

Reprogramming the CC2540 USB Dongle in the CC2540DK

This document will describe how to reprogram the firmware on the CC2540 USB dongle included in the CC2540DK.

Out-of-the-box, the dongle is programmed with packet sniffer firmware in order to work with SmartRF Packet Sniffer for analyzing packets sent over the air. To use the dongle with BTool (like the dongle which is included in the CC2540DK-MINI), the dongle needs to be reprogrammed with a new firmware image.

If you have installed the BLE stack at the default installation directory, the firmware image to use is located here:

```
C:\Texas Instruments\BLE-CC2540-1.1a\Accessories\Hex_Files\cc2540_ble1.1_USBdongle_HostTestRelease_Master.hex
```

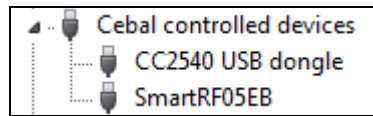
Note that the revision numbers in the path above, 1.1a and 1.1, will change for newer versions of the stack.

The first thing you need to do is to connect the USB dongle to the SmartRF05EB via the small debug cable as shown in the picture below. SmartRF05EB will act as the programmer (debug probe) for programming the CC2540 chip on the dongle.

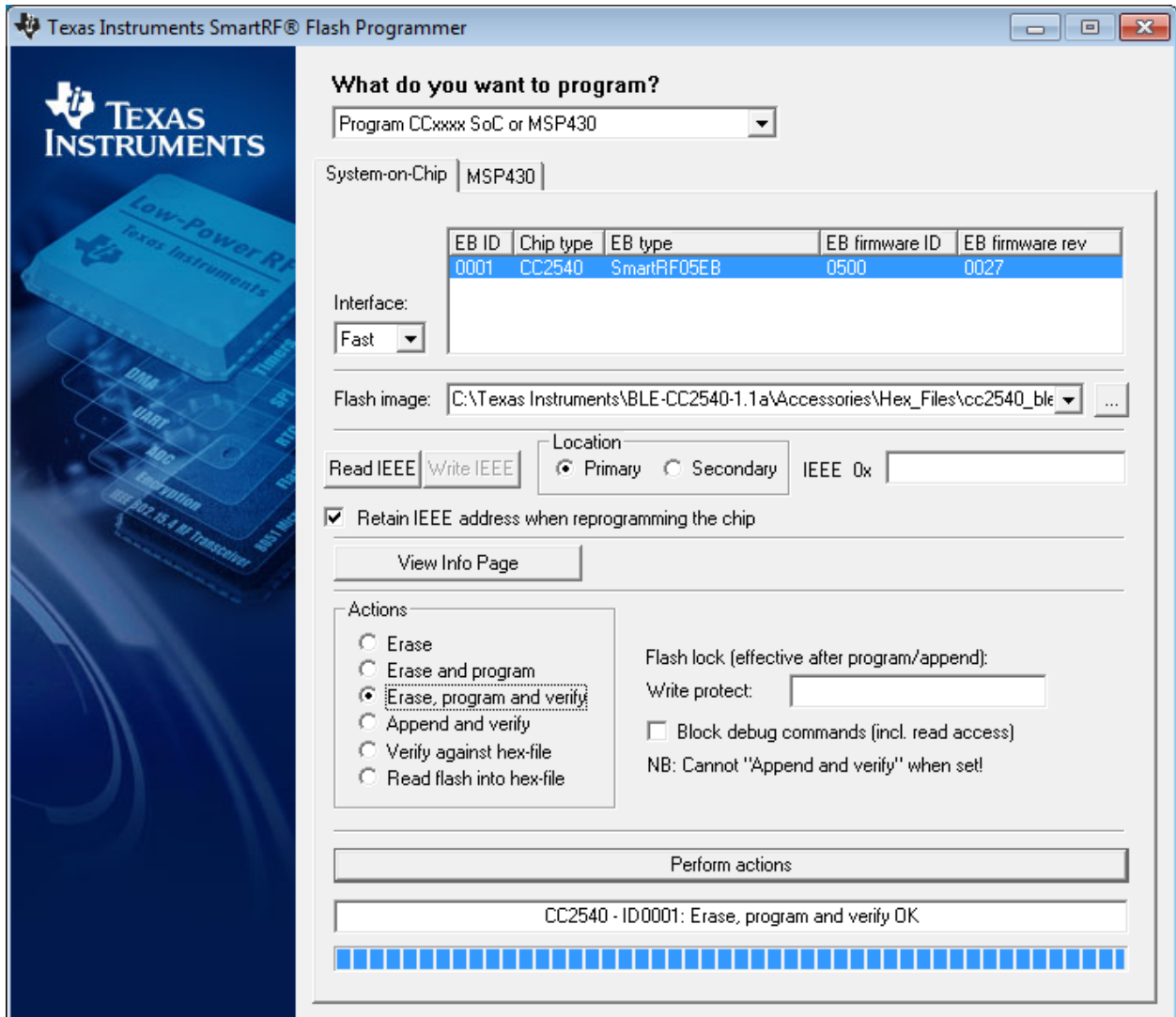


Note the orientation of pin 1 (red wire) on the debug cable and that the dongle is connected to a USB port (required for powering the device).

In Windows Device Manager, the two devices should at this point appear as “Cebal controlled devices”

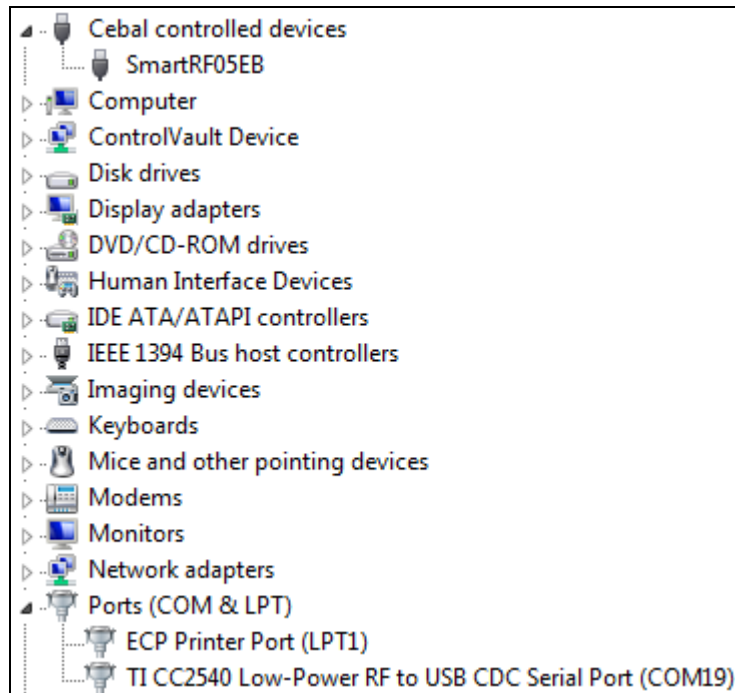


Next, use SmartRF Flash Programmer to program the new image on the dongle. The screenshot below shows the setting you need to use.

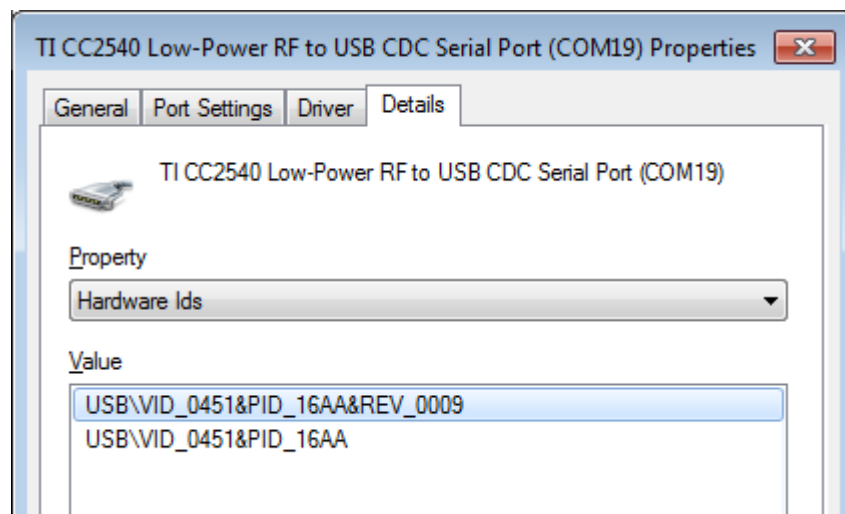


Make sure you select the correct firmware image (*cc2540_ble1.1_USBdongle_HostTestRelease_Master.hex*) and select the “Erase, program and verify” action. Click the “Perform actions” to program the device on the dongle.

If done correctly, the USB dongle should now appear as a CDC Serial Port in Windows Device Manager (see below).



Right click on the device in the device manager window and select Properties. Go to the Details tab and look at the Hardware Ids property. The VID and PID should be the same as shown in the screenshot below.



If, for some reason, the wrong USB device driver is associated with the product, you can either uninstall the device (right click device in device manager and select uninstall – reinstall by reconnecting the device to the PC) or update the driver manually.

The driver (or really the file that informs Windows which driver should be associated with the USB dongle with the above VID and PID) is located here: C:\Texas Instruments\BLE-CC2540-1.1a\Accessories\Drivers\usb_cdc_driver_cc2540.inf