Technical Article
Top 5 Reasons Why TI's CC2640 Wireless MCU Will Differentiate Your Bluetooth® Low Energy Product

TEXAS INSTRUMENTS

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Interested in designing with TI's lowest power *Bluetooth*® low energy wireless microcontroller (MCU)? These are 5 reasons why you should choose SimpleLink™ Bluetooth low energy CC2640 wireless MCU:

1. **Industry-leading range at the lowest power.** The CC2640 wireless MCU is built for a myriad of applications from industrial networks to connected homes. It's specifically tailored for end equipment's that require low power and longer range such as whole-house coverage.   The CC2640 solution offers a highly flexible, software configurable radio with programmable output power up to +5dBm and excellent receiver sensitivity of -97dBm at only 5.9mA Rx power. You can leverage CC2640 wireless MCU's 102dB link budget to create robust networks with less re-transmissions and longer battery life. Also, TI's scalable platform is designed to grow in flash space to support your system now and in the future.
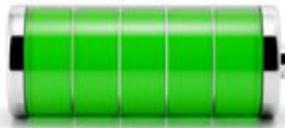
2. **Fully certified, fully featured Bluetooth 4.2 software stack and multi-role.** TI's longevity as a Bluetooth low energy solution provider is unparalleled, built not only on creating easy-to-use hardware but certified and royalty-free software. The BLE-Stack 2.2 software supports enhanced security during pairing, increased privacy and up to 2.5 times the throughput of previous Bluetooth specifications. Additionally, TI is one of the few suppliers to support multi-role (a device functioning as a central and peripheral simultaneously) due to the complexity of managing multiple connections. This additional functionality enables a new connectivity dimension for sensor data to be displayed locally while relaying alerts to a smartphone at the same time. Jumpstart your development with TI's multi-role demo.

3. **Easily add Bluetooth low energy to an existing product.** Eager to boost your product to the next level with smartphone connectivity? TI's simple network processor topology makes it seamless to add Bluetooth low energy functionality to your embedded microcontroller based product (Figure 1). The provided driver source code enables an external MCU to run your existing application code and the CC2640 solution handles all of the Bluetooth low energy related processing. Check out TI's new certified module and quickly get started with a sample application using the highly flexible CC2640 wireless MCU and the ultra-low power MSP432™ MCU.
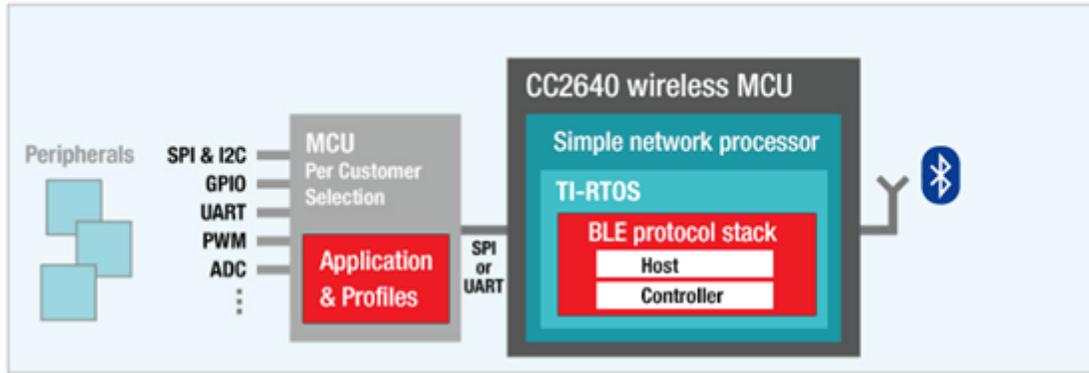
Figure 1. TI's Simple Network Processor configuration

4. **iBeacon and Eddystone support.** As Bluetooth low energy technology expands beyond personal electronics to home and industrial applications, developers are creating more innovative beacon use-cases. From retail shopper coupons to indoor navigation, the SimpleLink CC2640 wireless MCU is optimized to support all beacon platforms. Learn how to use TI's BLE-Stack software to implement your own beacon design.

5. **Bluetooth 5 Ready.** It's not a coincidence that the fifth reason to choose the CC2640 wireless MCU is that it is ready for Bluetooth 5. As leaders in innovation, TI strives to be proactive in preparing for the next Bluetooth specification. The CC2640 solution was designed with Bluetooth 5 features in mind. Longer range, higher speeds and increased broadcasting capacity are coming soon. TI is ready, are you?

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