

SimpleLink™ Bluetooth® Smart CC2640 Wireless Microcontroller



The SimpleLink™ Bluetooth® Smart CC2640, a member of the SimpleLink ultra-low power wireless MCU platform, is the lowest power Flash-based Bluetooth 4.1 solution on the market with multi-year operation on smaller coin cells. It is also the most integrated solution available



with a complete system design that will fit on your fingertip.

Overview

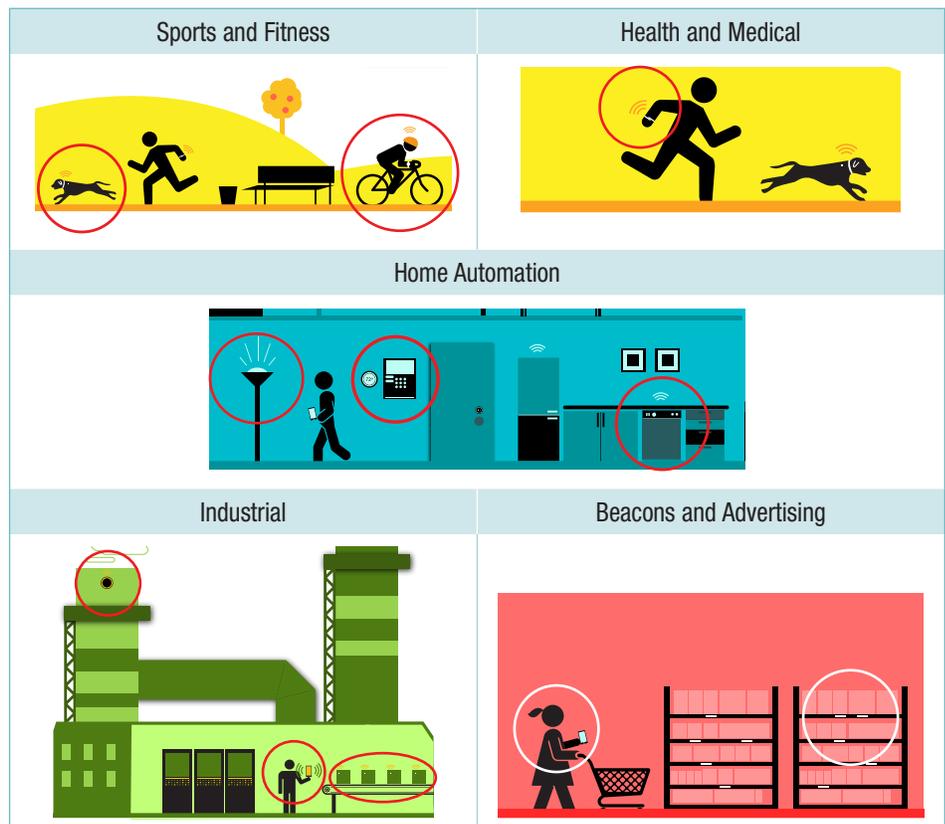
The CC2640 is designed with low-power Bluetooth Smart applications in mind due to its very low sleep, active, RF and average current. Compared to older MCUs, the ARM® Cortex®-M3 processor requires less processing time for application and stack processing and the current consumption per MIPS is among the lowest in the industry. The CC2640 uses

TI's unique sensor controller to interface external digital and analog circuitry in a low-power manner to achieve even longer battery life. All of these features are integrated in a 4x4 QFN package suitable for smaller end products due to less external circuitry. Designing with this device is made easy with TI's comprehensive support platforms, including TI's BLE-Stack software development kit, the Bluetooth Smart SensorTag, development kit and evaluation modules, as well as TI's E2E™ community.

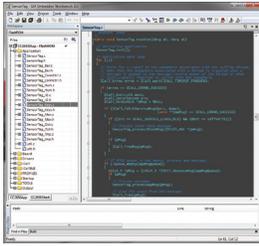
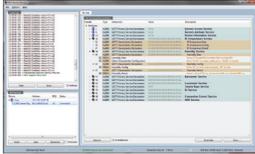
Key features of the CC2640

- **The lowest power:**
Multi-year operation on a coin cell: ARM® Cortex®-M3 MCU, radio, sleep current, and unique sensor controller
- **The most integrated:**
Complete solution in a fingertip size: Single-chip, Flash-based 4x4-mm QFN
- **Easiest to design with:**
Comprehensive design support: Complete software stack, wiki guides, dynamics design kits, low-cost tools and software starting points

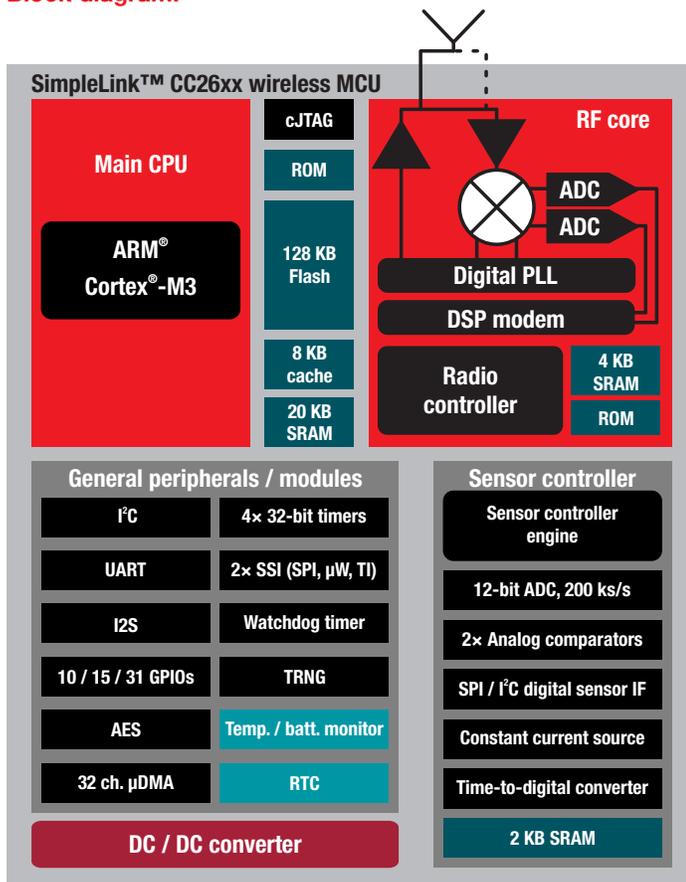
The SimpleLink CC2640 is designed for a broad range of applications, including:



Getting started: Evaluate the CC2640 on the CC2650-based development kits

Development kit CC2650DK: \$299	Evaluation modules CC2650EMK: \$99	SensorTag CC2650STK: \$29	Bluetooth Smart software development kit	Bluetooth Smart device monitor
				
<p>For complete system design and evaluation Complete 2.4-GHz hardware, software and RF development platform</p>	<p>Evaluation kit Two optimized plug-in boards to easily test RF performance with more nodes in a CC2650DK network The EMK comes in 4x4-mm, 5x5-mm and 7x7-mm options</p>	<p>Low-power development kit for IoT applications Start sensor development in the cloud in 3 minutes. Expandable with debugger and DevPacks to customize your IoT application. Powered by the CC2650 wireless MCU and 10 low-power sensors</p>	<p>Includes all necessary software to get started With continuously updated software features, the BLE-Stack is available royalty free to our customers</p>	<p>Provides an intuitive and graphical way to explore Bluetooth low-energy services and characteristics</p>

Block diagram:



For more information on the SimpleLink ultra-low power wireless MCU platform, please visit www.ti.com/simplelinkulp

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