SimpleLink™ 6LoWPAN/ZigBee® CC2630 Wireless Microcontroller

Texas Instruments

Key features of the CC2630

- **Industry's lowest power wireless MCU**
  - Ultra-low power sensor controller and lowest RF peak current enabling multi-year operation on a coin cell battery
  - Sensor controller and peripherals can be powered while rest of system is powered off
- **High performance**
  - Abundant processing power with an ARM® Cortex®-M3 application processor clocked up to 48 MHz and supported by a dedicated radio co-processor. In standby mode, the sensor controller engine (SCE) monitors, logs and acts on sensor inputs at 1 µA current consumption, providing an ideal solution for any low-power nodes in ZigBee, 6LoWPAN and IEEE 802.15.4 mesh networks
  - High link budget (up to 105dB) for a larger communication area and more nodes in the network
  - Multiple protocol support with ZigBee, 6LoWPAN and 802.15.4 mesh
- **Smallest solution size**
  - Save space with 4×4 mm QFN package
  - Additional sizes of 5×5 mm and 7×7 mm with up to 31 GPIOs
  - All solutions include on-chip Flash memory, RAM and DC/DC converter

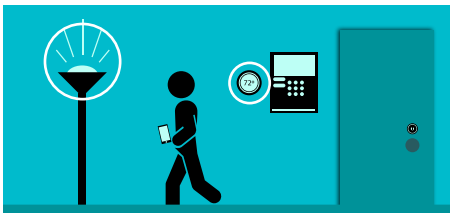
The SimpleLink™ 6LoWPAN/ZigBee® CC2630 wireless MCU is an ultra-low power 2.4 GHz product for low-power mesh networking that supports 6LoWPAN, ZigBee and IEEE 802.15.4 standards.

Overview

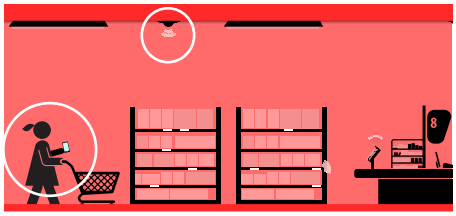
The SimpleLink 6LoWPAN/ZigBee CC2630 wireless MCU enables ultra-low power operation on that can power a light switch for 10 years using a coin cell battery. The CC2630 can support the largest networks, connecting 1000s of nodes in homes, buildings and cities with a versatile portfolio of 802.15.4-based solutions. The CC2630 also has easy IP and cloud connectivity, using 6LoWPAN to give each device its own IPv6 address.

The CC2630 is designed for a broad range of applications including:

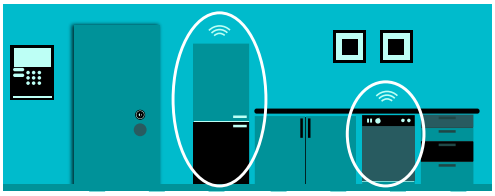
Home and Building Automation



Lighting

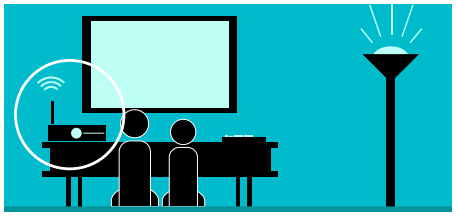


Smart Appliances



Medical and Fitness

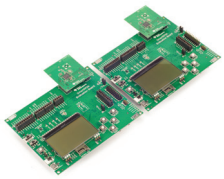
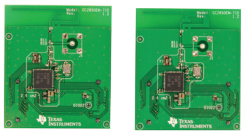
Wireless Infrastructure (Gateways)



Getting started:

Evaluate the CC2630 on the CC2650-based development kits

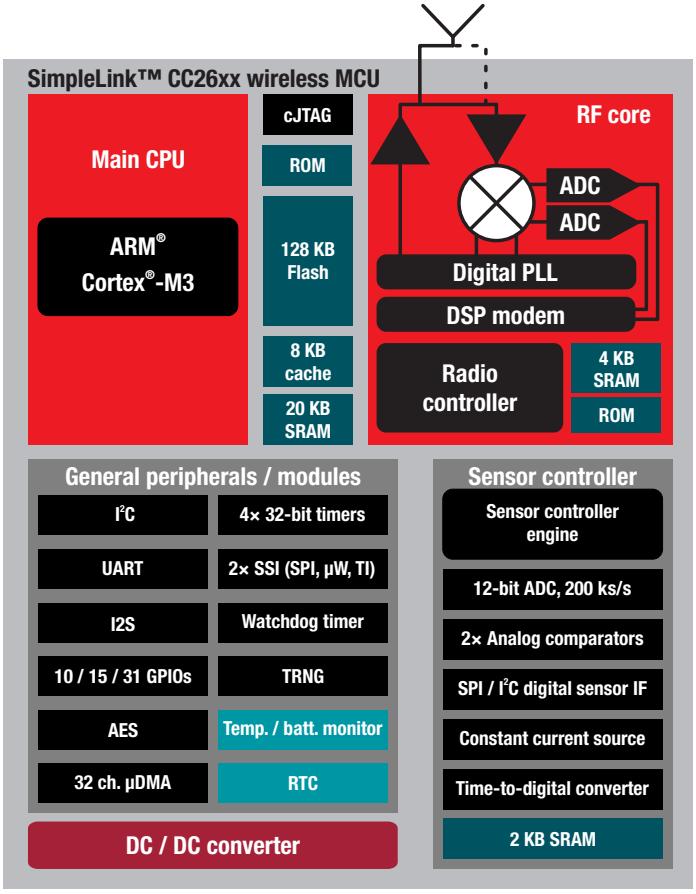
Kits

Development kit CC2650DK: $299	Evaluation modules CC2650EMK: $99
	
For complete system design and evaluation Complete 2.4-GHz hardware, software and RF development platform	**Evaluation kit** • Two optimized plug-in boards to easily test RF performance with more nodes in a CC2650DK network • The EMK comes in 4×4-mm, 5×5-mm and 7×7-mm options

Software

6LoWPAN	ZigBee
	
• Available for download from the Contiki open source community • All tools, including network simulator/emulator COOJA, are free and open source. TI contributes all Contiki 6LoWPAN development efforts to the Contiki community	• Robust, comprehensive Z-Stack™ software with various sample applications • For home automation, lighting and generic mesh applications

Block diagram:



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

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