

The Secret to Moving Faster with Bluetooth® 5



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As the speed increases with Bluetooth® 5, don't you want to move quickly too? Now it's easy to pick up the pace with the first fully qualified Bluetooth 5 protocol stack for single-mode Bluetooth low energy applications from TI, supporting high-speed mode.

Bluetooth 5 is groundbreaking. The new high-speed mode allows data transfers up to 2Mbps, twice the speed of Bluetooth 4.2 and five times the speed of Bluetooth 4.0, without increasing power consumption. And in addition to faster speeds, this mode offers significant improvements for energy efficiency and wireless coexistence with reduced radio communication time. Lastly, Bluetooth 5 enables unparalleled flexibility for you to adjust speed and range based on application needs, capitalizing on the high-speed or long-range modes respectively.

Because data transfers are now possible at 2Mbps, you can develop applications using voice, audio, imaging, and data logging that were not previously an option using Bluetooth low energy. With high-speed mode, existing applications will deliver faster responses, richer engagement and longer battery life. Not to mention, Bluetooth 5 enables faster, reliable firmware updates.

The SimpleLink™ Bluetooth low energy [CC2640R2F wireless microcontroller \(MCU\)](#) – which is already in mass production – is the tiniest Bluetooth 5 solution (see [Figure 1](#)) with fierce radio-frequency (RF) performance optimized for Internet of Things (IoT) end nodes. The CC2640R2F device is also ideal for industrial applications since it can be easily added to an existing host MCU as a network processor to ensure system design flexibility.

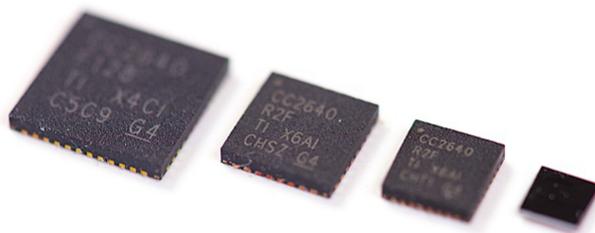


Figure 1. Package Sizes for the CC2640R2F Wireless MCU

Developers interested in trying out the extended range can also test drive the Bluetooth 5 coded physical layers (PHYs) (the long-range mode) using two [CC2640R2F LaunchPad™ development kits](#) (kit shown in [Figure 2](#)) to measure the achievable distance of this mode.

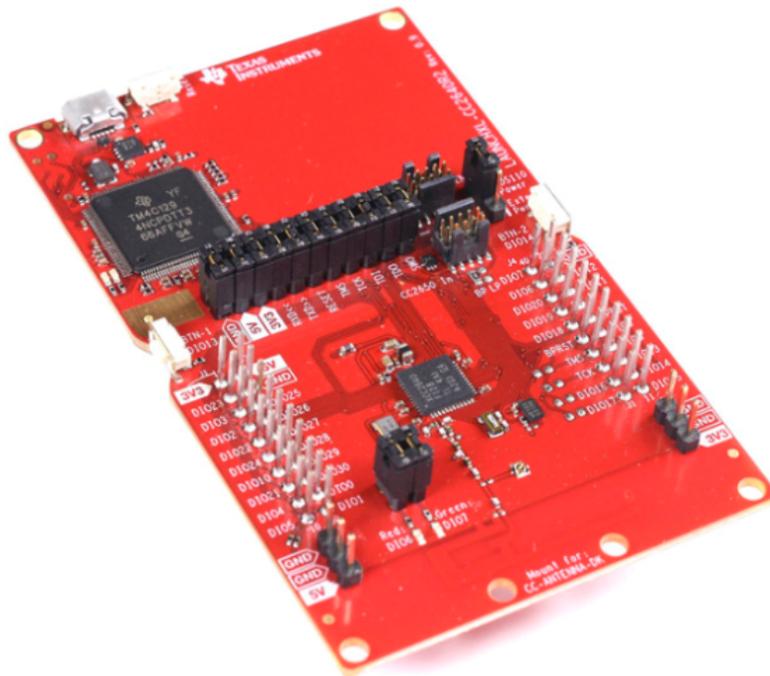


Figure 2. CC2640R2F LaunchPad Development Kit

The real secret to moving faster with Bluetooth 5 is getting started today. Whether you are designing a connected medical device, smart meter or motor condition monitor, Bluetooth 5 enables you to double your speed. With TI's fully qualified Bluetooth 5 protocol stack, you can rapidly start development today and have more time to innovate.

Get started by downloading the industry's first fully qualified [Bluetooth 5 protocol stack \(BLE5-Stack\)](#)!

Additional resources

- View the first qualified listing for single-mode Bluetooth low energy high speed mode on the [Bluetooth SIG's website](#)
- After downloading the SimpleLink CC2640R2 Software Development Kit (SDK), leverage [TI's Bluetooth 5 Throughput Demo](#) to test BLE5-Stack's 1Mbps, 2Mbps, 1+2 Mbps, and Coded PHYs

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