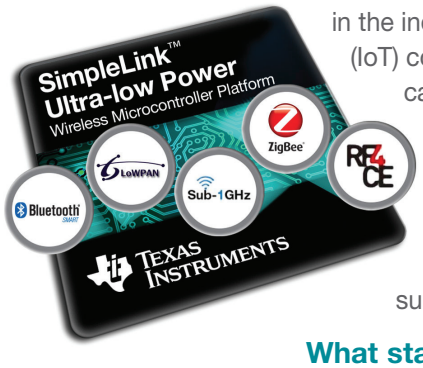
SimpleLink™ Ultra-Low Power Wireless Microcontroller Platform

The industry's **only multi-standard family** with code- and pin-compatibility across:

- *Bluetooth*® low energy (Bluetooth Smart)
- 6LoWPAN
- Sub-1 GHz
- ZigBee®
- RF4CE™ and
- Proprietary modes
- ANT/ANT+



Key benefits

- **The lowest power:**
  - Go battery-less with energy harvesting
  - Use a coin cell battery for multi-year, always-on operation
  - Integrated ultra-low power sensor controller
- **Industry's only multi-standard platform:**
  - Code- and pin-compatibility across Bluetooth low energy, 6LoWPAN, ZigBee, Sub-1 GHz and RF4CE
- **Easiest to design with:**
  - ARM® Cortex®-M3 based MCU
  - TI-RTOS
  - Simplest RF and antenna design
  - Built-in robust security
  - Ready-to-use protocol stacks
  - Tools and reference designs

Overview

The SimpleLink™ ultra-low power wireless microcontroller (MCU) platform is the broadest, lowest power and easiest to use wireless connectivity offering in the industry for Internet of Things (IoT) connected devices. With the capability to leverage multiple standards, customers have flexibility in design and TI makes it easy by providing tools and software, reference designs, community support and more.

What standard fits your design?

- **Bluetooth low energy:** Control ultra-low power wireless solutions with a smartphone or tablet
- **6LoWPAN:** Complete solution to the cloud in a wide-area mesh network using open IP standards
- **Sub-1 GHz:** Provides long range and reliable communication at ultra-low power
- **ZigBee:** Standardized stacks, protocols and application profiles for robust, low-power mesh networks
- **RF4CE:** Two-way communication standard designed for ultra-low power input devices such as remote controls
- **ANT/ANT+:** Provides ultra-low-power wireless protocol and application profiles for sports, fitness and other applications.

Available products

- **SimpleLink dual-band C1350 wireless MCU:** The CC1350 is the world's first dual-band (Sub-1 GHz and 2.4 GHz) wireless microcontroller. Monitor your IoT networks from your handheld device with TI's Sub-1 GHz and Bluetooth low energy single-chip solution.
- **SimpleLink Sub-1 GHz CC1310 wireless MCU:** Combines low-power with high-RF performance in a tiny package for all ISM bands. With this device you are able to achieve 20 kilometers on a coincell!
- **SimpleLink 2.4-GHz multi-standard CC2650 wireless MCU:** The CC2650 supports multiple 2.4 GHz standards allowing customers to leverage code compatibility across 2.4 GHz standards by downloading the corresponding protocol stack.
- **SimpleLink Bluetooth low energy CC2640 wireless MCU:** The CC2640 is the lowest power Flash-based Bluetooth 4.2 solution with multi-year operation on smaller coin cells.
- **SimpleLink 6LoWPAN/ZigBee CC2630 wireless MCU:** The CC2630 supports large networks connecting 1,000s of nodes in homes, buildings and cities. Take advantage of easy IP and cloud connectivity through 6LowPAN operation where each device has an IPv6 address.

Getting started

To simplify development, TI provides a broad range of tools and software that offer flexibility between technologies. All kits for 2.4-GHz operation are based on the multi-standard CC2650 wireless MCU. The CC2650STK SimpleLink SensorTag is a rapid prototyping and development tool designed to shorten the design time for CC26xx development from months to hours.

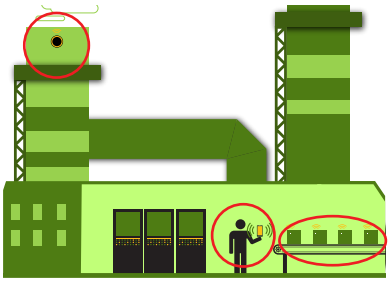
Application areas

The SimpleLink ultra-low power wireless MCU platform is designed for use in multiple applications including:

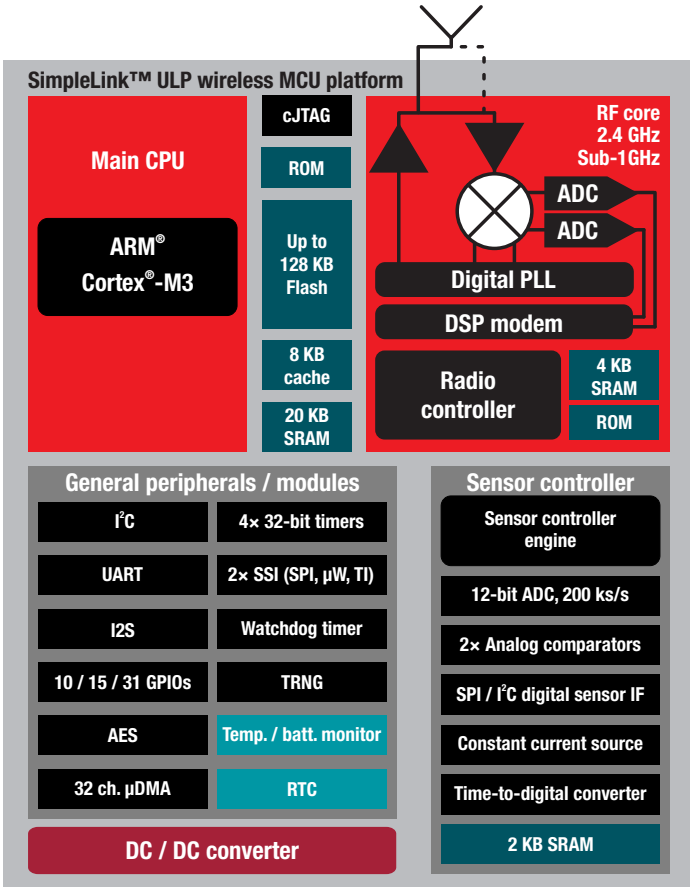
Health and Fitness

Home and Building Automation

Industrial



Block diagram



Hardware

CC1310 LaunchPad™ kit (launchxl-cc1310) $29.00	CC1350 LaunchPad kit (launchxl-cc1350) $29.00	SensorTag kits (CC1350STK) & (CC2650STK) $29.00	CC2650 LaunchPad kit (launchxl-cc2650) $29.00
TI's first LaunchPad kit with a Sub-1 GHz radio offering low power and long-range connectivity.	This CC1350 kit combines a Sub-1 GHz radio with a Bluetooth low energy radio for the ultimate combination of easy mobile phone integration with long-range connectivity.	The CC1350 kit combines a Sub-1 GHz radio with a Bluetooth low energy radio for easy mobile phone integration with long-range connectivity. The CC2650STK Bluetooth low energy SensorTag includes iBeacon technology, allowing your phone to launch applications and customize content based on SensorTag data and physical location.	This LaunchPad kit brings easy *Bluetooth*® low energy connectivity to the LaunchPad kit ecosystem.

Software

SmartRF™ Studio 7	Sensor Controller Studio	SmartRF Flash Programmer 2	CCS Uniflash
PC application that helps designers of radio systems easily evaluate the RF-IC at an early stage in the design process	Development environment to implement sensor controller task algorithms and rapid development	PC application for programming CC26xx devices	Flash programmer with Windows® and Linux® support

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

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