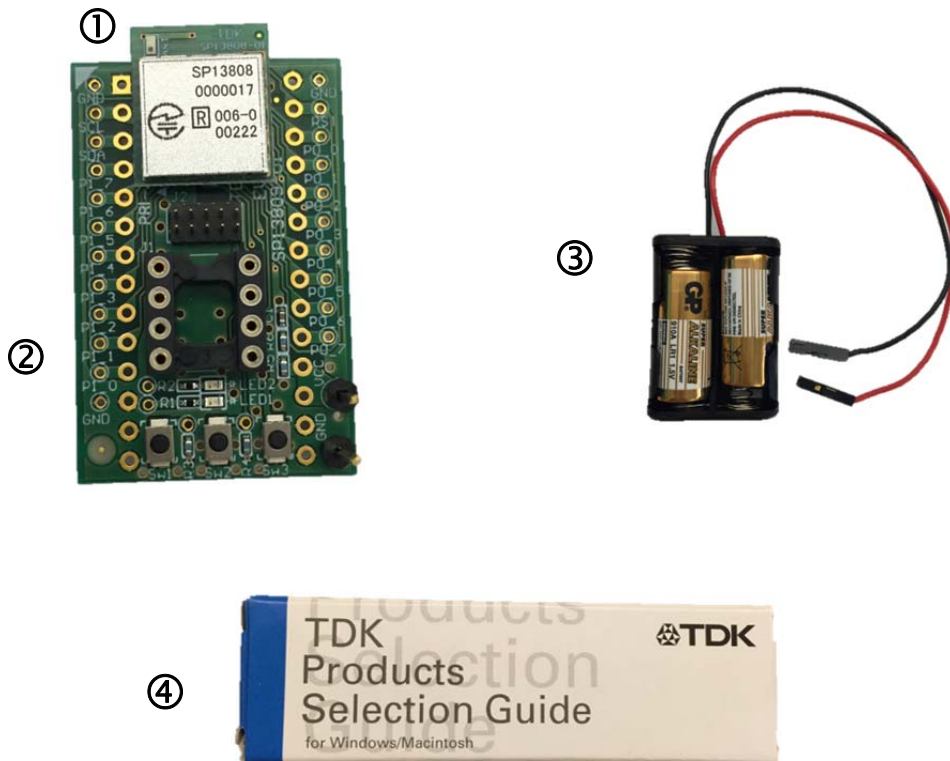

SESUB-PAN-T2541 EVK

Bluetooth® Low Energy Module Quick Start Guide

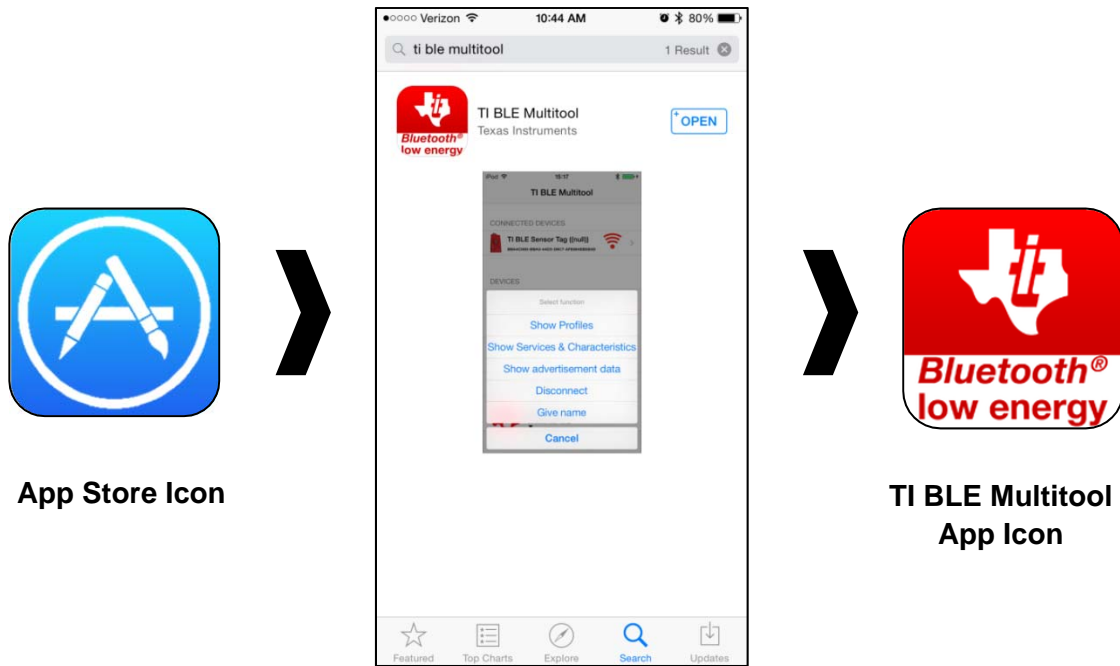
Kit Contains:

1. SP13808: SESUB-PAN-T2541 Evaluation Module
 - Equipped with the SESUB-PAN-T2541 BLE Module, a 2.4GHz band chip antenna, and a 32.768kHz sleep clock resonator
2. SP13809: Adapter Board
 - The adapter board contains switches and LEDs used during the TI BLE Multitool demonstration, and also a pin header for TI's CC-Debugger.
3. Battery Pack Power Supply
4. Product Selection Guide



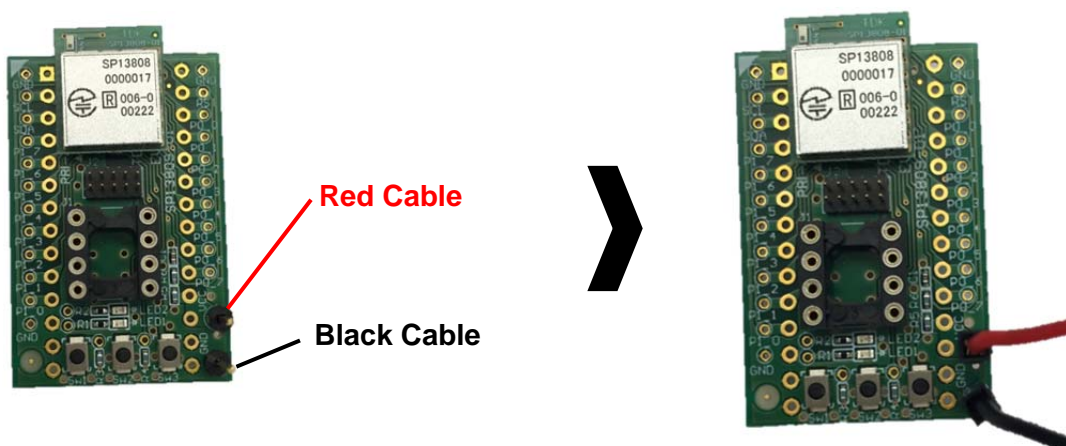
1. Download the Texas Instruments 'TI BLE Multitool' App from the App Store for your Bluetooth® 4.0 compatible iOS device*. The TI BLE Multitool Icon will appear on your home screen when installed properly.

**Bluetooth® 4.0 is compatible with iPhone 4s and iPad 3rd Gen. or later models*

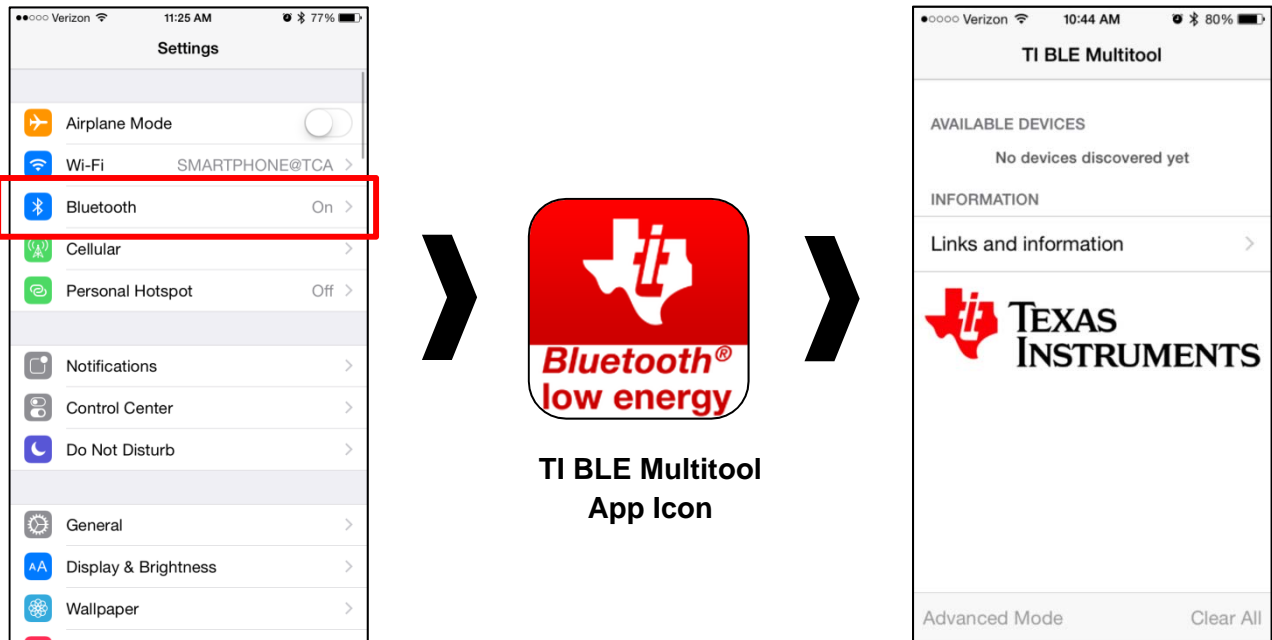


2. Connect the battery pack* to the SESUB-PAN-T2541 evaluation module/adaptor board. The red cable connects to the top pin (Vcc), and the black cable connects to the bottom pin (GND), as shown below.

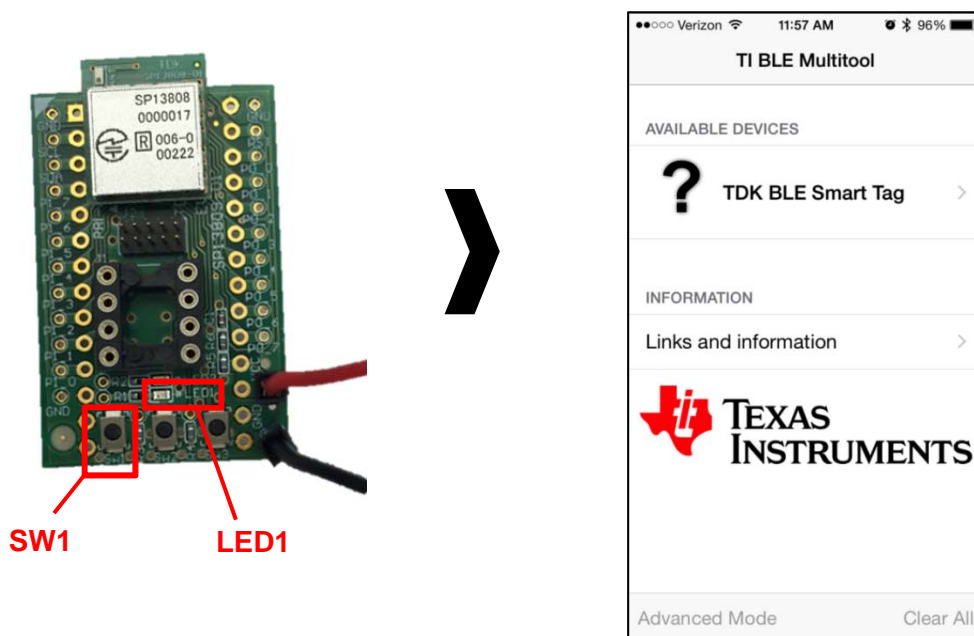
**3.0-3.6 V is the recommended power supply voltage*



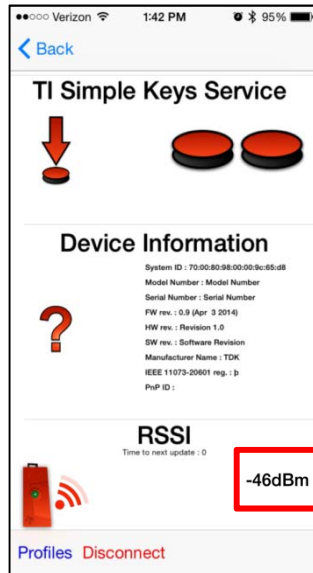
3. Make sure the Bluetooth function is set to 'On' on your iOS device, and then open the TI BLE Multitool App.



4. Make the evaluation module discoverable by pressing the SW1 button. LED1 will begin to flash on the evaluation board, and 'TDK BLE Smart Tag' will appear under Available Devices in the TI BLE Multitool App.

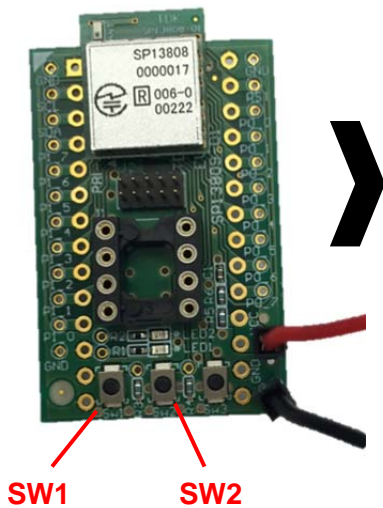


5. Select 'TDK BLE Smart Tag' from the main screen of the TI BLE Multitool App. Notice the two buttons near the top of the screen, the device information in the middle, and the RSSI value near the bottom.

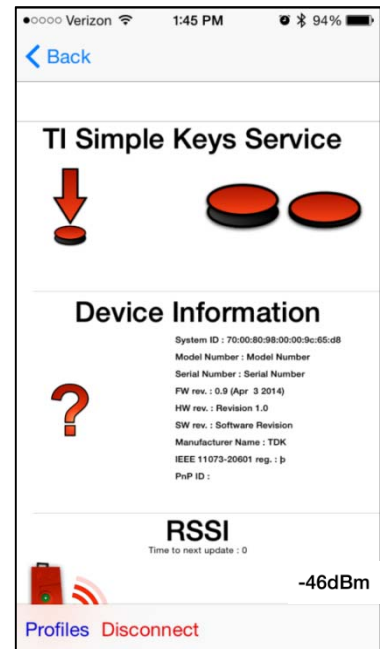


This value will change as the iOS device and the SESUB-PAN-T2541 evaluation module are moved closer or further from one another. As the evaluation module is moved closer to the iOS device, the RSSI value becomes larger, and as the evaluation module is moved further from the iOS device, the RSSI value becomes smaller.

6. Push SW1 or SW2 to see the respective buttons on the screen of your iOS device change position.



SW1 is pressed



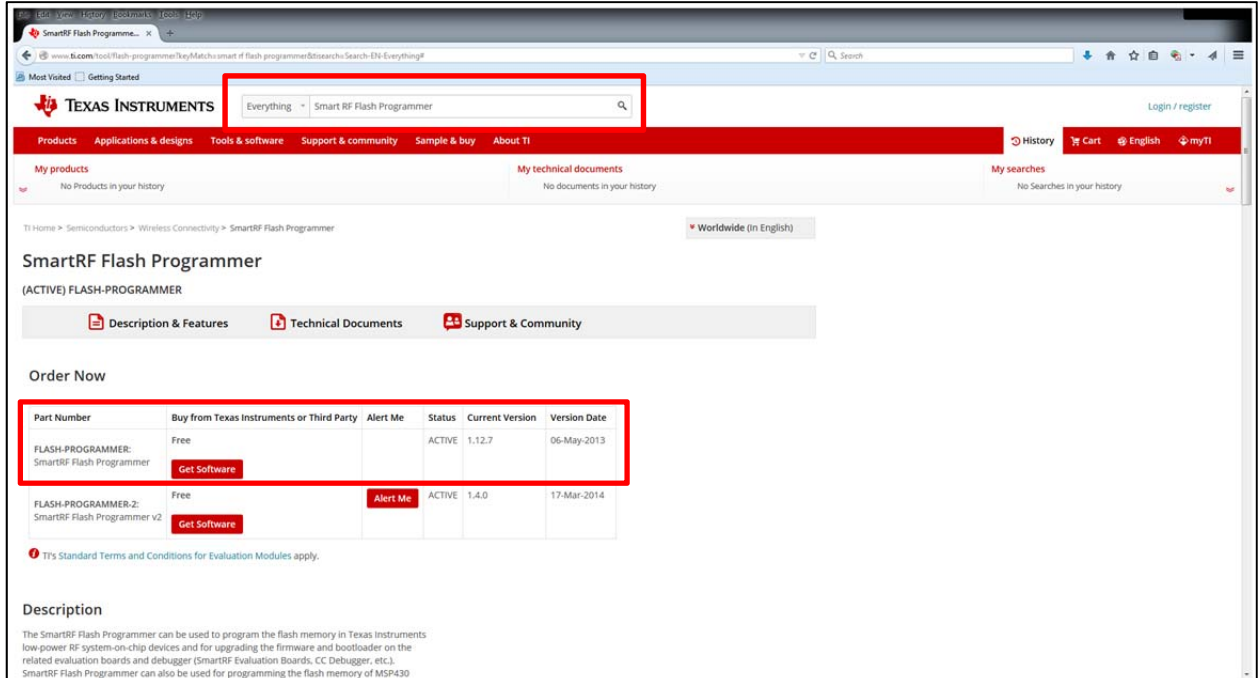
SW2 is pressed

Using the SESUB-PAN-T2541 EVK with the TI CC-Debugger

Needed:

- SESUB-PAN-T2541 EVK
- TI CC-Debugger
 - The CC-Debugger must be purchased separately.
- PC (Windows OS)
- SmartRF Flash Programmer
 - TI's Flash Programmer software "swrc044s.zip" (V1.12.7 5/6/2013) is included within the firmware folder on the TDK Products Selection Guide USB drive
 - The latest version of this software can also be downloaded through TI's website by searching "SmartRF Flash Programmer". – www.ti.com

1. Download and install the SmartRF Flash Programmer from the TI website or from the "swrc044s.zip" file on the TDK Products Selection Guide USB drive. Search "SmartRF Flash Programmer" on www.ti.com and click "Get Software" to download the swrc044s.zip file.

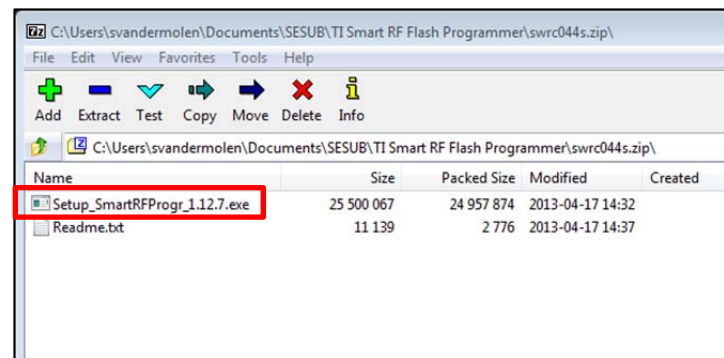
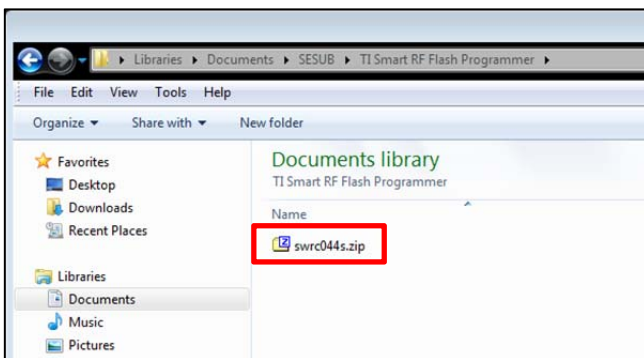
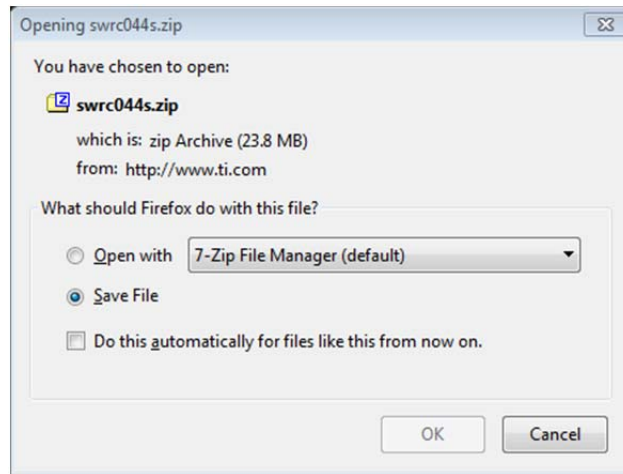


The screenshot shows the Texas Instruments website search results for "SmartRF Flash Programmer". The search bar at the top contains the text "Smart RF Flash Programmer". Below the search bar, there are three tabs: "Description & Features", "Technical Documents", and "Support & Community". Under the "Order Now" section, there is a table with the following data:

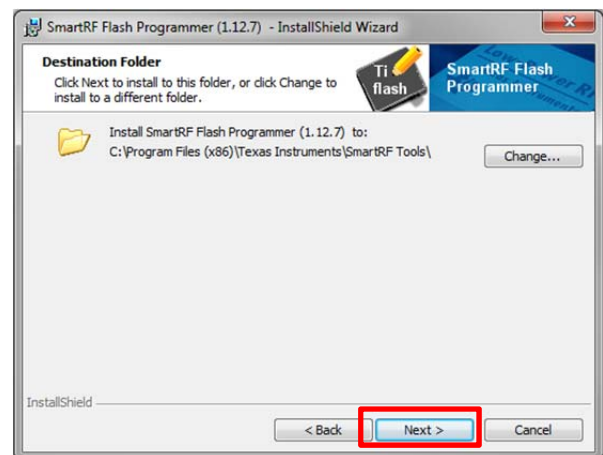
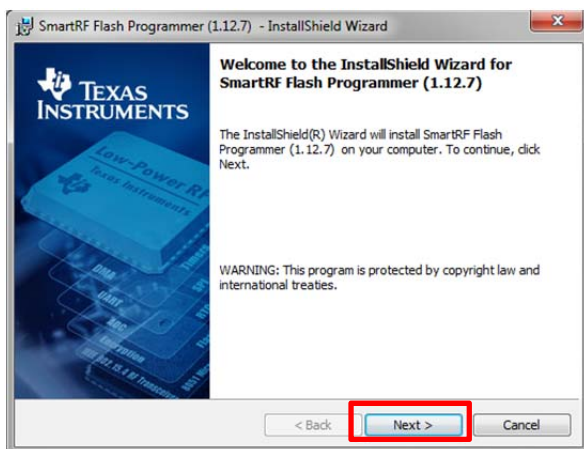
Part Number	Buy from Texas Instruments or Third Party	Alert Me	Status	Current Version	Version Date
FLASH-PROGRAMMER: SmartRF Flash Programmer	Free Get Software		ACTIVE	1.12.7	06-May-2013
FLASH-PROGRAMMER-2: SmartRF Flash Programmer v2	Free Get Software	Alert Me	ACTIVE	1.4.0	17-Mar-2014

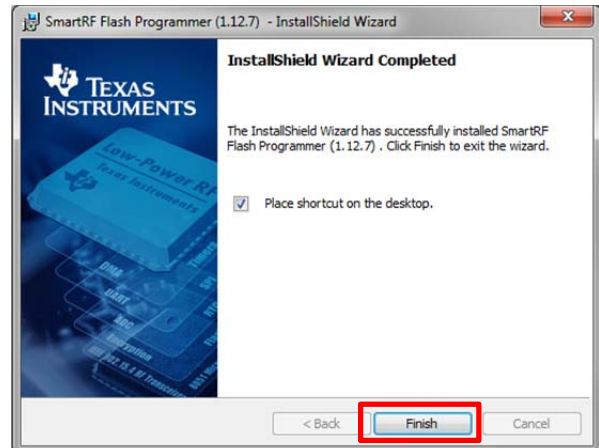
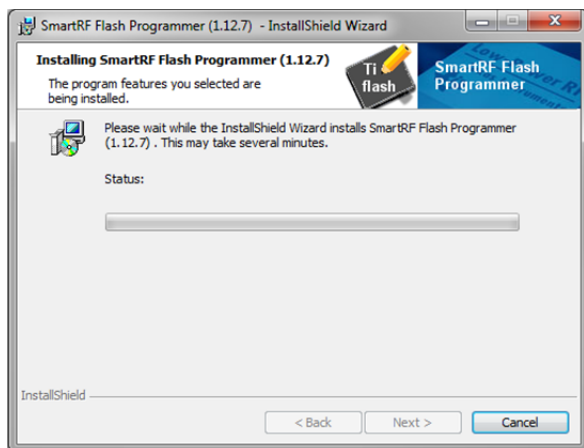
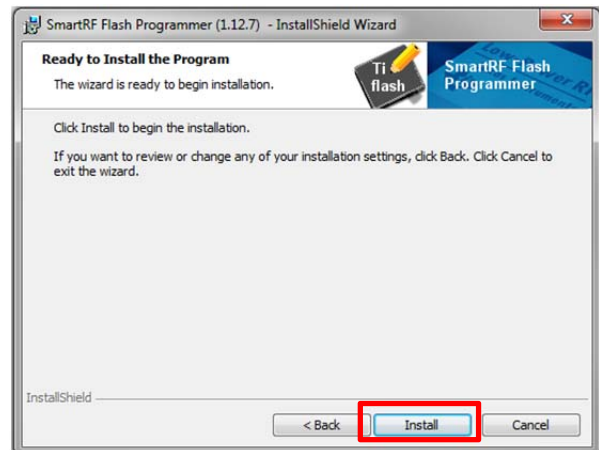
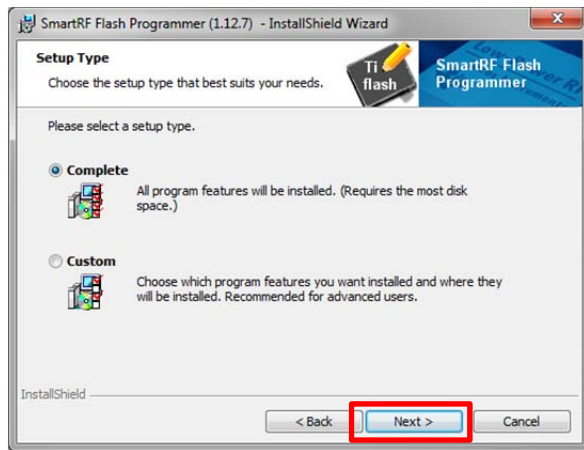
Below the table, there is a note: "TI's Standard Terms and Conditions for Evaluation Modules apply." Under the "Description" section, there is a paragraph: "The SmartRF Flash Programmer can be used to program the flash memory in Texas Instruments low-power RF system-on-chip devices and for upgrading the firmware and bootloader on the related evaluation boards and debugger (SmartRF Evaluation Boards, CC Debugger, etc.). SmartRF Flash Programmer can also be used for programming the flash memory of MSP430."

2. Save the swrc044s.zip file to your PC. Open the zip file from the location where it was saved and run the .exe executable file to install the TI SmartRF Flash Programmer.



3. Follow the automatic prompts to install the software.

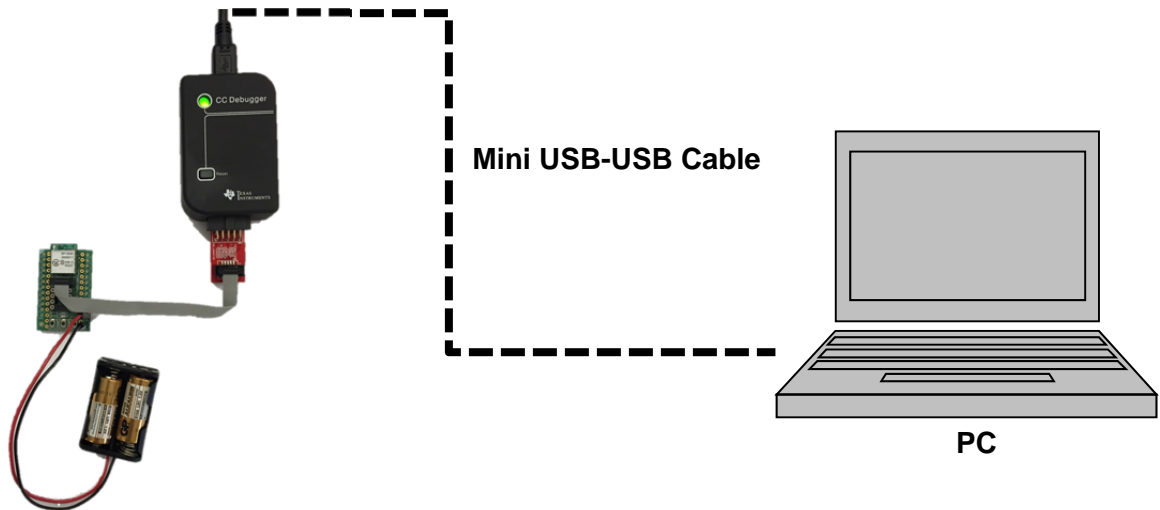




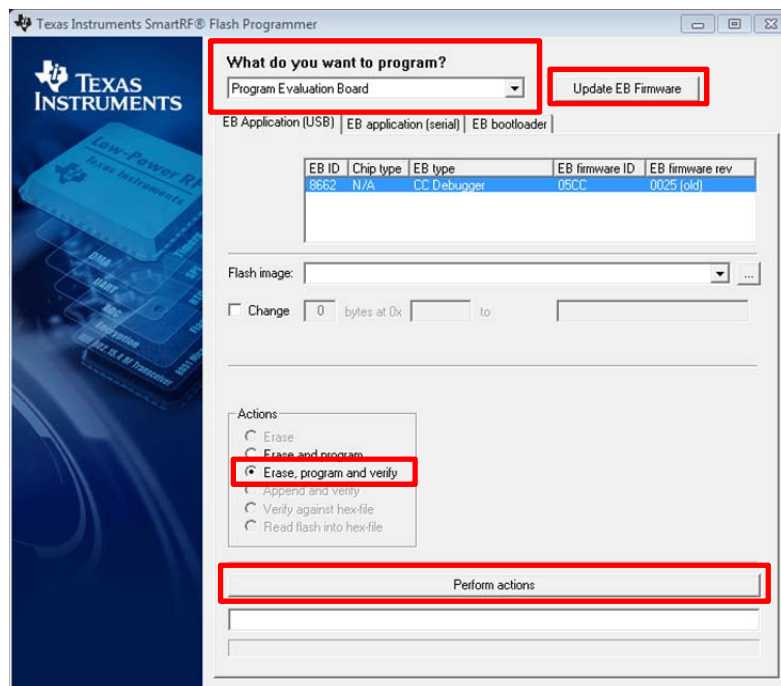
4. Launch the SmartRF Flash Programmer software by clicking the icon below on your desktop.



5. Connect the SESUB-PAN-T2541 EVK to the CC-Debugger, and then connect the CC-Debugger to the PC using the mini USB cable. When the USB cable is connected, the PC should automatically prompt you to update the driver as long as the software from Step 3 has been installed.



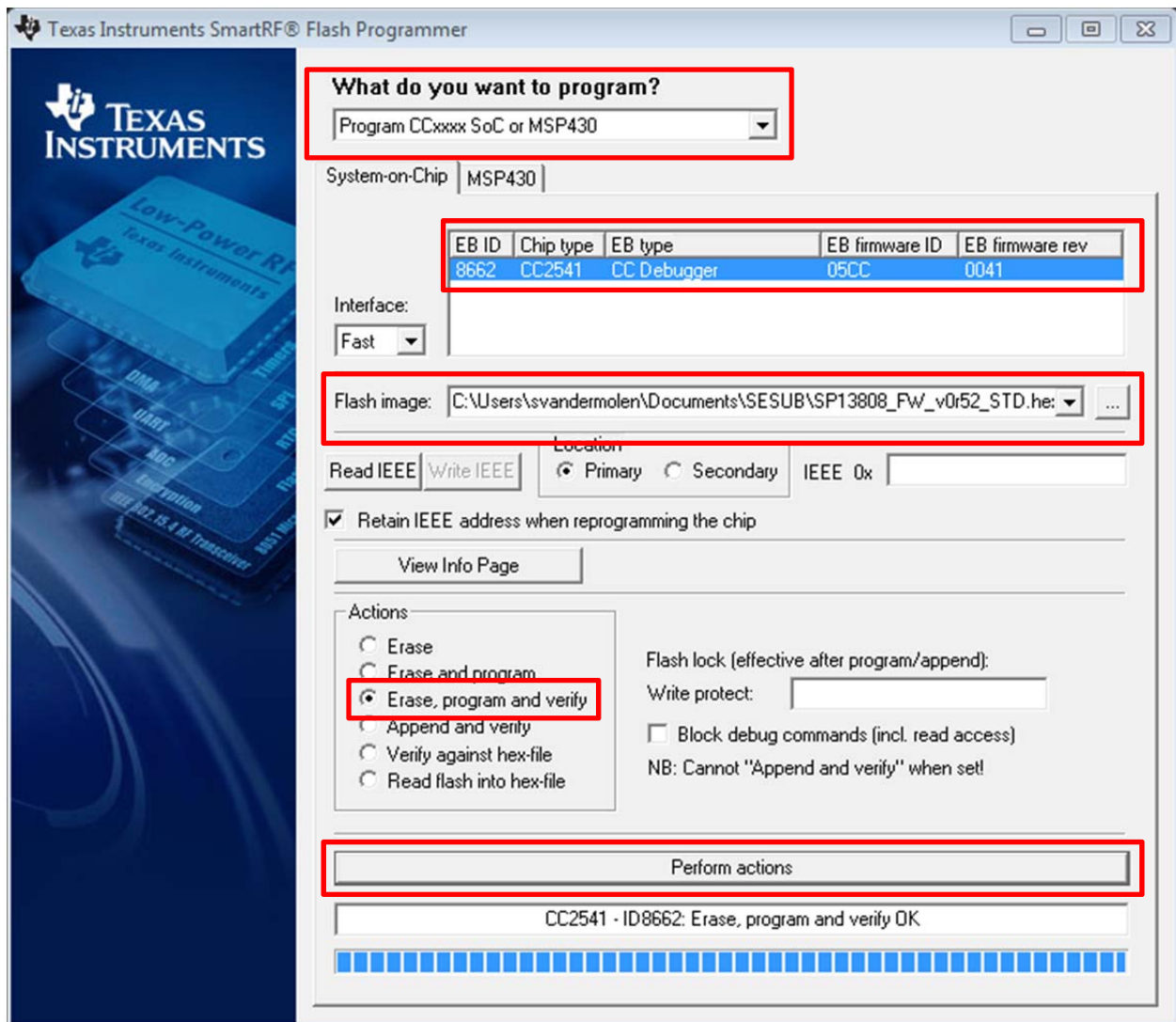
6. Make sure the firmware on the CC-Debugger is up to date. To update the firmware on the CC-Debugger, first remove the SESUB-PAN-T2541 EVK from the CC-Debugger.
 - Select “Program Evaluation Board” from the “What do you want to program?” dropdown list from within the Smart RF Programmer
 - Click the “Update EB Firmware” button
 - Make sure that “Erase, program, and verify” is selected under “Actions”
 - Click the “Perform actions” button



7. Install the latest version of firmware for the SESUB-PAN-T2541 EVK Module.

- Select “Program CCxxxx SoC or MSP430” from the “What do you want to program?” dropdown
- Make sure that the CC-Debugger is highlighted in the System-on-Chip menu
- Select the “SP13808_FW_v0r52_STD.hex” file from the firmware folder on the TDK Products Selection Guide USB drive in the Flash Image section
- Make sure “Erase, program and verify” is selected under the Actions menu and click “Perform Actions”
-

**Note if firmware fails to update, check the hardware connections and repeat installation.*



Note: For additional information or any questions regarding the CC-Debugger, please refer to the TI CC-Debugger User’s Guide: <http://www.ti.com/lit/ug/swru197h/swru197h.pdf>.