

Simplelink F3 CC2745 OAD Step by Step Guide

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1 Off-Chip



Off-Chip not support in Loki High devices

2 On-Chip

2.1 Prerequisite

- CC2745 device
- Smartphone + SimpleLink Connect Mobile App
- Installed SimpleLink F3 SDK
- Binaries:
 - **basic_persistent*_sb.hex** - can be obtain from compilation of basic_persistent from `<SDK_PATH>/examples/rtos/<CC2745_PN>/ble/basic_persistent`
 - **ble5_basic_ble_oada_onchip_peripheral_v1*_sb.bin** - can be obtain from compilation of basic_ble_oada_onchip from `<SDK_PATH>/examples/rtos/<CC2745_PN>/ble/basic_ble_oada_dual_image` with default configurations
 - **ble5_basic_ble_oada_onchip_peripheral_v2*_sb.bin** - can be obtain from compilation of basic_ble_oada_onchip from `<SDK_PATH>/examples/rtos/<CC2745_PN>/ble/basic_ble_oada_dual_image` with updated version see "Update Version in Application Binary" below.
- UniFlash
- Serial Terminal application

2.2 Step By Step

2.2.1 Program Device with Version 1.0.0

1. Open UniFlash
2. Select required device
3. Click on "Browse" and navigate and select **basic_persistent*_sb.hex** binary
4. Click on "Load Image"

Flash Image(s)

basic_persistent_LP_EM_CC2745R10_Q1_freertos_ticlang_sb.hex

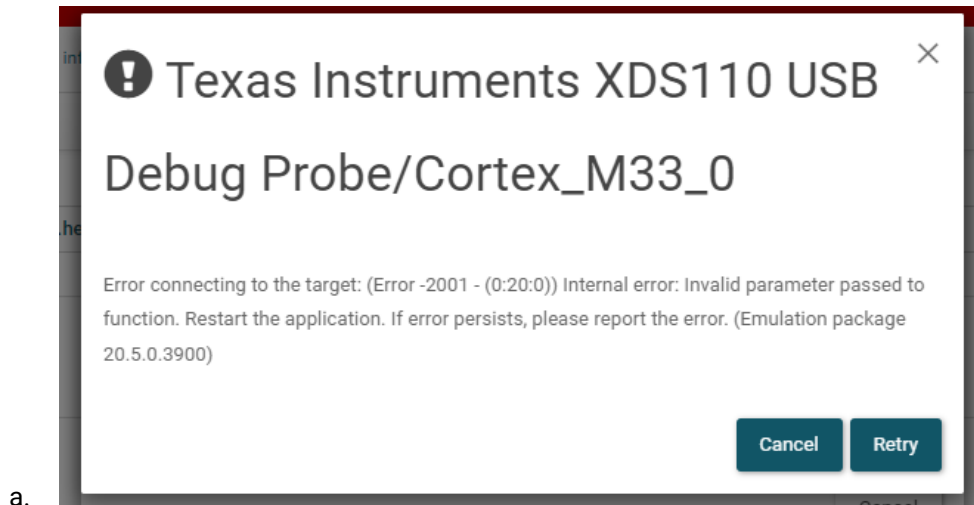


Available Action(s) - 1 Image Selected

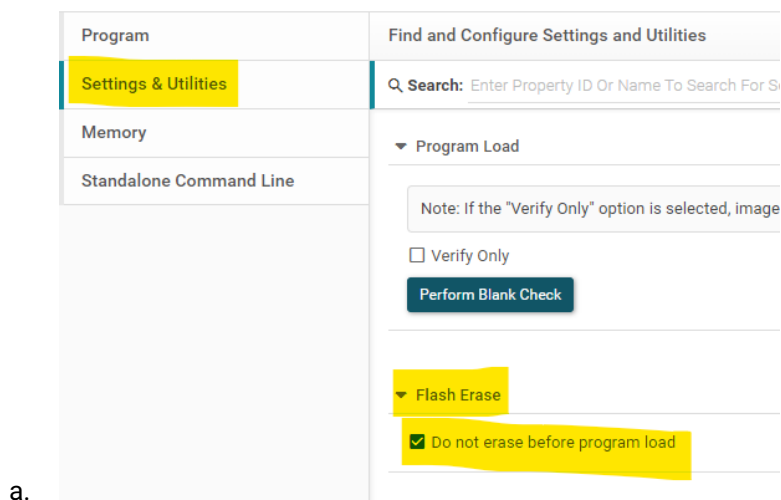
Load Image

a.

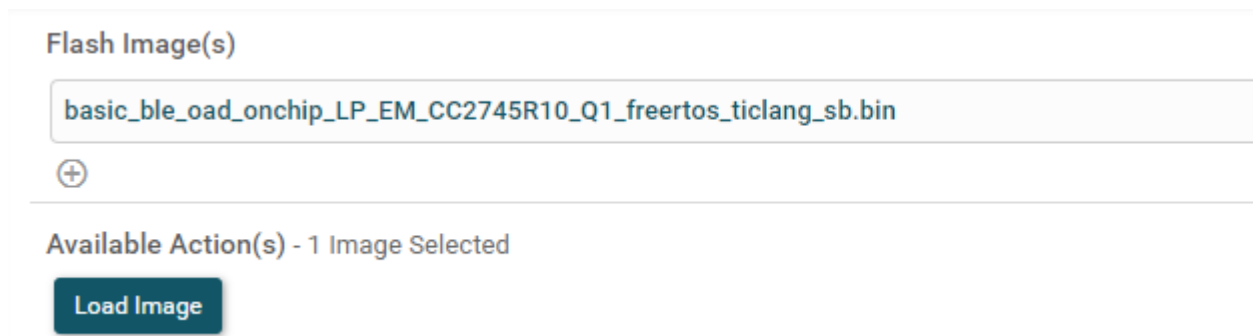
5. **Note** : In the end of programming error message (see below) **might** popup, this is expected click on "Cancel"



6. Reset Device (XDS Reset / Click on reset button on the board)
7. Start new session
8. Select required device
9. On the left side click on "Settings & Utilities"
10. Check "Do not erase before program load" under "Flash Erase"

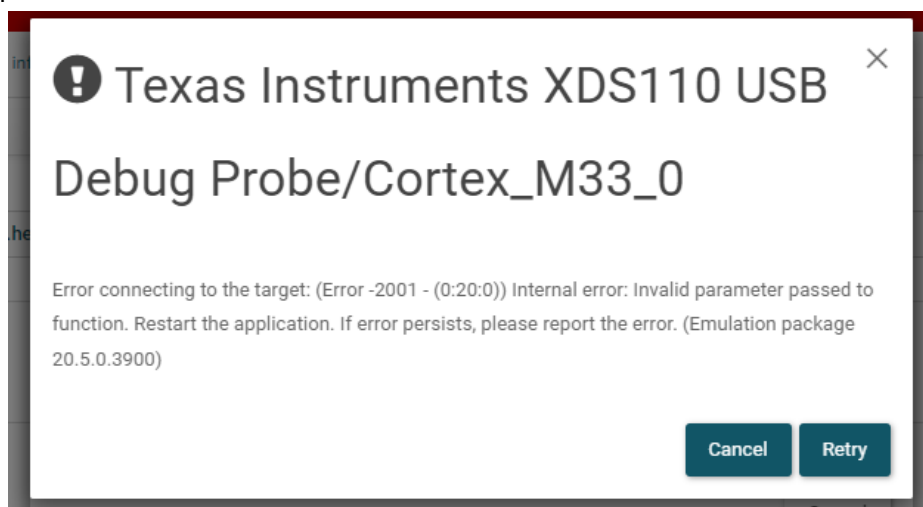


11. On the left side click on "Program"
12. Click on "Browse" and navigate and select **ble5_basic_ble_oad_onchip_peripheral_v1*_sb.bin** binary
13. In the text box near to "**Local Addr:**" type "**0x34000**"
14. Click on "Load Image"



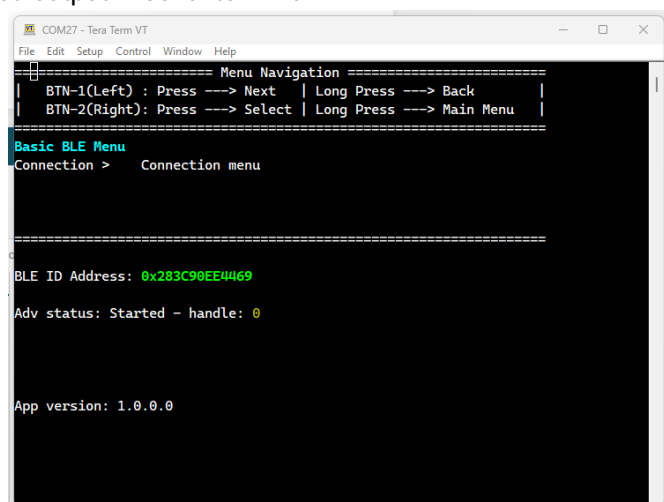
a.

15. **Note** : In the end of programming error message (see below) **might** popup, this is expected click on "Cancel"



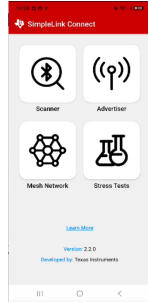
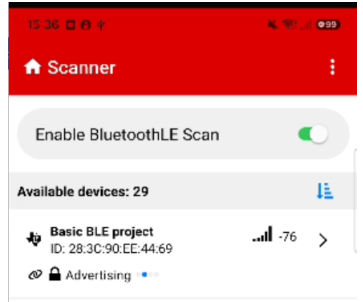
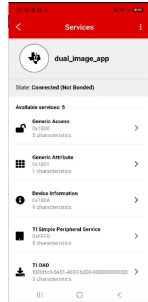
a.

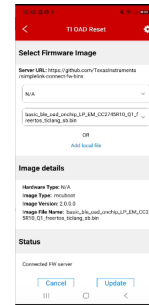
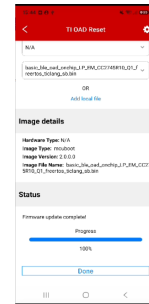
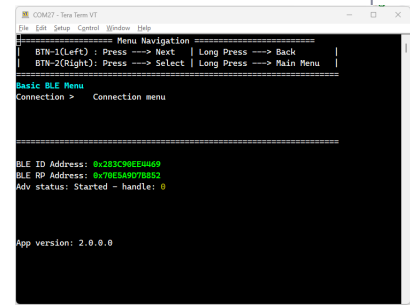
16. Open Serial Terminal to the device
 17. Reset device (XDS Reset / Click on reset button on the board)
 18. Expected output in serial terminal



a.

2.2.2 Preform a OAD Process

Step #	Description	Screenshoot
1	Upload ble5_basic_ble_oad_onchip_peripheral_v2*_sb.bin into smartphone, where you can find it later.	
2	Start " SimpleLink Connect " app and select " Scanner "	
3	Enable BluetoothLE Scan and search for " Basic BLE project "	
4	Click on " Right arrow "	
5	Click in " Right arrow " of " TI OAD Reset "	
6	Click on "Add local file", navigate and select the ble5_basic_ble_oad_onchip_peripheral_v2*_sb.bin	

Step #	Description	Screenshoot
7	Review "Image details"	
8	Click on "Update" button	
9	Wait until process is done	
10	Click on "Update" button	
11	Expected output in serial terminal	

3 Dual Image

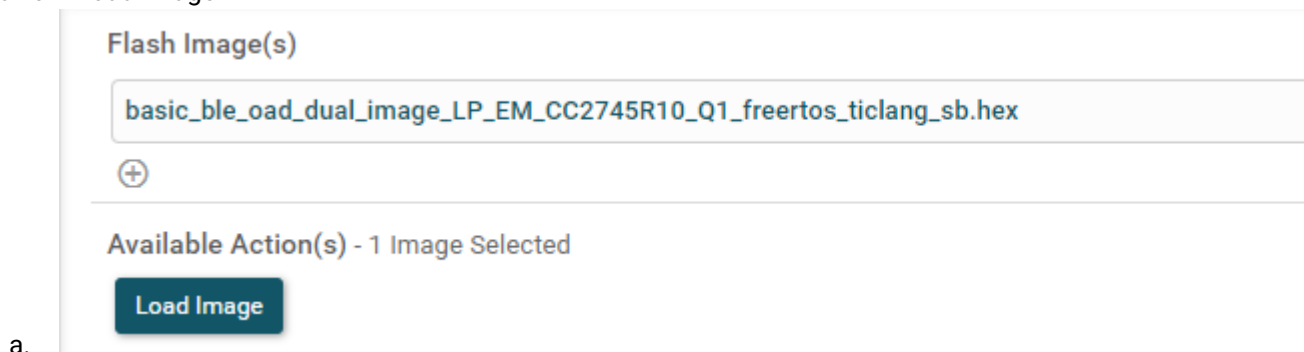
3.1 Prerequisite

- Loki high device
- Smartphone + SimpleLink Connect Mobile App
- Installed SimpleLink F3 SDK
- Binaries:
 - **ble5_basic_ble_oad_dual_image_peripheral_v1*_sb.hex** - can be obtain from compilation of basic_ble_oad_onchip from <SDK_PATH>/examples/rtos/<CC2745_PN>/ble/basic_ble_oad_onchip, default configurations
 - **ble5_basic_ble_oad_dual_image_peripheral_v2*_sb.bin** - can be obtain from compilation of basic_ble_oad_onchip from <SDK_PATH>/examples/rtos/<CC2745_PN>/ble/basic_ble_oad_onchip, updated version see "Update Version in Application Binary" below.
- UniFlash
- Serial Terminal application

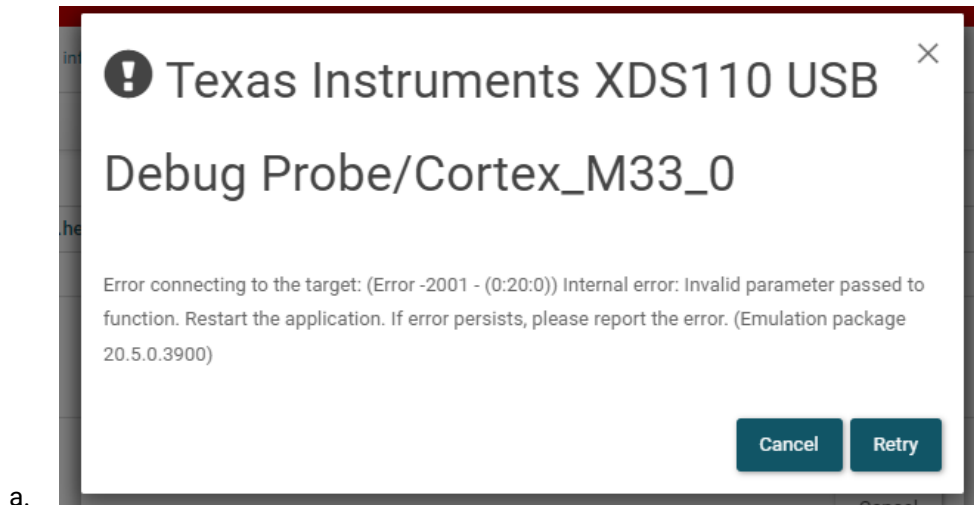
3.2 Step By Step

3.2.1 Program Device with Version 1.0.0

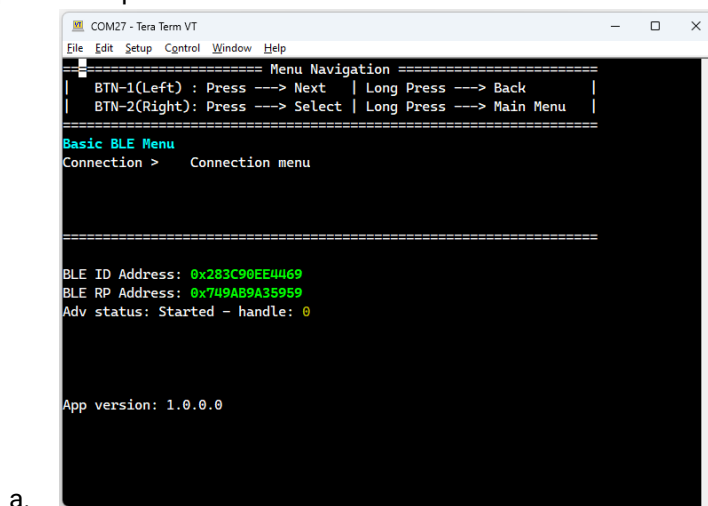
1. Open UniFlash
2. Select required device
3. Click on "Browse" and navigate and select **ble5_basic_ble_oad_dual_image_peripheral_v1*_sb.hex** binary
4. Click on "Load Image"



5. **Note** : In the end of programming error message (see below) **might** popup, this is expected click on "Cancel"

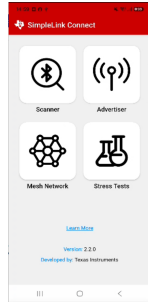
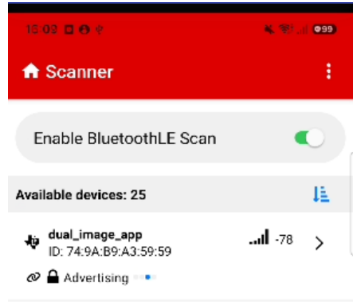
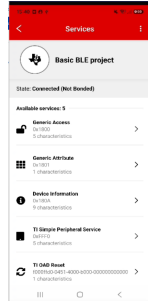


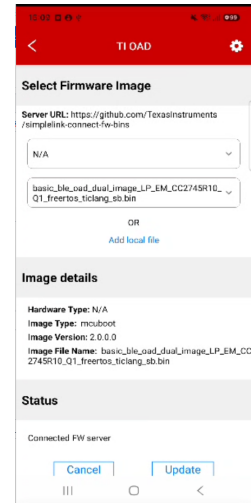
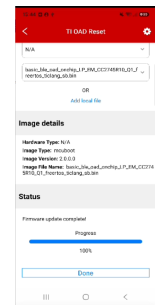
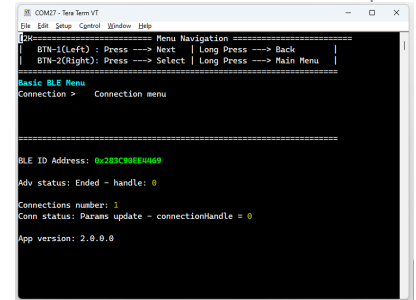
6. Open Serial Terminal to the device
7. Reset Device (XDS Reset / Click on reset button on the board)
8. Expected output in serial terminal



3.2.2 Preform a OAD Process

Step #	Description	Screenshot
1	Upload ble5_basic_ble_oad_dual_image_peripheral_v2_*_sb.bin into smartphone, where you can find it later.	

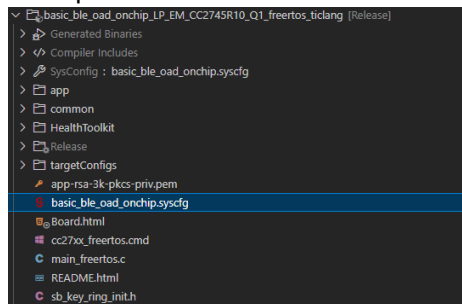
Step #	Description	Screenshoot
2	Start " SimpleLink Connect " app and select " Scanner "	 The screenshot shows the SimpleLink Connect app interface. It has a red header with the app name. Below the header are four icons: a Bluetooth symbol for 'Scanner', a signal tower for 'Advertiser', a network diagram for 'Mesh Network', and a flask for 'Stress Tests'. At the bottom, it says 'Version 2.0.0' and 'Developed by Texas Instruments'.
3	Enable BluetoothLE Scan and search for " dual_image_app "	 The screenshot shows the 'Scanner' screen of the app. It has a red header with a home icon and the word 'Scanner'. Below the header is a toggle switch for 'Enable BluetoothLE Scan' which is turned on. Underneath, it says 'Available devices: 25'. A list of devices is shown, with 'dual_image_app' at the top, having ID '74:9A:B9:A3:59:59' and a signal strength of -78. It also indicates 'Advertising'.
4	Click on " Right arrow "	
5	Click in " Right arrow " of " TI OAD "	 The screenshot shows the 'Services' screen of the app. It has a red header with a back arrow and the word 'Services'. Below the header is a section for 'Basic BLE project' with a status of 'Connected (Not Bonded)'. Underneath, there are several services listed: 'Remote Access', 'Generic Attribute', 'Battery Information', 'TI Simple Peripheral Service', and 'TI OAD Request'. Each service has a right arrow next to it.
6	Click on "Add local file", navigate and select the ble5_basic_ble_oad_dual_image_peripheral_v2*_sb.bin	

Step #	Description	Screenshoot
7	Review "Image details"	
8	Click on "Update" button	
9	Wait until process is done	
10	Click on "Update" button	
11	Expected output in serial terminal	

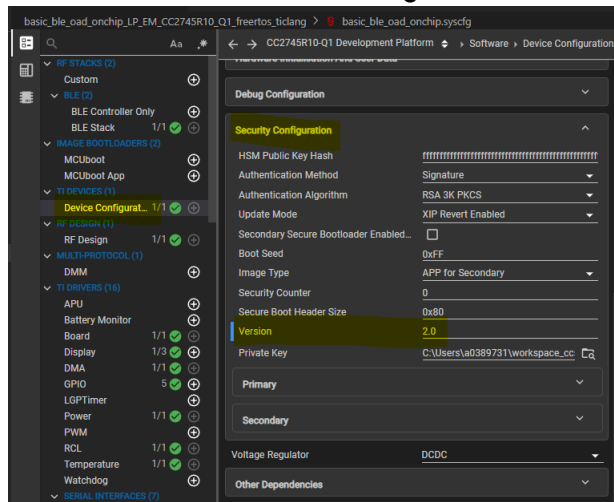
4 Appendix

4.1 Update Version in Application Binary

1. Import example in CCS
2. Expand example



3. Double click on example syscfg file, SysConfig UI should opened.
4. Update "**Version**" to "**2.0**" in "**Device Configuration**" → "**Security Configuration**" (See image below)



5. Save and Re-Build