

# CC2540 Mini Development Kit

## Quick Start Guide



### Kit Contents

1 x CC2540 USB dongle  
 1 x CC2540 Keyfob board  
 1 x Keyfob plastic case  
 1 x CC Debugger with cables  
 1 x Mini USB cable  
 1 x CR2032 Battery  
 Documentation



This kit includes a non-rechargeable lithium battery. Always make sure the battery is removed from any device that is connected to an external power source. Dispose the battery properly and keep out of the reach of children. If swallowed, contact a physician immediately.

## 1 Purpose of this document

This document will guide you through the initial steps required in order to run the *Bluetooth®* low energy demo application which is included with the Bluetooth low energy (BLE) stack from Texas Instruments.

You will get familiar with the hardware in the box and some of the tools required for developing your own software at a later stage.

## 2 Download and install software

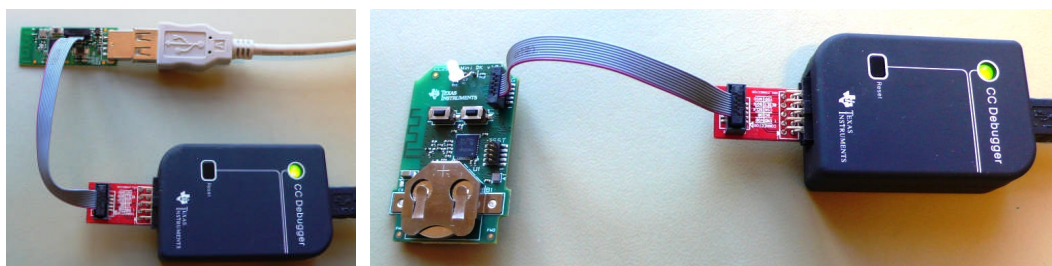
Please start by downloading the CC2540 BLE software. The software can be found at [www.ti.com/blestack](http://www.ti.com/blestack). Once downloaded, run the installer and let the wizard guide you through the installation procedure. The default root installation directory will be C:\Texas instruments.

Please also download and install the SmartRF Flash Programmer. The tool can be downloaded from <http://focus.ti.com/docs/toolsw/folders/print/flash-programmer.html>

## 3 Program the devices

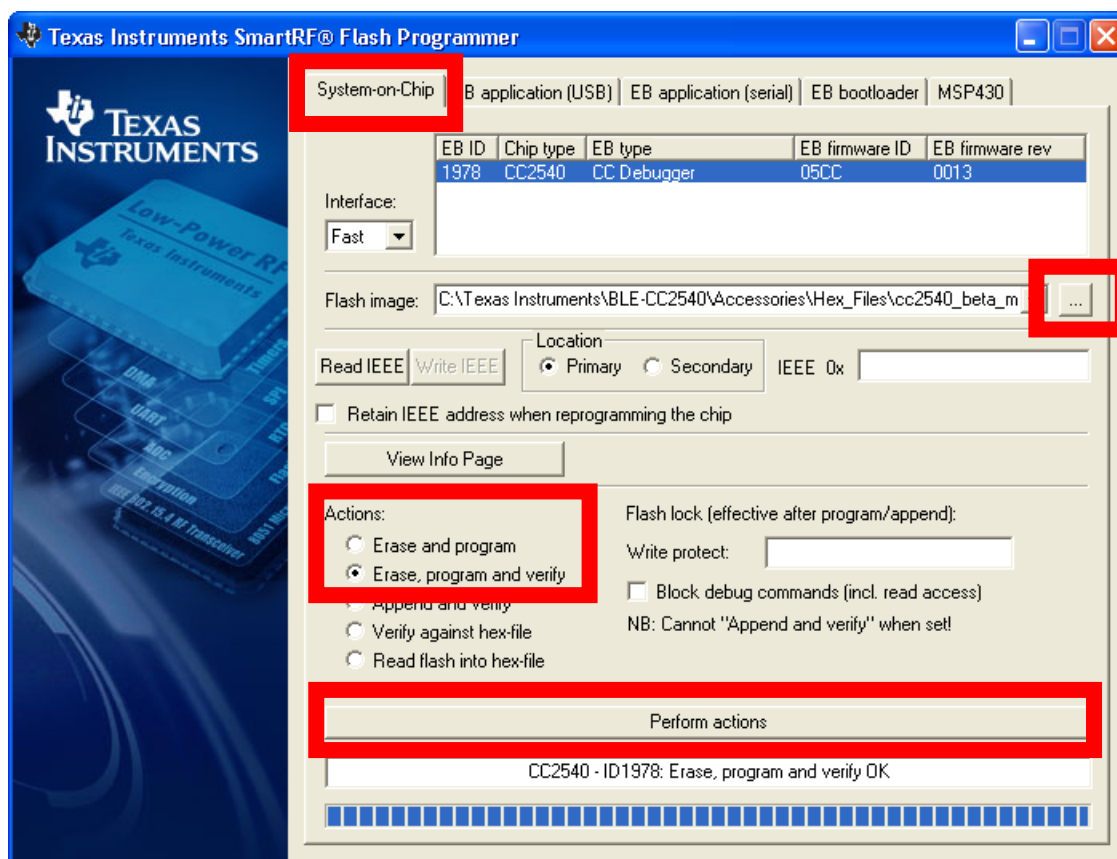
By default, there is no application programmed on the keyfob or dongle. There are several applications, bundled with the BLE stack that could run on this hardware. This step will explain how to use the CC Debugger to program the devices in the kit.

The figures below show how the CC Debugger is connected to the targets. **Note that in both cases you need an external power supply for proper programming.** That is, the CC Debugger will *not* power the device by default. In case of the keyfob, just insert the coin cell battery in the battery holder. In case of the USB dongle, power it through the USB interface.



Once connected, make sure the GREEN LED on the Debugger is turned on.

Next, start the SmartRF Flash Programmer. Make sure you select the tab called “System-on-Chip” (marked in the figure below). The screenshot shows the CC Debugger connected to a CC2540 device.



Select the appropriate flash image by clicking the browse button (marked “...”) next to the flash image text field. You will find the flash images in <BLE stack install dir>\Accessories\Hex\_Files. Note that there are different files for the keyfob and the dongle.

Select “Erase and program” or “Erase, program and verify”. The verify step might take some time, as the programmer will do a byte wise read-back to verify that all bytes were programmed successfully.

Make sure both devices are programmed with the appropriate software image.

You are now ready to run your first *Bluetooth*® low energy application! For further details, please follow the instructions in the CC2540 Mini Development Kit User’s Guide.

## 4 Additional information and support

The Low Power RF Online Community [www.ti.com/lprf-forum](http://www.ti.com/lprf-forum) has forums, blogs and videos. Use the forums to find information, application and design notes, FAQs, or to discuss and get help with your design.

On the Texas Instruments’ Low-Power RF web site [www.ti.com/lprf](http://www.ti.com/lprf), you will find all our latest products, news and events updates, and much more.

The TI LPRF eNewsletter keeps you up to date on e.g. new products, application notes, software and events. Sign up at [www.ti.com/lprfnewsletter](http://www.ti.com/lprfnewsletter)

We hope you will enjoy working with the C2540 Mini Development Kit and associated Low-Power RF products from Texas Instruments.

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Amplifiers	<a href="http://amplifier.ti.com">amplifier.ti.com</a>	Audio	<a href="http://www.ti.com/audio">www.ti.com/audio</a>
Data Converters	<a href="http://dataconverter.ti.com">dataconverter.ti.com</a>	Automotive	<a href="http://www.ti.com/automotive">www.ti.com/automotive</a>
DLP® Products	<a href="http://www.dlp.com">www.dlp.com</a>	Communications and Telecom	<a href="http://www.ti.com/communications">www.ti.com/communications</a>
DSP	<a href="http://dsp.ti.com">dsp.ti.com</a>	Computers and Peripherals	<a href="http://www.ti.com/computers">www.ti.com/computers</a>
Clocks and Timers	<a href="http://www.ti.com/clocks">www.ti.com/clocks</a>	Consumer Electronics	<a href="http://www.ti.com/consumer-apps">www.ti.com/consumer-apps</a>
Interface	<a href="http://interface.ti.com">interface.ti.com</a>	Energy	<a href="http://www.ti.com/energy">www.ti.com/energy</a>
Logic	<a href="http://logic.ti.com">logic.ti.com</a>	Industrial	<a href="http://www.ti.com/industrial">www.ti.com/industrial</a>
Power Mgmt	<a href="http://power.ti.com">power.ti.com</a>	Medical	<a href="http://www.ti.com/medical">www.ti.com/medical</a>
Microcontrollers	<a href="http://microcontroller.ti.com">microcontroller.ti.com</a>	Security	<a href="http://www.ti.com/security">www.ti.com/security</a>
RFID	<a href="http://www.ti-rfid.com">www.ti-rfid.com</a>	Space, Avionics & Defense	<a href="http://www.ti.com/space-avionics-defense">www.ti.com/space-avionics-defense</a>
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