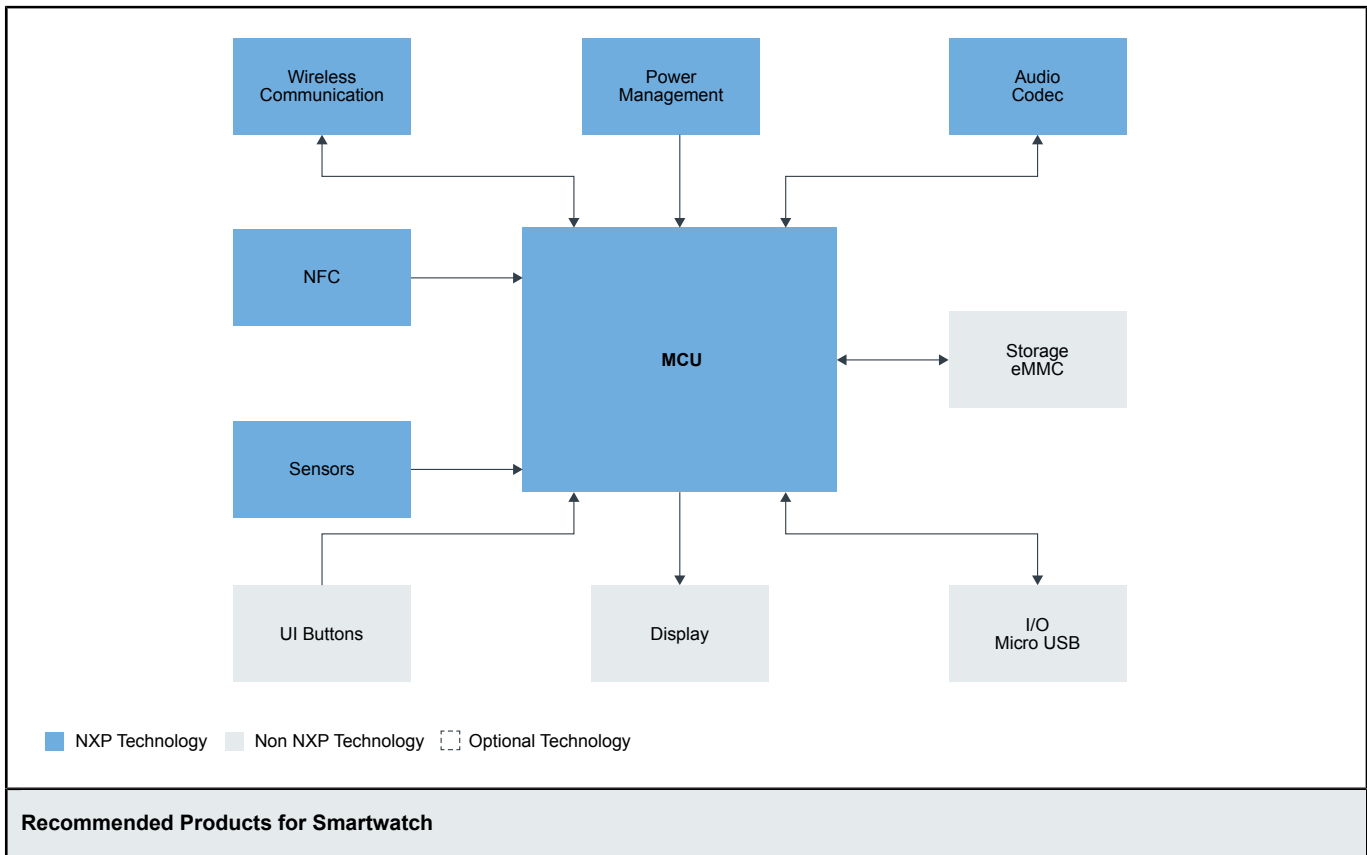
With a broad portfolio of sensors, connectivity, security and embedded processing, NXP's technology is designed to meet the growing and demanding need of smart watch designs. Take the i.MX RT500 family of crossover MCUs for example. This family of MCUs is optimized for low-power HMI application by combining a graphics engine and a streamlined Cadence® Tensilica® Fusion F1 DSP core with a next-generation Arm® Cortex®-M33 core.

## Smart Watch UWB Block Diagram



MCU	<ul style="list-style-type: none"> <li>• <a href="#">i.MX RT500 Crossover MCU with Arm® Cortex®-M33, DSP and GPU Cores</a></li> <li>• <a href="#">i.MX7ULP</a>: i.MX 7ULP Family, Ultra-Low-Power with Graphics</li> </ul>
PMIC	<ul style="list-style-type: none"> <li>• <a href="#">PCA9420</a>: PMIC for Low Power Applications</li> <li>• <a href="#">PCA9460</a>: 13-Channel Power Management Integrated Circuit (PMIC) for Ultra Low Power Application</li> </ul>
Wireless	<ul style="list-style-type: none"> <li>• <a href="#">88W8801</a>: 2.4 GHz Single-Band 1x1 Wi-Fi® 4 (802.11n) Solution</li> <li>• <a href="#">QN9090/30</a>: <a href="#">Bluetooth Low-Energy MCU with Arm®Cortex®-M4 CPU, Energy Efficiency, Analog and Digital Peripherals and NFC Tag Option</a></li> <li>• <a href="#">Ultra-Wideband (UWB)</a>: Ultra wideband (UWB)</li> </ul>
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Load Switch	<ul style="list-style-type: none"> <li>• <a href="#">NX3P2902BUK</a>: Logic-Controlled High-Side Power Switch</li> </ul>
Level Shifter	<ul style="list-style-type: none"> <li>• <a href="#">NTS0308E</a>: 8-Bit Dual-Supply Translating Transceiver (Open-Drain, Auto-Direction Sensing)</li> </ul>
UWB	<ul style="list-style-type: none"> <li>• <a href="#">Trimension™ SR150</a>: <a href="#">Secure UWB Solution for IoT Devices</a></li> </ul>

## Smartwatch Block Diagram



MCU	<ul style="list-style-type: none"> <li>• <a href="#">i.MX7ULP</a>: i.MX 7ULP Family, Ultra-Low-Power with Graphics</li> <li>• <a href="#">i.MX6ULL</a>: i.MX 6ULL Single-Core Processor with Arm® Cortex®-A7 Core</li> </ul>
Power Management	<ul style="list-style-type: none"> <li>• <a href="#">PF1510</a>: Power Management Integrated Circuit (PMIC) for Low Power Application Processors</li> <li>• <a href="#">PF1550</a>: PMIC with 1A Li+ Linear Battery Charger for Low Power Processor Systems</li> <li>• <a href="#">PF3000</a>: 12-Channel Configurable PMIC for i.MX6 and i.MX7 Application Processors</li> <li>• <a href="#">PCA9460</a>: 13-Channel Power Management Integrated Circuit (PMIC) for Ultra Low Power Application</li> </ul>
Wireless Communication	<ul style="list-style-type: none"> <li>• <a href="#">KW31Z</a>: Kinetis® KW31Z-2.4 GHz Bluetooth Low Energy Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core</li> <li>• <a href="#">2.4/5 GHz Dual-Band 1x1 Wi-Fi® 4 (802.11n) + Bluetooth® 5.2 Solution</a></li> </ul>
NFC	<ul style="list-style-type: none"> <li>• <a href="#">NTAG 1°C Plus 2K: NFC Forum Type 2 Tag with I²C Interface</a></li> </ul>
Sensor	<ul style="list-style-type: none"> <li>• <a href="#">FXOS8700CQ</a>: Digital Motion Sensor - 3D Accelerometer (±2g/±4g/±8g) + 3D Magnetometer</li> <li>• <a href="#">MPL3115A2</a>: Absolute Digital Pressure Sensor (20 to 110 kPa)</li> <li>• <a href="#">MMA8451Q</a>: ±2g/±4g/±8g, Low g, 14-bit Digital Accelerometer</li> </ul>
Audio Codec	<ul style="list-style-type: none"> <li>• <a href="#">SGTL5000</a>: Ultra-Low-Power Audio Codec</li> </ul>

View our complete solution for [Smart Watch](#).

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

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