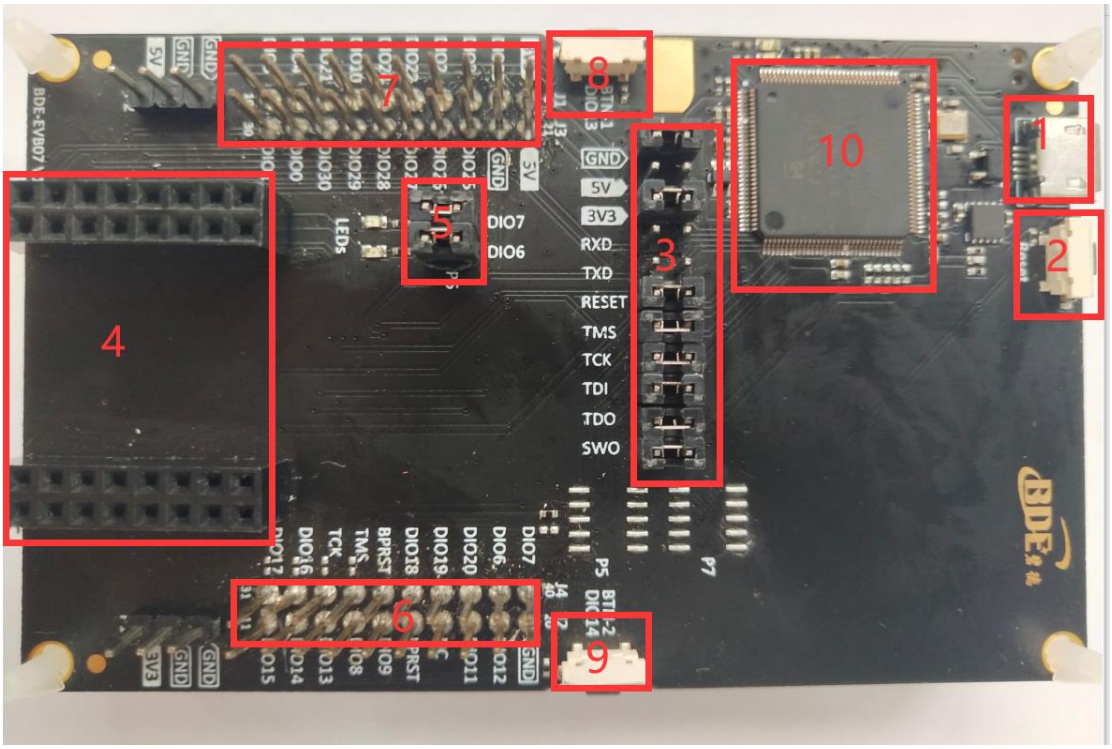
BDE-EVB07 User Manual

1. Description

EVB07 is an evaluation board designed for various BDE modules which use TI CC26xx and CC13xx chips. It is basically the same as TI launch pad, except EVB07 provides a socket (item 4 in the following picture) for BDE modules to plug in.



① Micro USB connector
② Reset button
③ Jumpers, to connect or disconnect the module from debug port or UART
④ Connect with module
⑤ Two LEDs, connect with GPIO DIO6 and DIO7
⑥ 2.54 mm pins, module pins out
⑦ 2.54 mm pins, module pins out
⑧ Button 1, connect with GPIO DIO13
⑨ Button 2, connect with GPIO DIO14
⑩ XDS110 chip, for programming and debug, also providing USB to UART

2. Modules supported

- BDE-BLEM203P/ BDE-BLEM203D (CC2640R2F chip)
- BDE-RFM204/BDE-RFM204A/BDE-RFM214/BDE-RFM214A (CC1310 chip)
- BDE-BLEM205/BDE-BLEM215/ BDE-BLEM205-IN (CC2642R chip)
- BDE-RFM206/BDE-RFM216 /BDE-RFM216 -IN(CC1312R chip)
- BDE-RFM207/ BDE-RFM207-IN / BDE-RFM207P/BDE-RFM217 (CC2652R chip)
- BDE-RFM207B (CC2652RB chip)
- BDE-RFM208/ BDE-RFM208-IN (CC1352R chip)
- BDE-RFM208P (CC1352P chip)

3. Steps

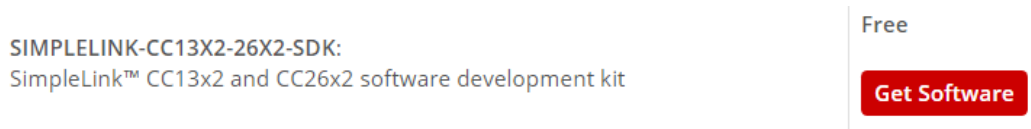
(1) IDE, SDK and tools download

Customers can download all the tools and SDK from TI website.

SDK download link:

- BDE-BLEM203P/ BDE-BLEM203D (CC2640R2F chip)
  https://www.ti.com/tool/SIMPLELINK-CC2640R2-SDK
- BDE-RFM204/BDE-RFM204A/BDE-RFM214/BDE-RFM214A (CC1310 chip)
  https://www.ti.com/tool/SIMPLELINK-CC13X0-SDK
- BDE-BLEM205/BDE-BLEM215 (CC2642R chip)
  https://www.ti.com/tool/SIMPLELINK-CC13X2-26X2-SDK
- BDE-RFM206/BDE-RFM216 (CC1312R chip)
  https://www.ti.com/tool/SIMPLELINK-CC13X2-26X2-SDK
- BDE-RFM207/BDE-RFM217 (CC2652R chip)
  https://www.ti.com/tool/SIMPLELINK-CC13X2-26X2-SDK
- BDE-RFM208 (CC1352R chip)
  https://www.ti.com/tool/SIMPLELINK-CC13X2-26X2-SDK
- BDE-RFM208P (CC1352P chip)
  https://www.ti.com/tool/SIMPLELINK-CC13X2-26X2-SDK

Click “Get Software” to download the SDK.



IDE download link:

http://www.ti.com/tool/CCSTUDIO

Flash Programmer2download link: (For programming the firmware)

http://www.ti.com/tool/FLASH-PROGRAMMER?keyMatch=FLASH%20PROGRAMMER&tisearch=Search-EN-everything&usecase=part-number

SmartRF Studio download link: (For measuring RF parameters)

http://www.ti.com/tool/download/SMARTRFTM-STUDIO/

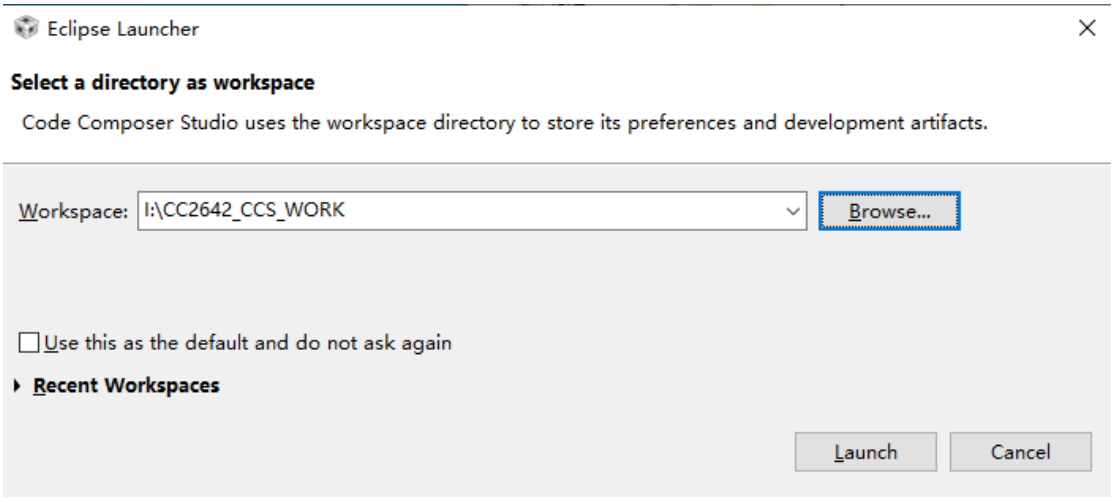
(2) Installation

Install the SDK (use default paths) and tools

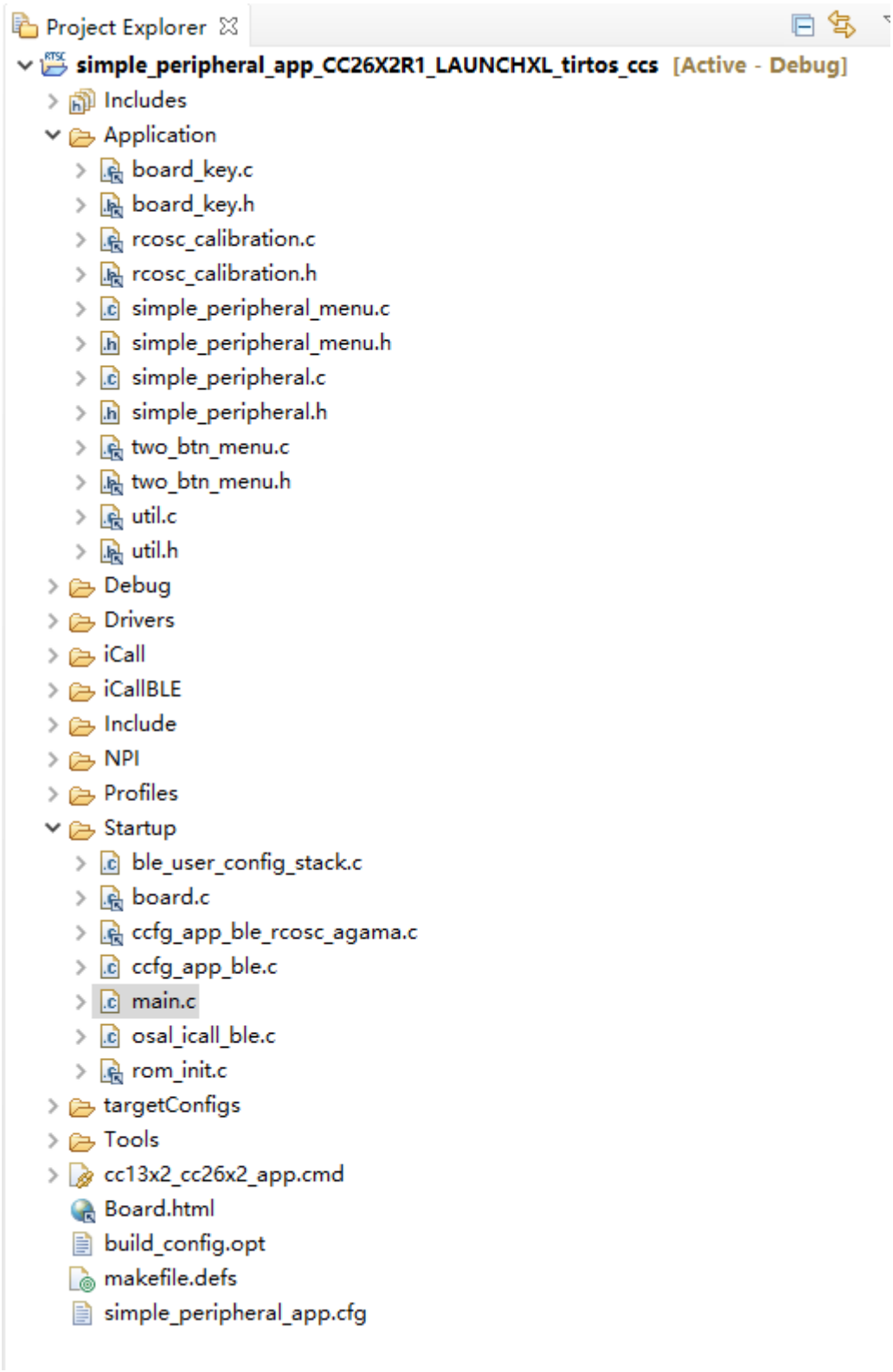
(3) Build project, program and execute

Following we demonstrate the steps on CC2642R chip, the example project is "simple_peripheral" .

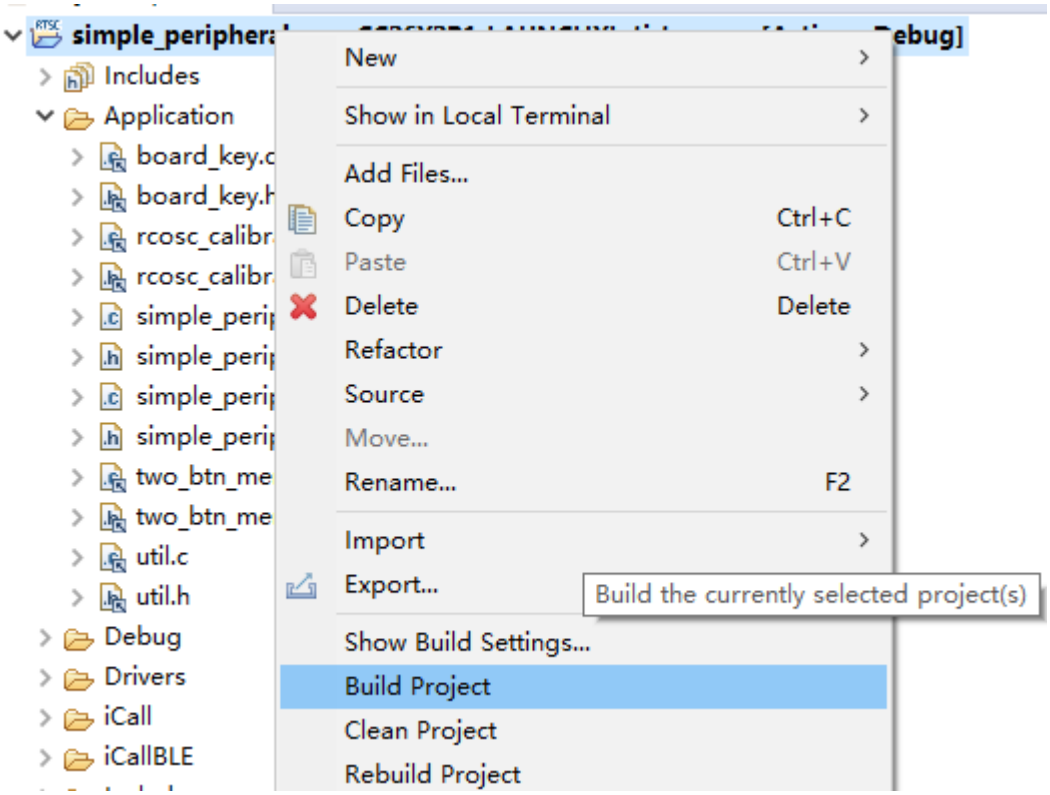
- Open CCS, select workspace path as below:



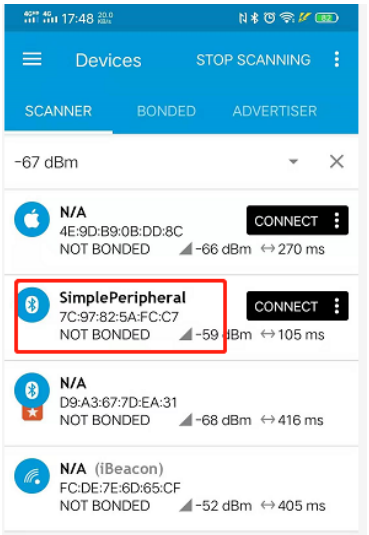
- Click Project->Import CCS Projects…, select the project path of "simple_peripheral" as below:
  C:\ti\simplelink_cc13x2_26x2_sdk_3_20_00_68\examples\rtos\CC26X2R1_LAUNCHXL\ble5stack\simple_peripheral\tirtos\ccs
- Click "Finish" and then the project is imported to the CCS as follow:



- Right click the project and click “Build Project” as follow:



- After build, plug the BLEM205 to the EVB07 and connect the EVB07 to PC through Micro USB, click  icon from CCS, the CCS will download the firmware to the module and enter to debug mode.
- Click  icon from CCS, the program will execute, and BLEM205 will start advertising, you can use any third party APP (NRF Connect) to scan the device as follow:



(4) Program the firmware using Flash Programmer 2

After finishing the firmware, customer can program the firmware to the module using Flash Programmer 2.

- Open “Flash Programmer 2”, the programmer will auto detect the chip as follow:

- Browser and select the firmware Step (3) made.
  The path is as follow in this demonstration.
  I:\CC2642_CCS_WORK\simple_peripheral_app_CC26X2R1_LAUNCHXL_tirtos_ccs\Debug\ simple_peripheral_app_CC26X2R1_LAUNCHXL_tirtos_ccs.hex
  Check “Erase” and “Prgram”:

  Click  icon and start programming.

4. Revision History

Revision	Date	Description
V1.1	29-Aug-2019	Editorial Correction
V1.2	14-Apr-2021	Replaced template

5. Other documents and tools

You can check more documents at below paths:
C:\ti\simplelink_cc13x2_26x2_sdk_3_20_00_68\docs

For example, you can find the ble5 stack documents of CC2642R from below paths:
C:\ti\simplelink_cc13x2_26x2_sdk_3_20_00_68\docs\ble5stack\ble_user_guide

For more tools and information, customer can go to TI website and search the chip that the module is using.
For more information of help please send email to info@bdecomm.com

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