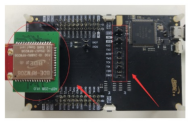
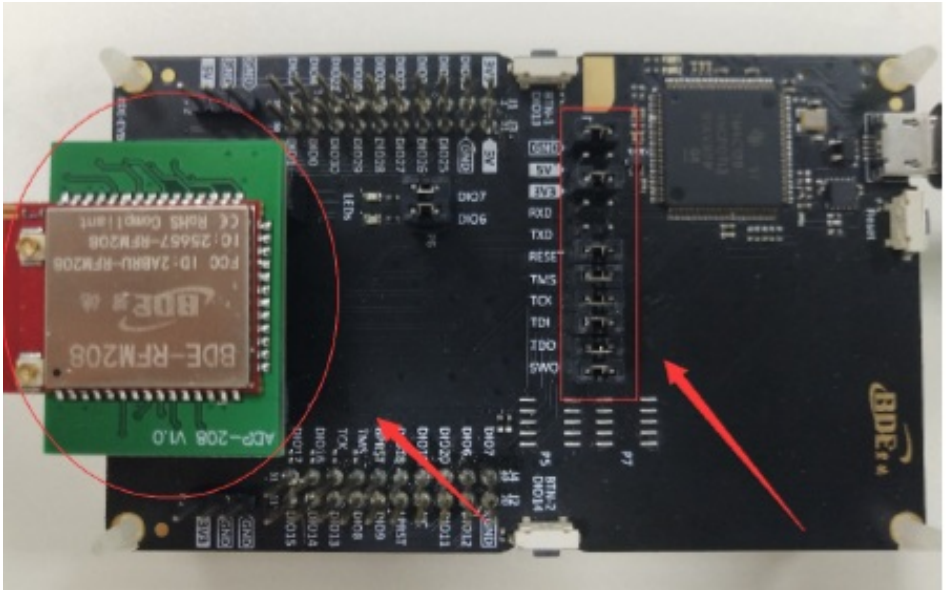


BDE Technology BDE-RFM208 Multi-Band Wireless Module User Guide

Contents

BDE Technology BDE-RFM208 Multi-Band Wireless Module



Introduction
This user guide is for BDE-RFM208, a Wireless Module based on TI CC1352R. It is a quick start guide for how to connect the module with the evaluation board BDE-EVB07 or with the TI launchpad, and how to build the first application. It also shows a demo for how BDE-RFM208 receives a data packet that is sent from another BDE-RFM208.

Get Ready

The following tools are recommended to develop with BDE-RFM208.
Hardware tools:

- Two modules of BDE-RFM208(BDE-RFM208-BDE Technology Inc. (bdecomm.com))
- Two BDE-ADP208 V1.0 (adaptor board)
- PC or Laptop
- Two BDE-EVB07 (BDE-EVB07-BDE Technology Inc. (bdecomm.com))

  or
- Two TI Launchpad (LAUNCHXL-CC13X2R1 Evaluation board | TI.com)
- USB cable for power supply and debugging

Software tools:

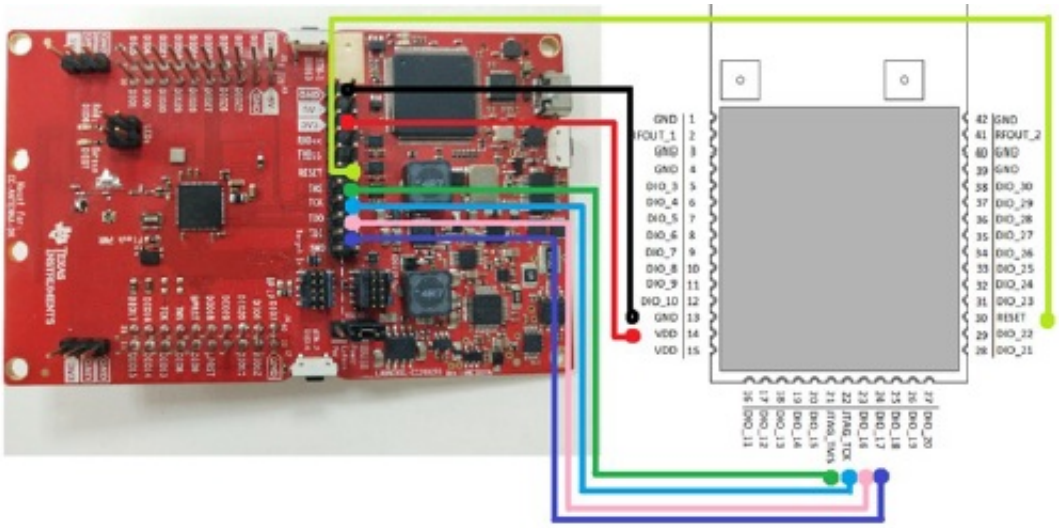
- Terminal software such as CCS, IAR.
- CCS download
- Software Development Kit (SDK)

Build Your First Application
Once have the Hardware and Software tools in place, please following the following steps:

A. Connect the Hardware
If chose EVB07:
Use USB cable to connect EVB07 and PC or laptop. Plug BDE-RFM208 with the adaptor board into the dev board and connect all the pins with Jumpers as the following picture shows.

If chose TI Launchpad:

The connection is as following.



Connection Designator	BDE-RFM208	LaunchPad Pin
3V3 Power	VDD	3V3
Ground	GND	GND
RST	RST	RESET
TMS	TMS	TMS
TCK	TCK	TCK
TDO	DIO16	TDO
TDI	DIO17	TDI

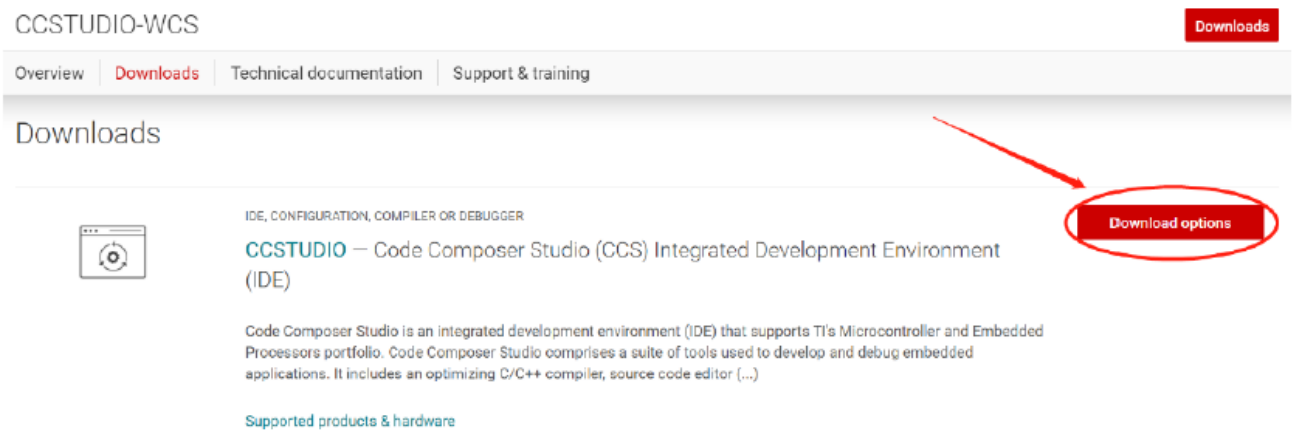
Optional: TDO TDI RXD TXD

B. Build the Application

- **Download and install the CCS and SDK**

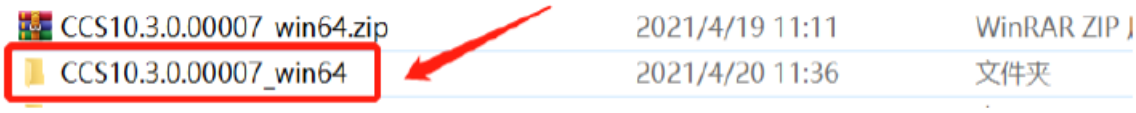
  From the above links, follow the instructions in the following steps to download and install the CCS and SDK.
- **CCS Installation**

1. Click on this option



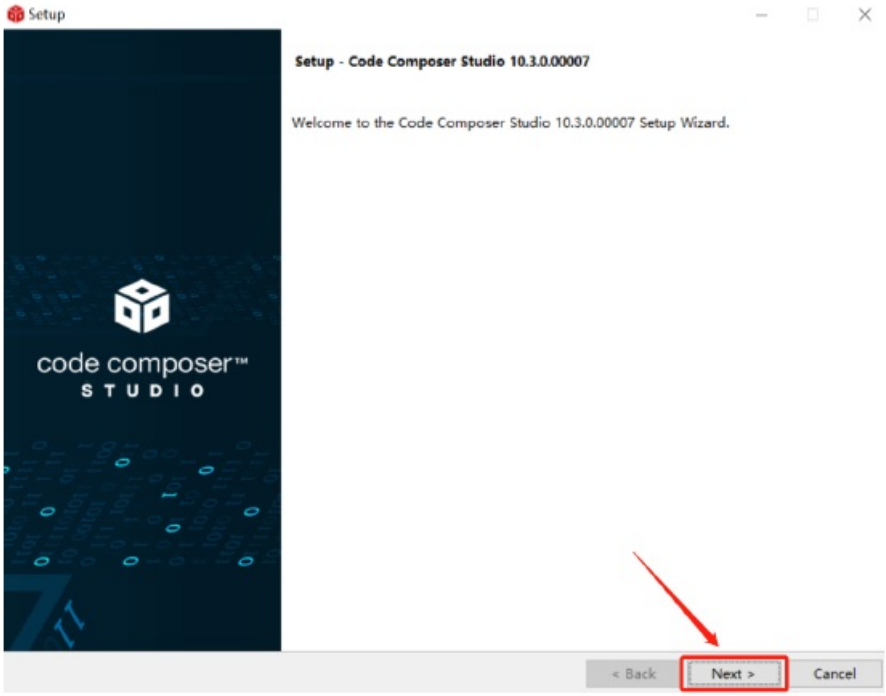
2. Select an option to download CCS

3. Unzip the package to a local disc



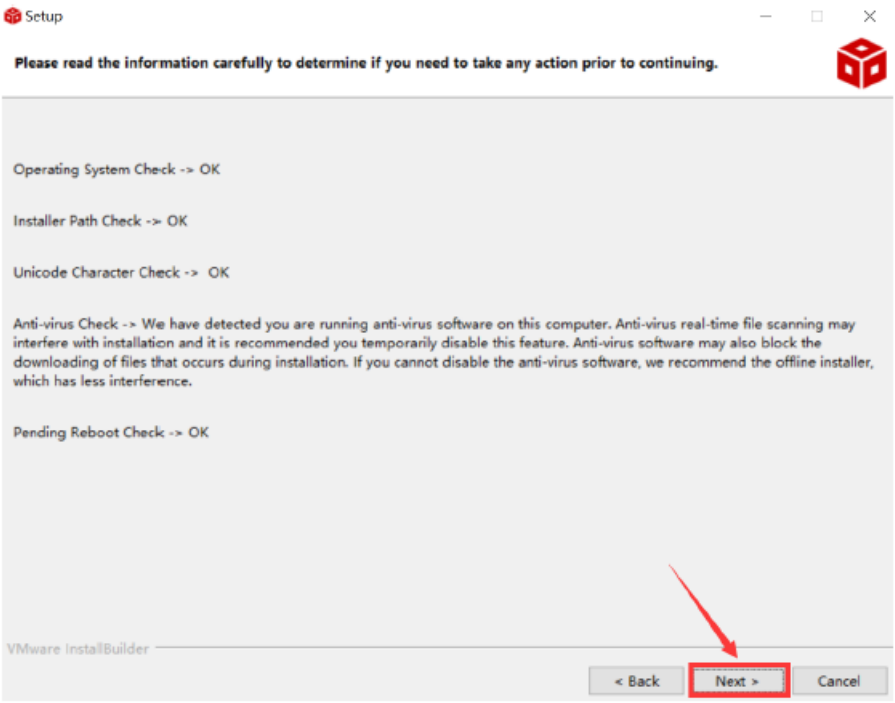
4. Click the setup of CCS

5. Click “Next”

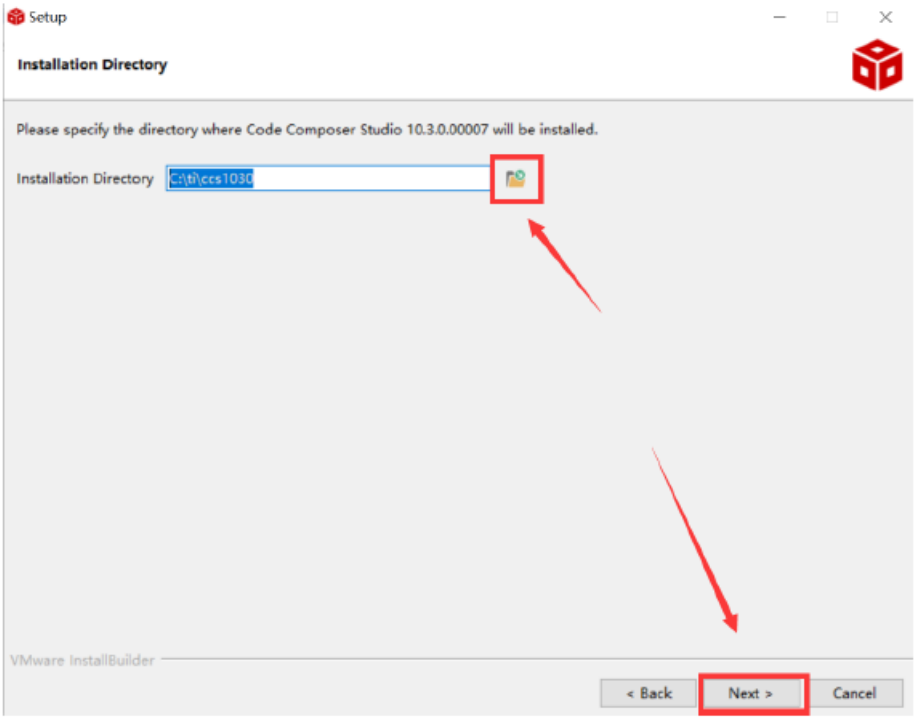


6. Select the default option

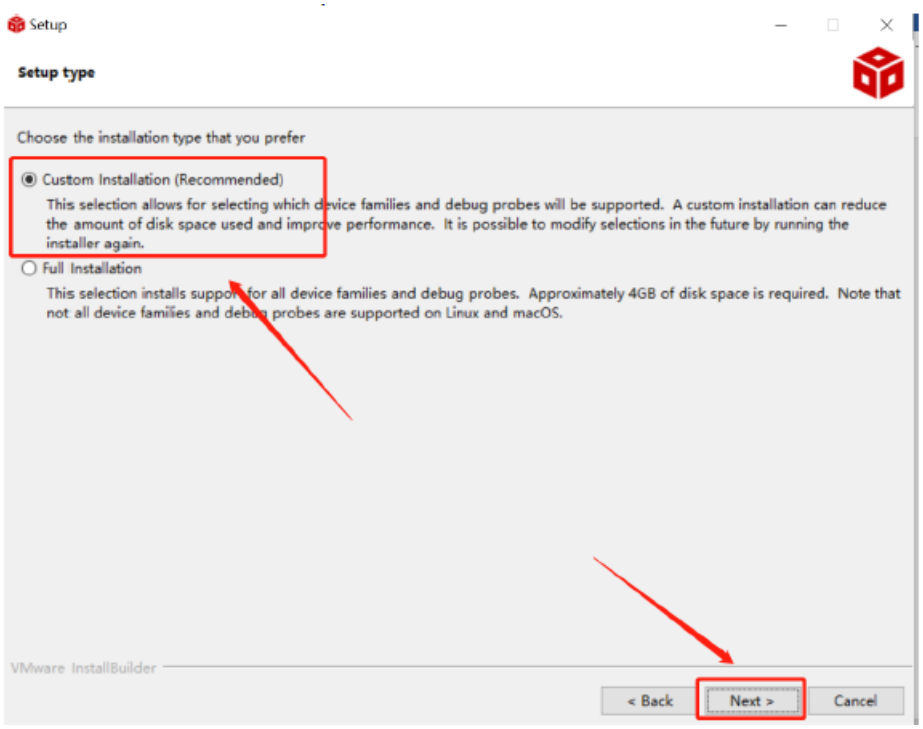
7. Click “Next”



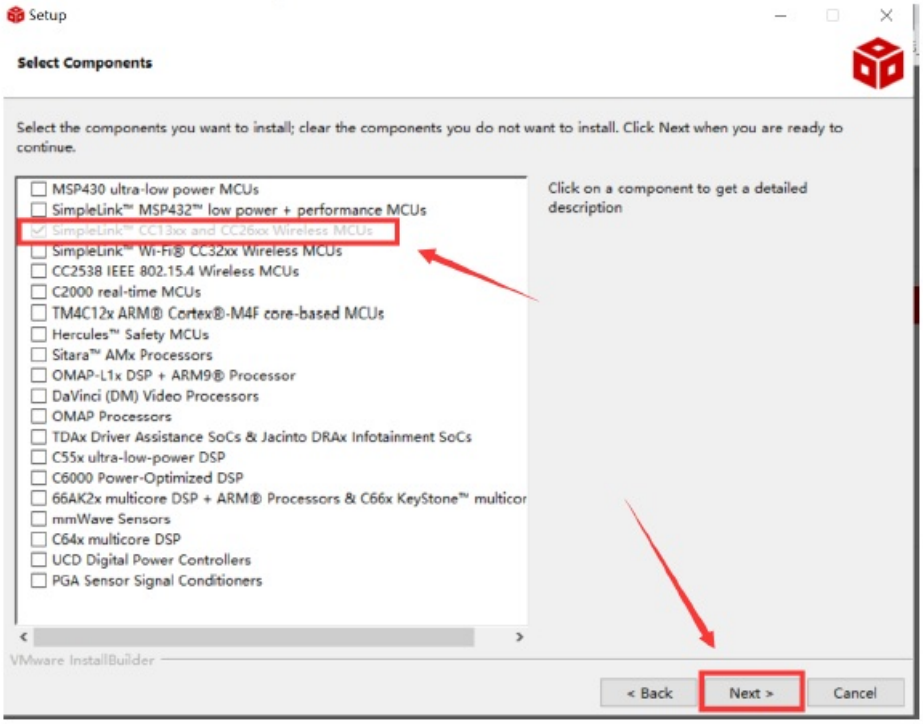
8. Select the Installation Directory



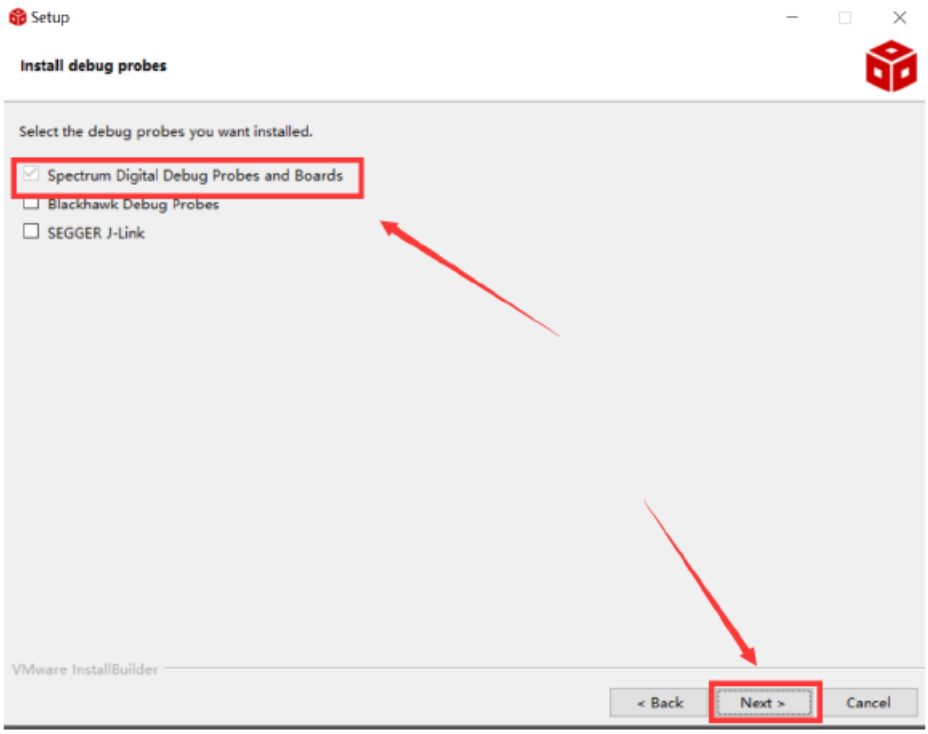
9. Select the default option



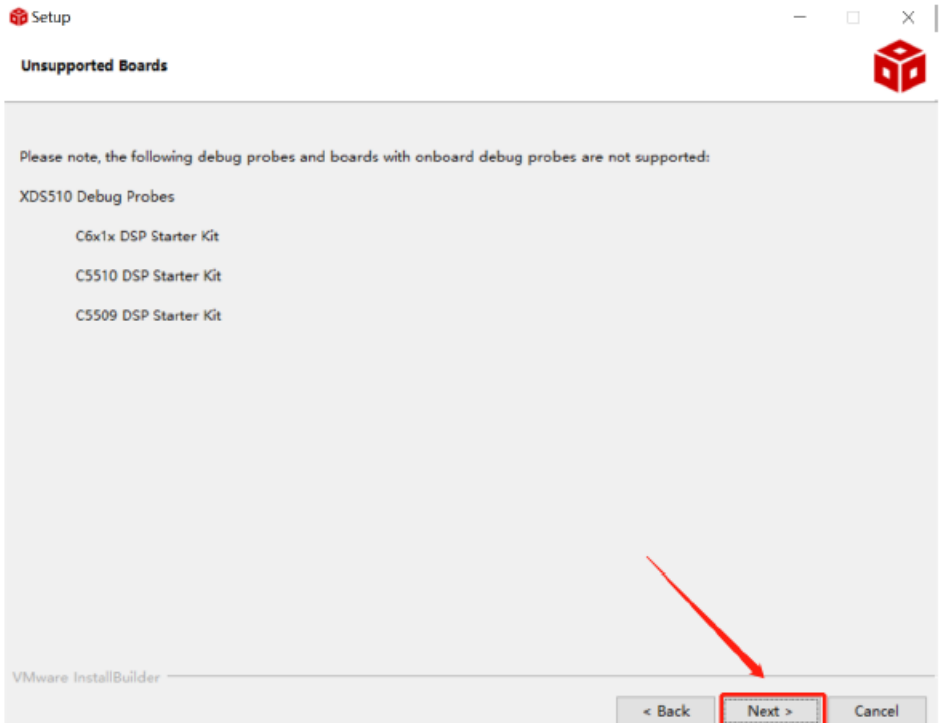
10. Select the component



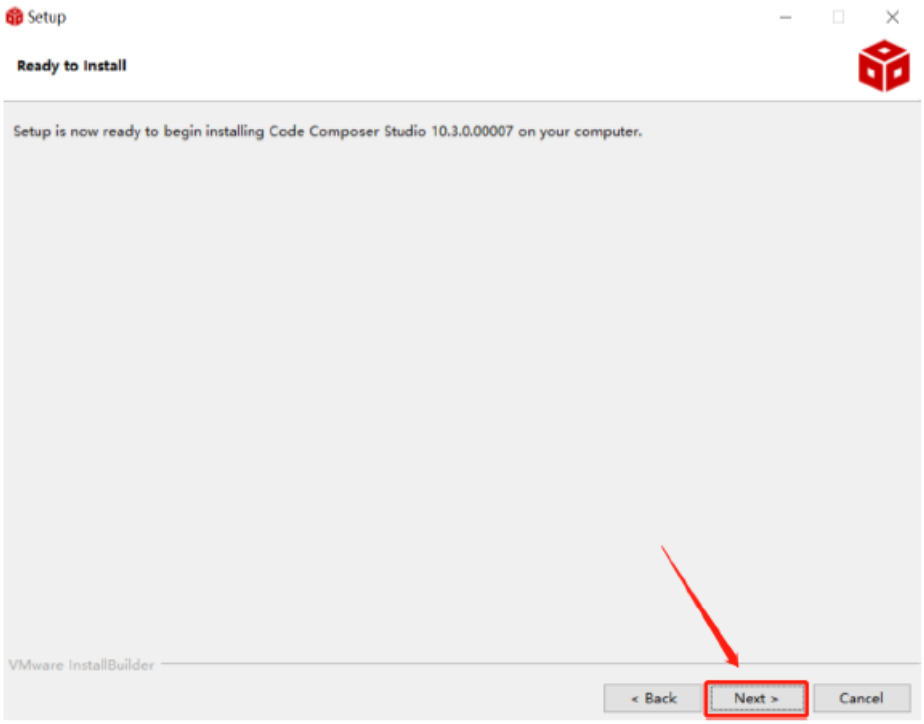
11. Select the default option



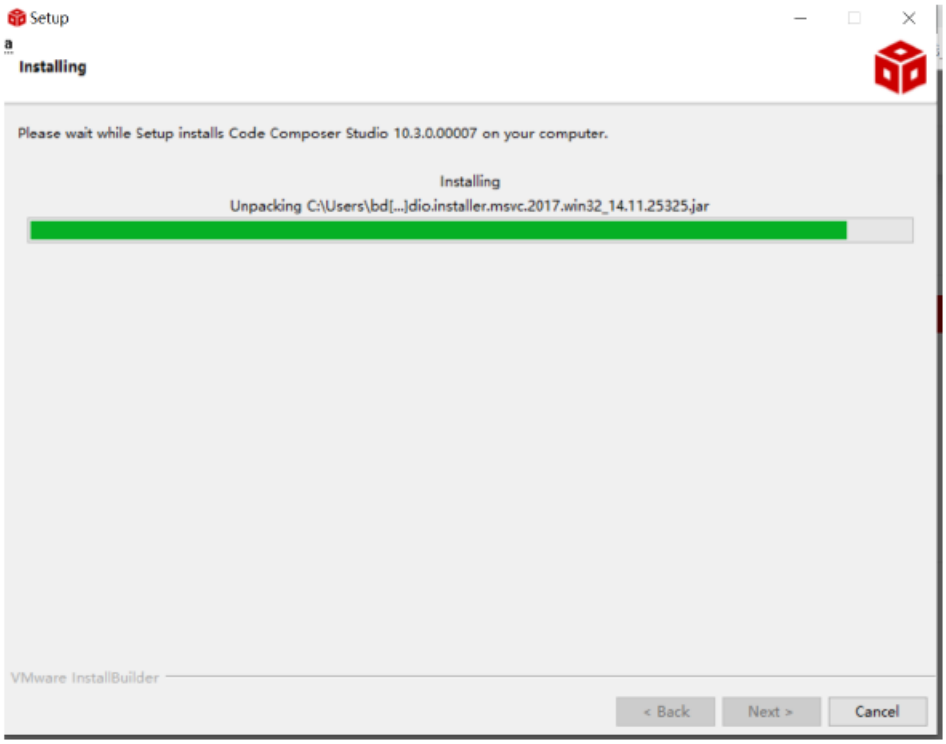
12. Click “Next”



13. Click “Next”



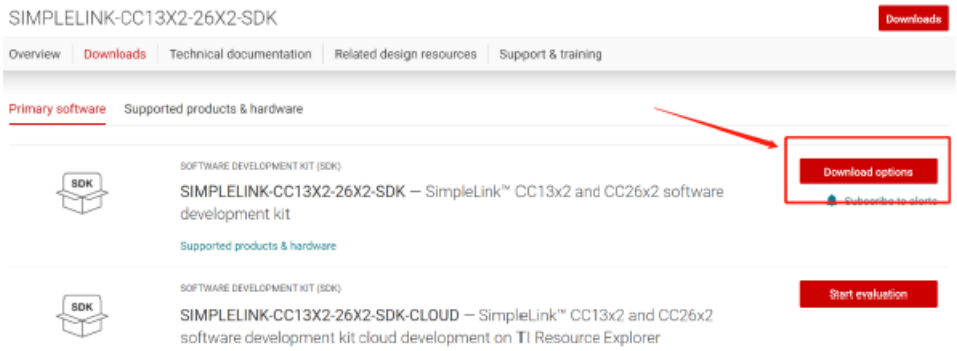
14. Waiting for installation to complete



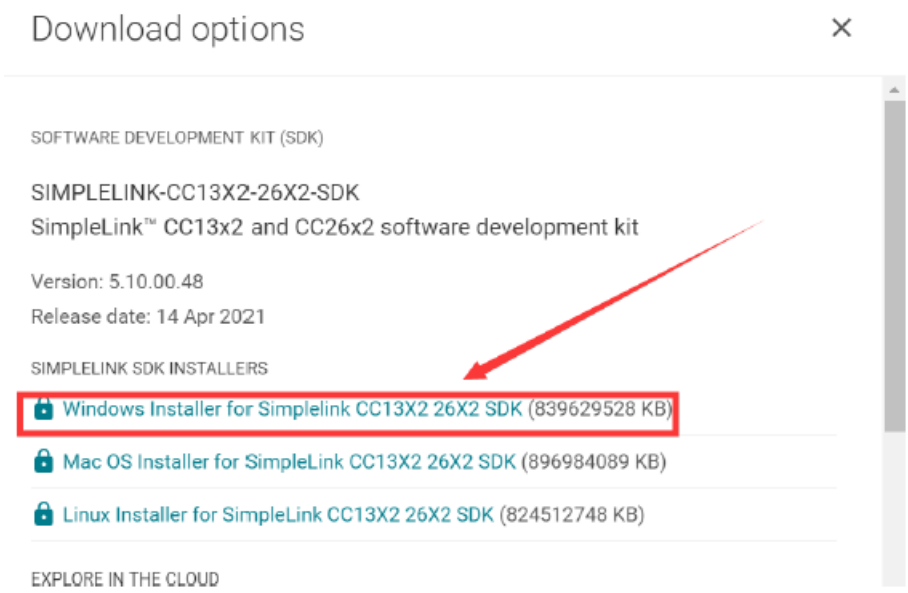
Software Development Kit (SDK) installation

1. Click on this option

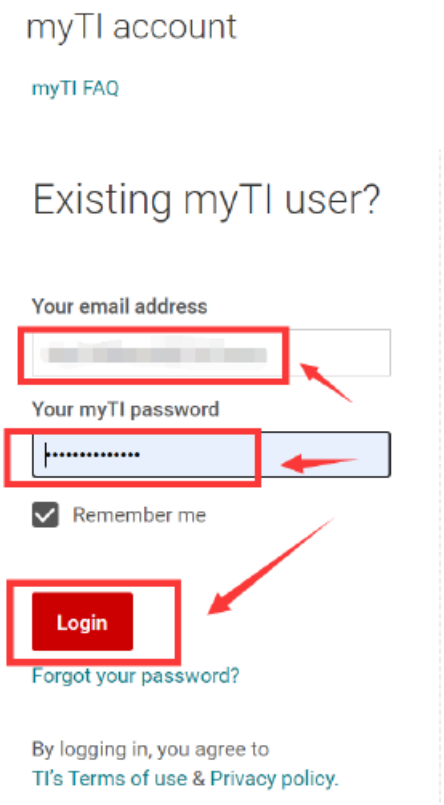
1. Click on this option



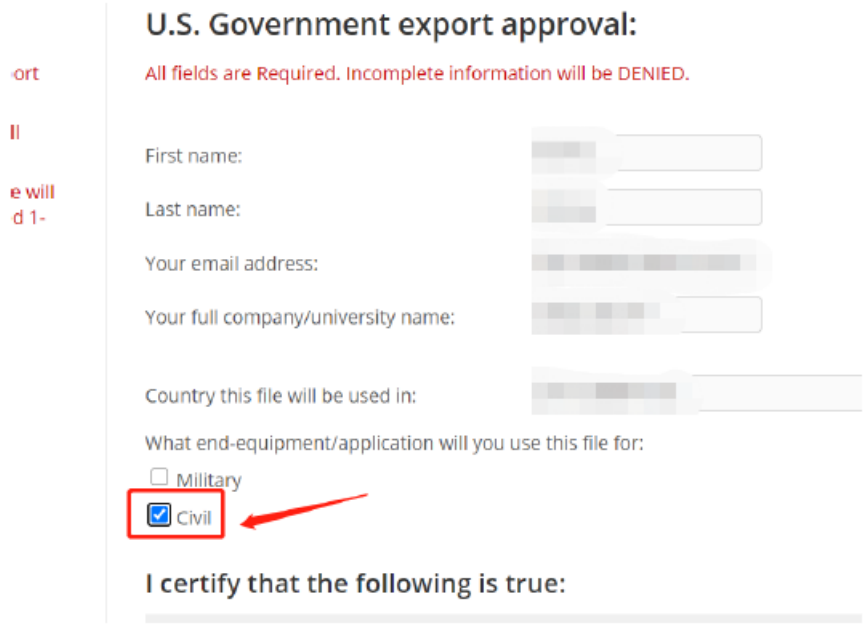
2. Select an option you need to download SDK



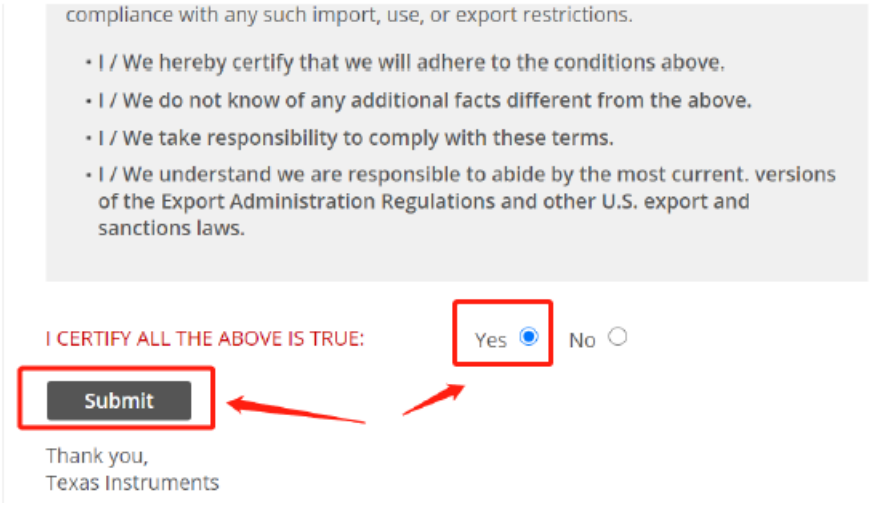
3. Log in to your TI account, if you are a new user, register a TI account first



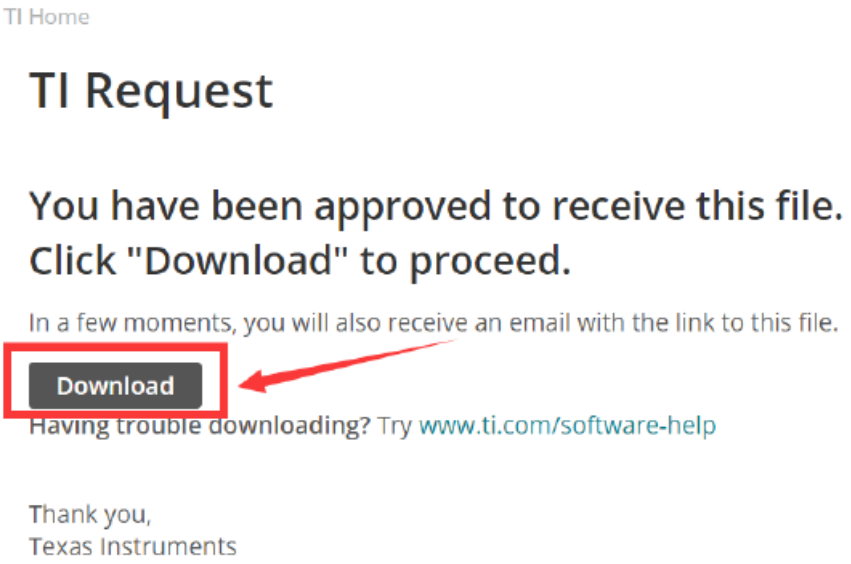
4. Select “civil” if your application is for civil use



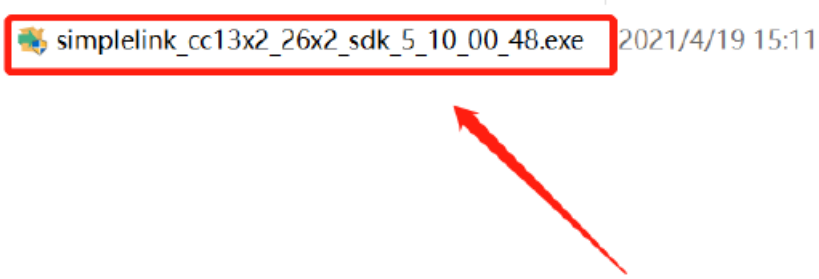
5. Select “Yes” and submit



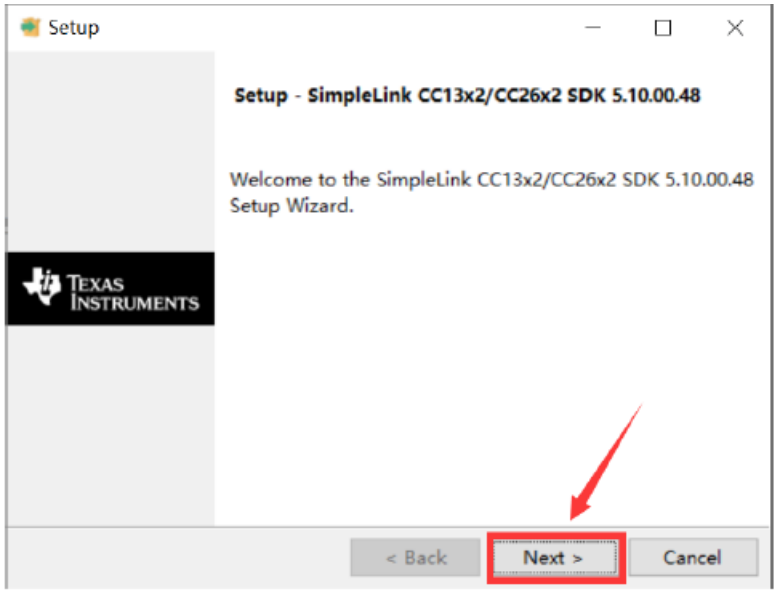
6. Download SDK



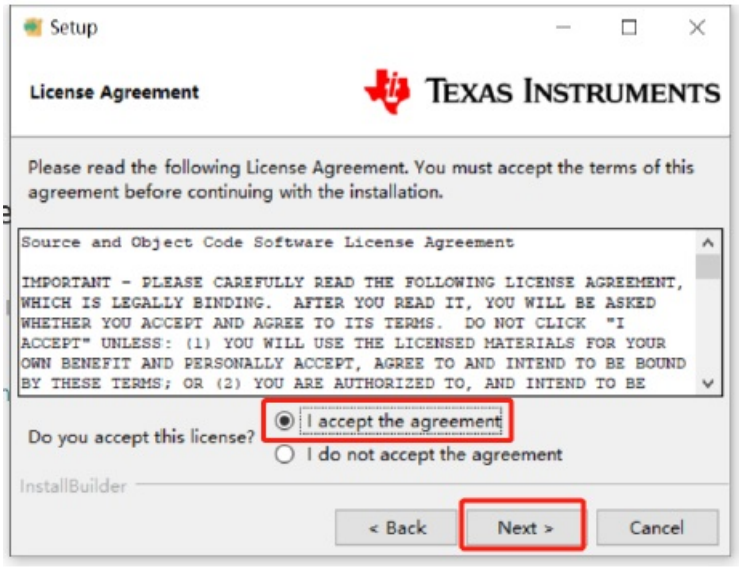
7. Installation



8. Click “Next”

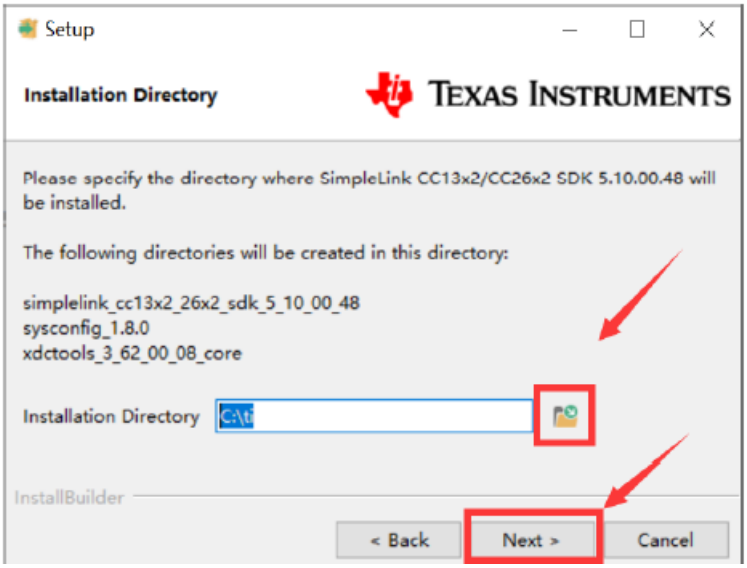


9. Select the default option

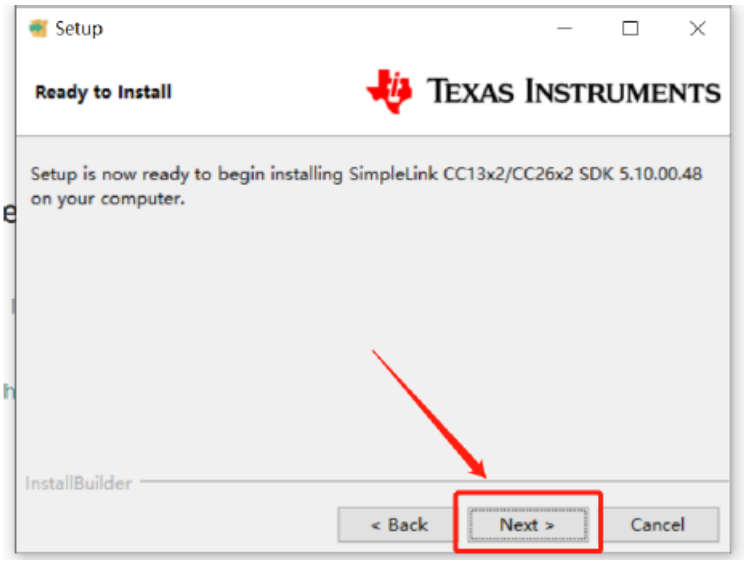


10. Select the Installation directory

11. Click “Next”

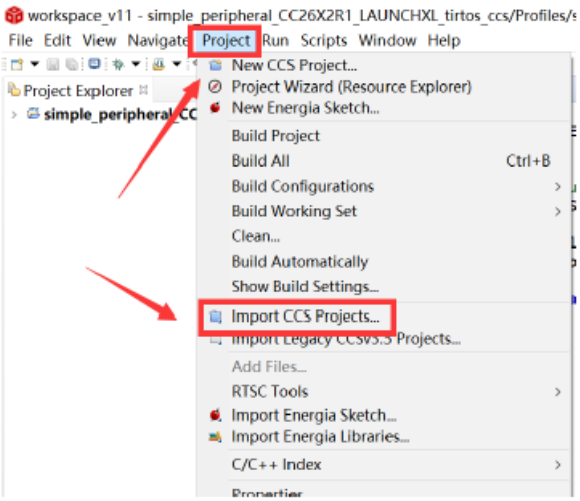


12. Waiting for installation to complete

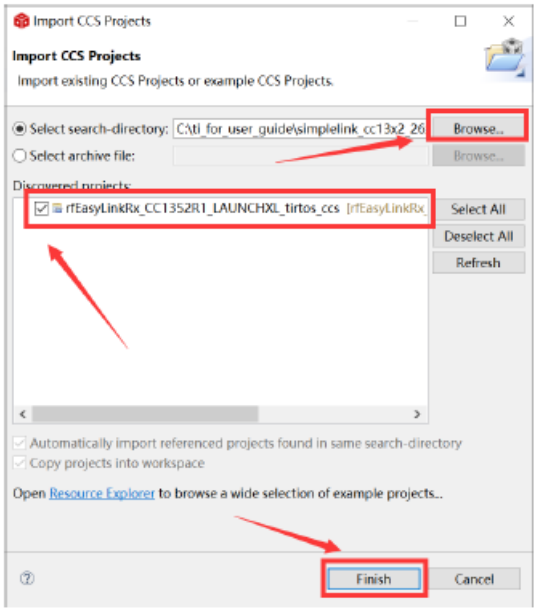


Run an example/demo code

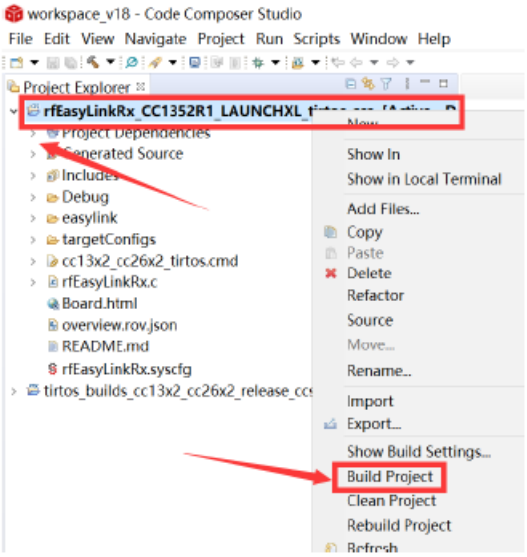
1. For the first module, find the option named “Import CCS project…”



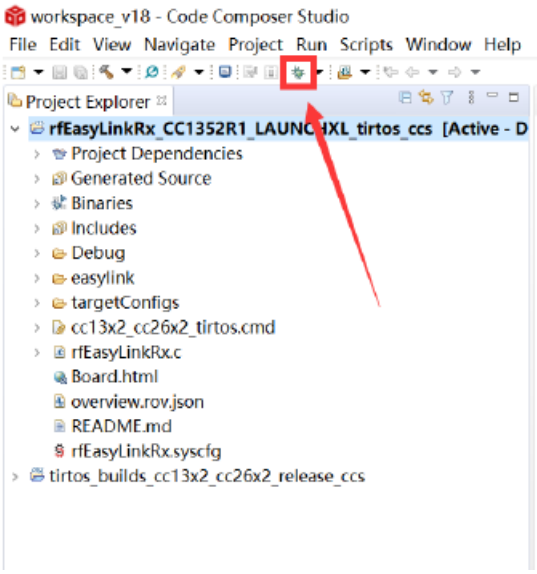
2. According to the following path to find the sending end project: ti\simplelink_cc13x2_26x2_sdk_5_10_00_48\examples\rtos\CC1352R1_LAUNCHXL\ easylink\ rfEasyLinkRx\tirtos\ccs



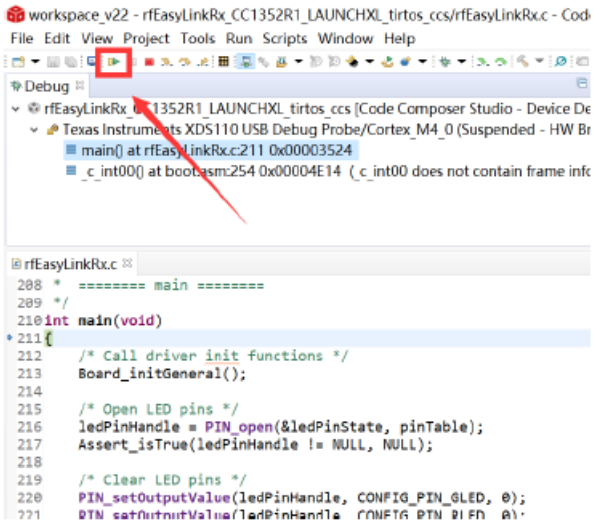
3. Right Click the project to build the receiving end project



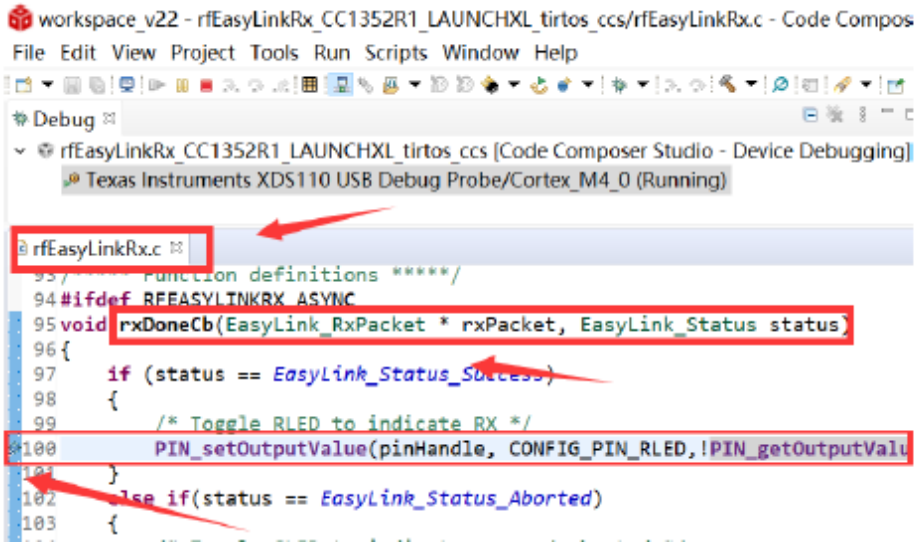
4. Click this bug icon (means download and debugging)



5. C lick on this option to start debugging

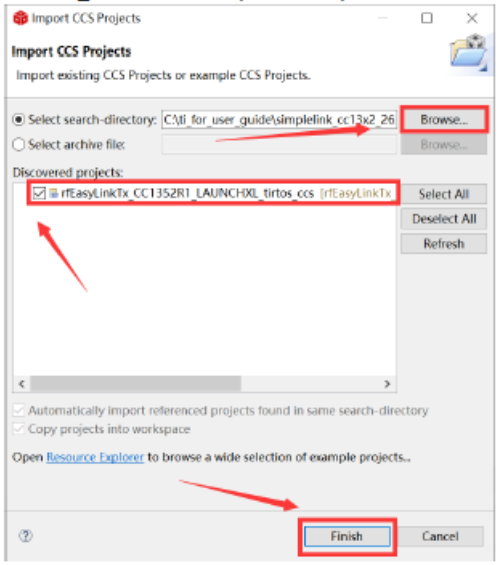


6. Find the file which is named “rfEasyLinkRx.c” and the function which is named “rxDoneCb”, and set a breakpoint at the line as the arrows shows

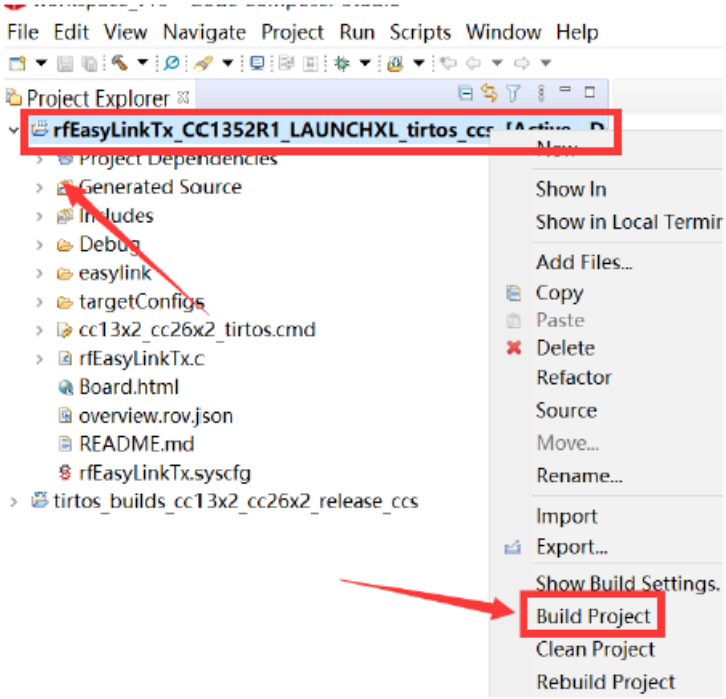


7. For another module, according to the following path to find the sending end project:

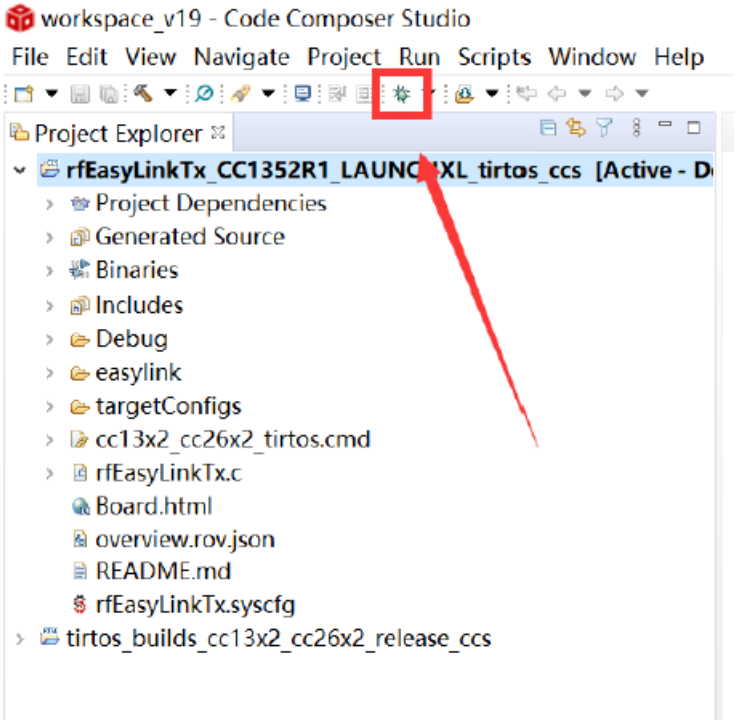
ti\simplelink_cc13x2_26x2_sdk_5_10_00_48\examples\rtc
CC1352R1_LAUNCHXL \ easylink\ rfEasyLinkTx\tirtos\ccs



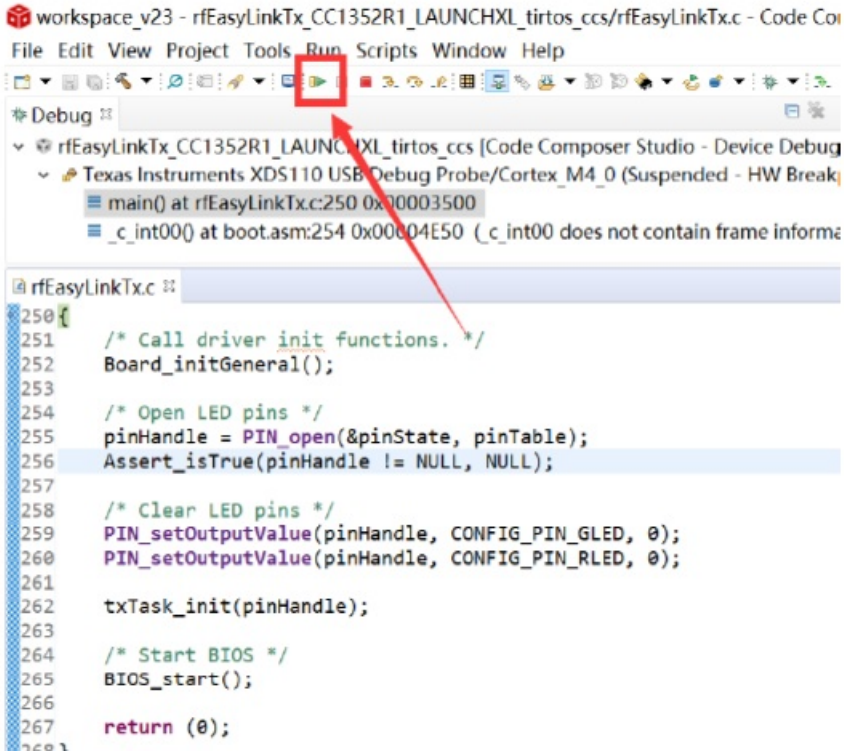
8. Right Click the project to build the sending end project



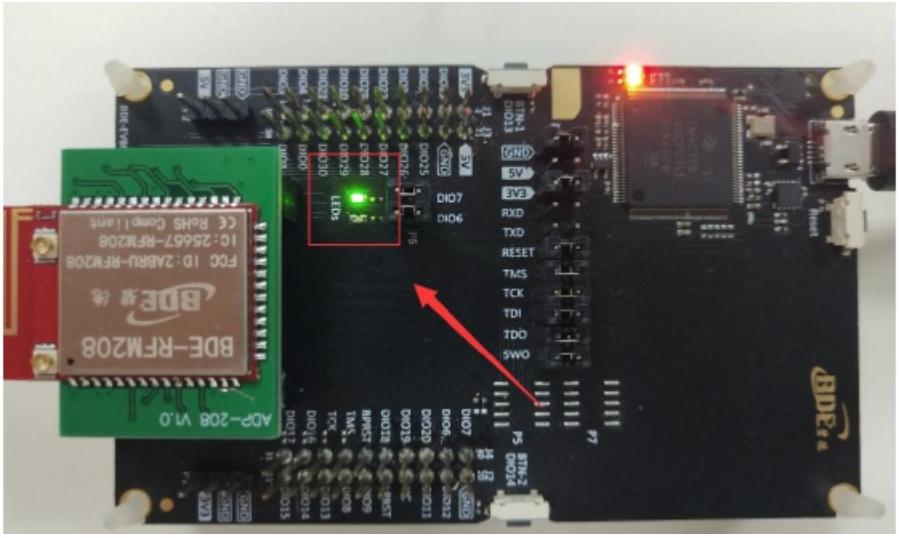
9. Click this bug icon (means download and debugging)



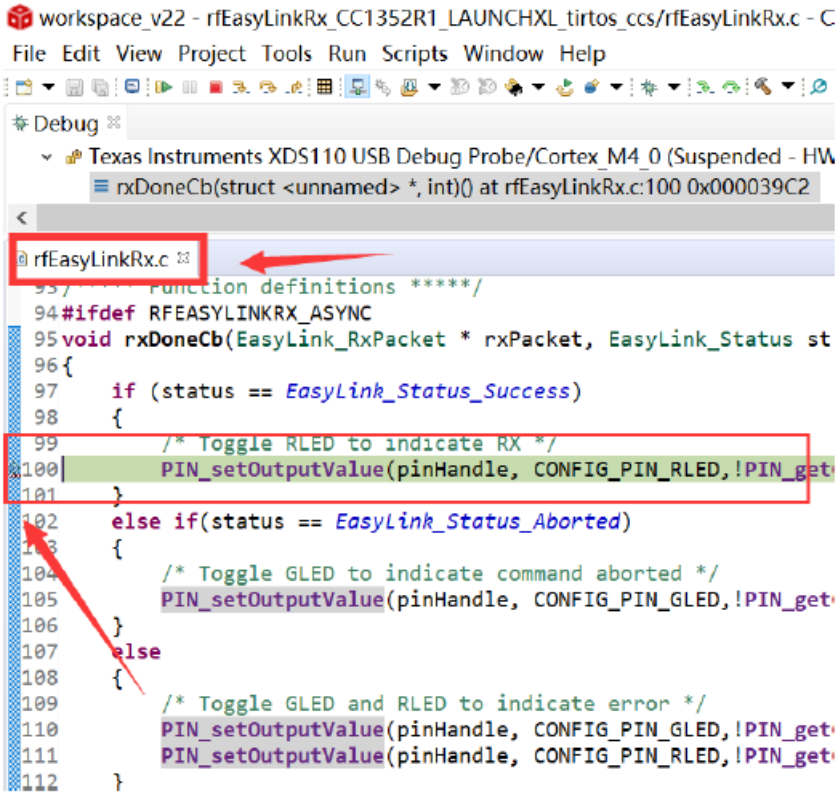
10. C lick on this option to start debugging



11. You can see the lights flashing (means sending a data uninterruptedly)



12. The program stops at the breakpoint



By far you should've built your first application successfully.
For further development, please check out the CC1352R1 data sheet, product information and support | TI.com page and download the User guide (**https://www.ti.com/lit/pdf/swcu185**)

Other Resources

- Mac OS Installer for SimpleLink CC13X2 26X2 SDK
- Linux Installer for SimpleLink CC13X2 26X2 SDK
- Mac OS Installer for Code Composer Studio IDE
- Linux Installer for Code Composer Studio IDE
- CC1352R SimpleLink™ High-Performance Multi-Band Wireless MCU
- Windows Installer for SmartRF Flash Programmer 2

Revision History

Revision	Date	Description
V1.0	15-Feb-2020	Initial Released
V2.0	14-Apr-2021	Changed template

More Questions:

Please search existing answers on TI E2E support forums
Contact your local TI sales representative. **Or** Contact BDE Technology, Inc.

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Website: http://www.bdecomm.com/cn/ Email: shu@bdecomm.com

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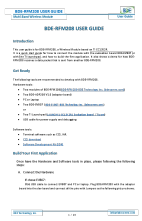
67 E Madison St, #1603A, Chicago, IL 60603
Tel: +1-312-379-9589
Website: http://www.bdecomm.com/ Email: info@bdecomm.com

Documents / Resources

	BDE Technology BDE-RFM208 Multi-Band Wireless Module [pdf] User Guide BDE-RFM208, Multi-Band Wireless Module

References

- BDE Technology Inc.
- Analog | Embedded processing | Semiconductor company | TI.com
- BDE Technology Inc.
- _____
- BDE-RFM208 (Multi-Band)-BDE Technology Inc.
- BDE-EVB07-BDE Technology Inc.
- TI E2E support forums
- ti.com/lit/pdf/swcu185
- CC1352R data sheet, product information and support | TI.com
- CC2642R data sheet, product information and support | TI.com
- CCSTUDIO-WCS IDE, configuration, compiler or debugger | TI.com
- FLASH-PROGRAMMER Software programming tool | TI.com
- LAUNCHXL-CC1352R1 Development kit | TI.com
- SIMPLELINK-CC13XX-CC26XX-SDK Software development kit (SDK) | TI.com