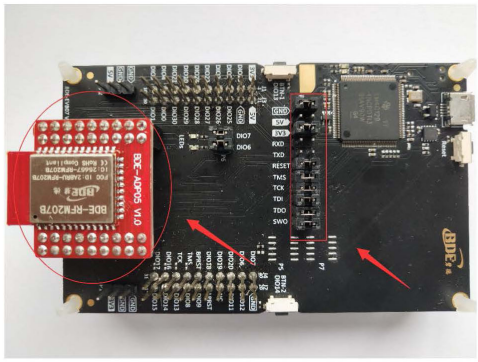
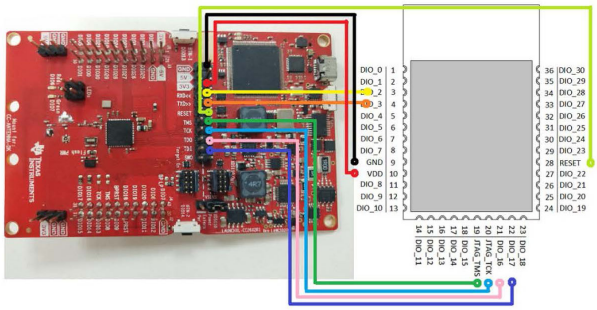
Manuals+ — User Manuals Simplified.



If chose TI Launchpad:
The connection is as following.



BDE-RFM207B Multiprotocol 2.4G Wireless Module User Guide

Contents

BDE-RFM207B Multiprotocol 2.4G Wireless Module

USER GUIDE

Introduction

This user guide is for BDE-RFM207B, a Wireless Module based on TI CC2652RB. 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-RFM207B receives a data packet that is sent from a mobile phone APP – nRF Connect.

Get Ready

The following tools are recommended to develop with BDE-RFM207B.

Hardware tools:

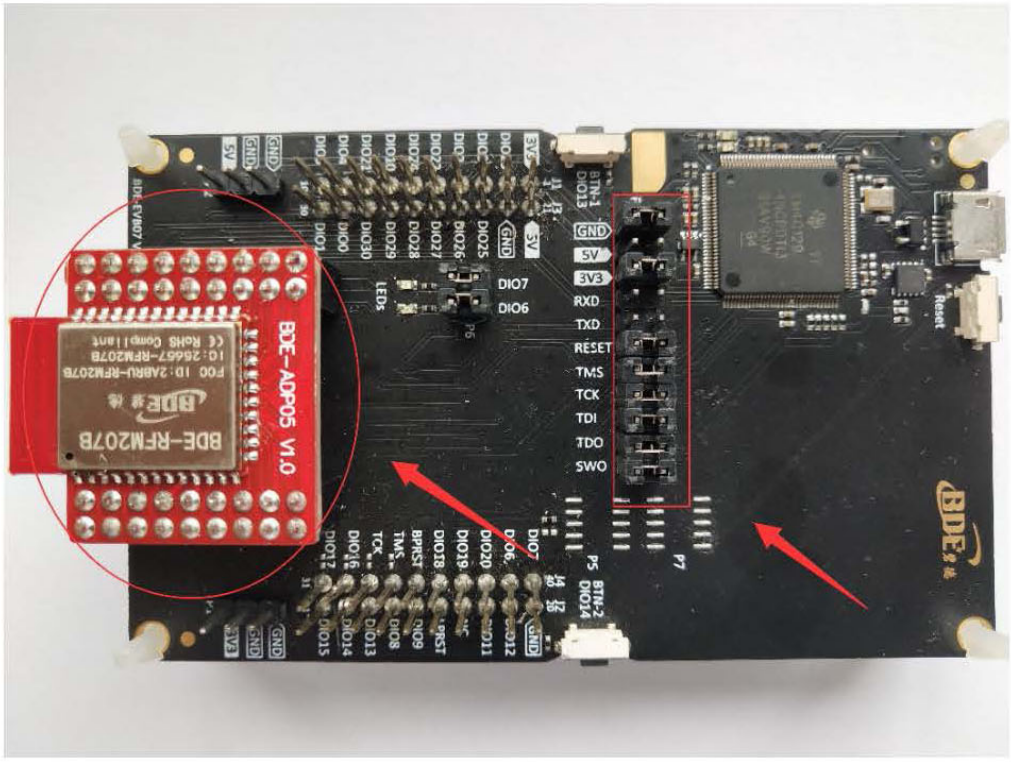
- BDE-RFM207B **(BDE-RFM207B-BDE Technology Inc. (bdecomm.com))**
- BDE-ADP05 V1.0 (adaptor board)
- PC or Laptop
- BDE-EVB07 **(BDE-EVB07-BDE Technology Inc. (bdecomm.com))**

  or
- TI Launchpad **(LAUNCHXL-CC26X2R1 Evaluation board | TI.com)**
- USB cable for power supply and debugging

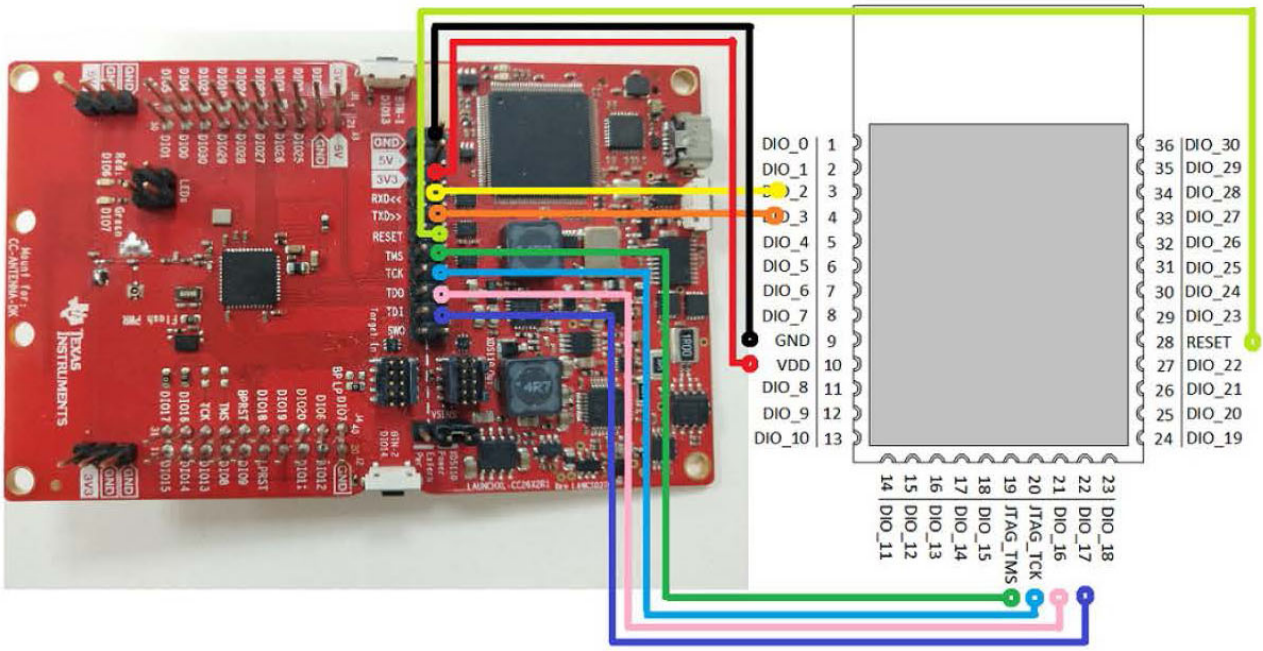
Software tools:

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

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-RFM207B 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-RFM207B	LaunchPad Pin
3V3 Power	VDD	3V3
Ground	GND	GND
RST	RST	RESET
TMS	TMS	TMS
TCK	TCK	TCK
TDO	DIO16	TDO
TDI	DIO17	TDI
RXD	DIO2	RXD
TXD	DIO3	TXD

Optional: TDO，TDI，RXD，TXD

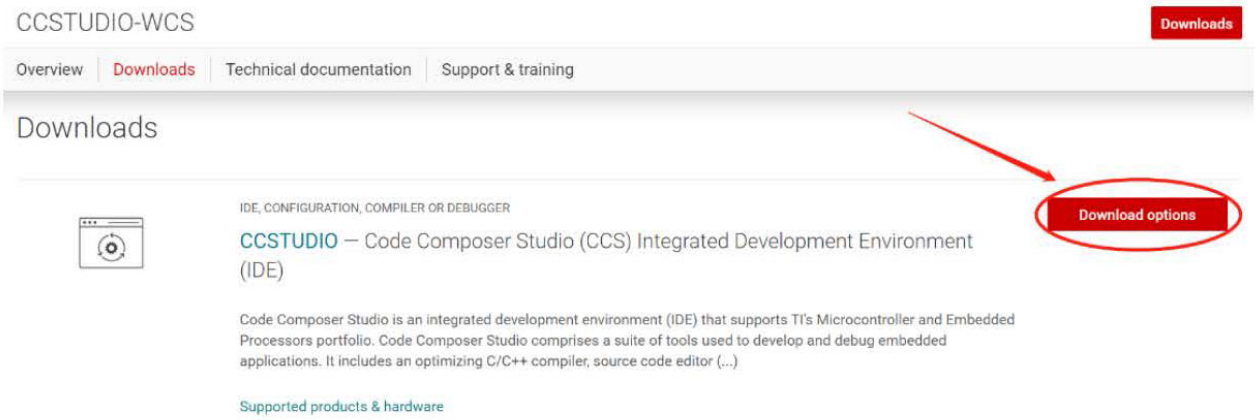
B. Build the Application

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

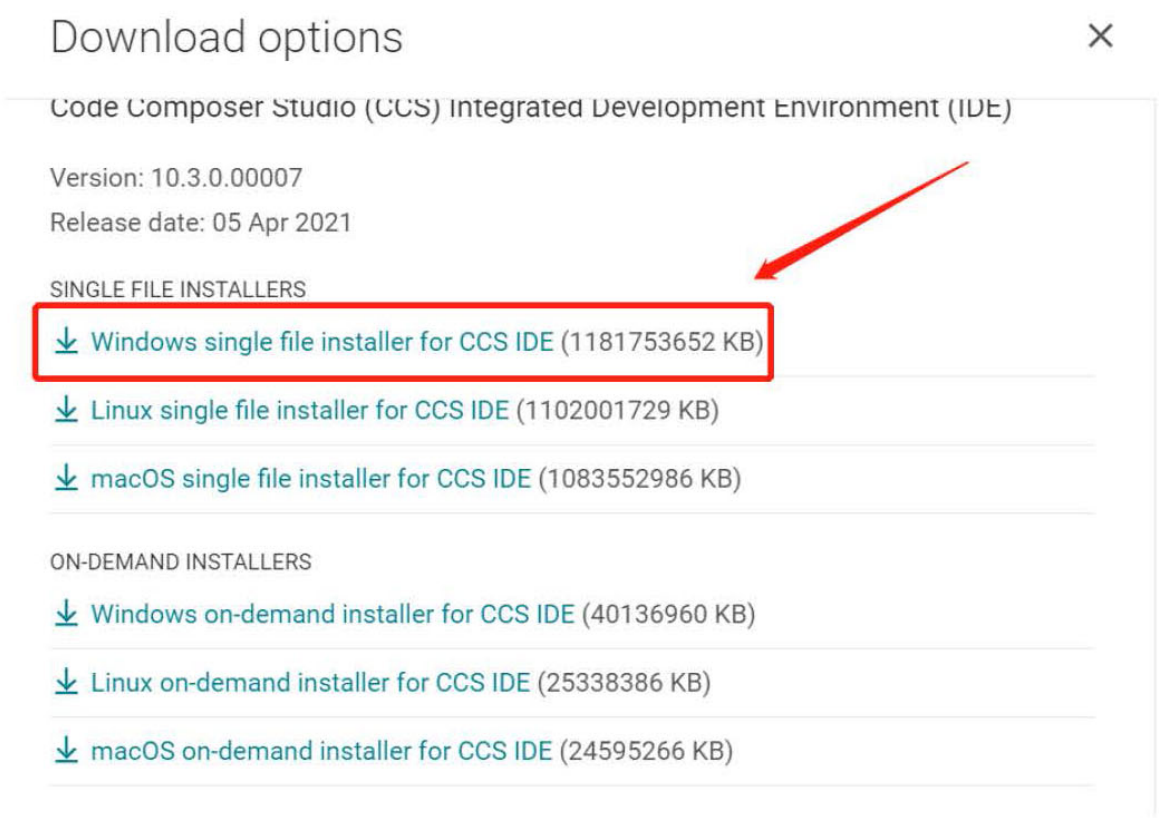
  From the above links, follow the instructions in the following steps to download and install the CCS and SDK.

- **CCS Installation**

1. Click on this option

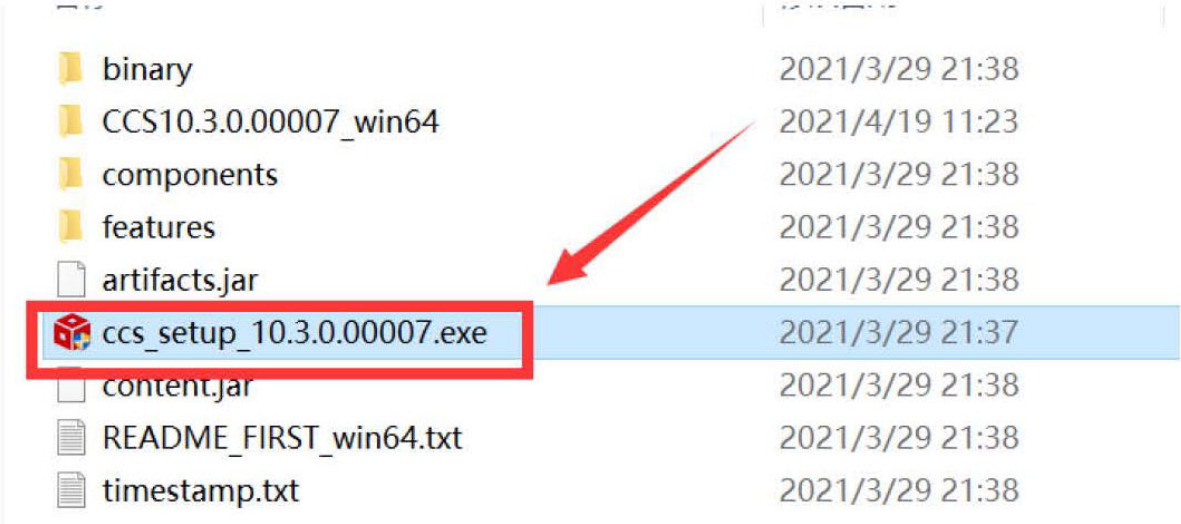


2. Select an option to download CCS

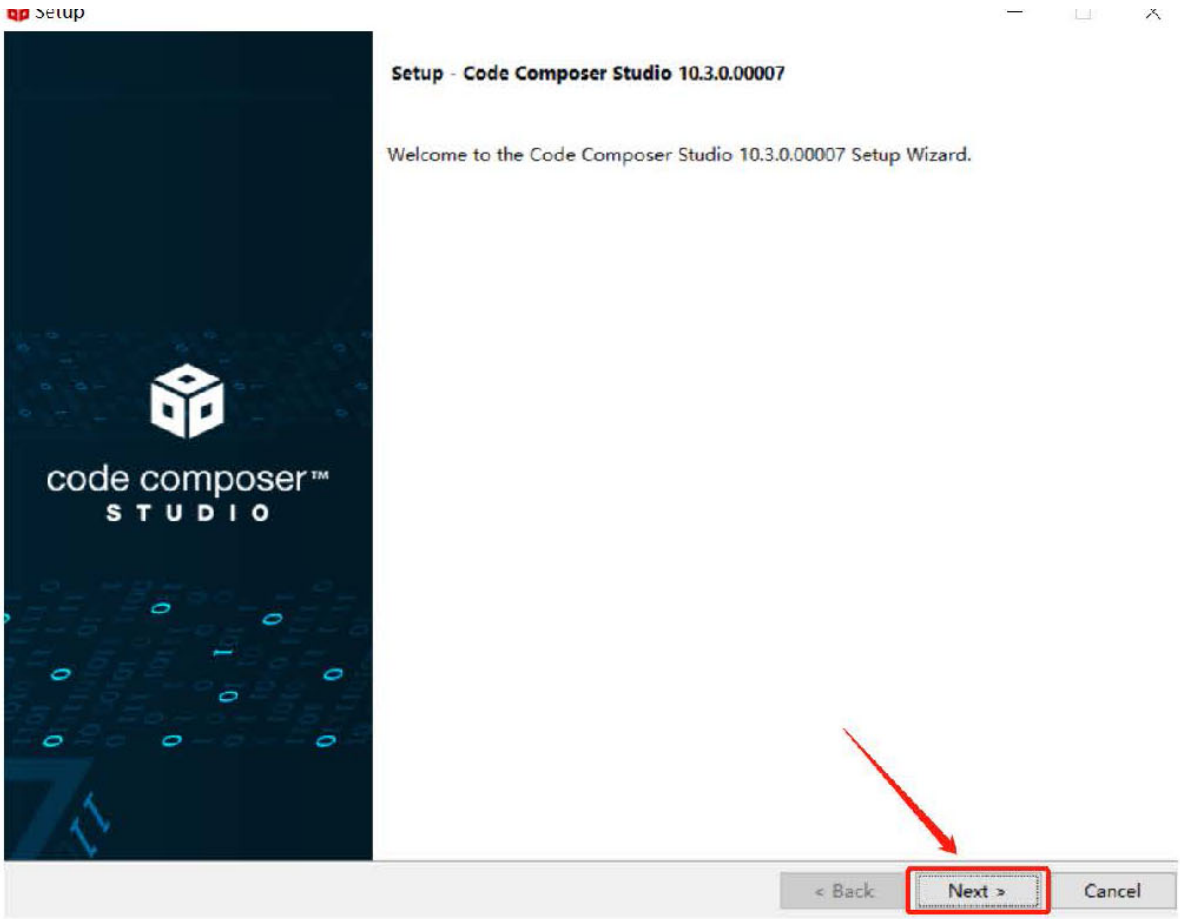


3. Unzip the package to a local disc

4. Click the setup of CCS

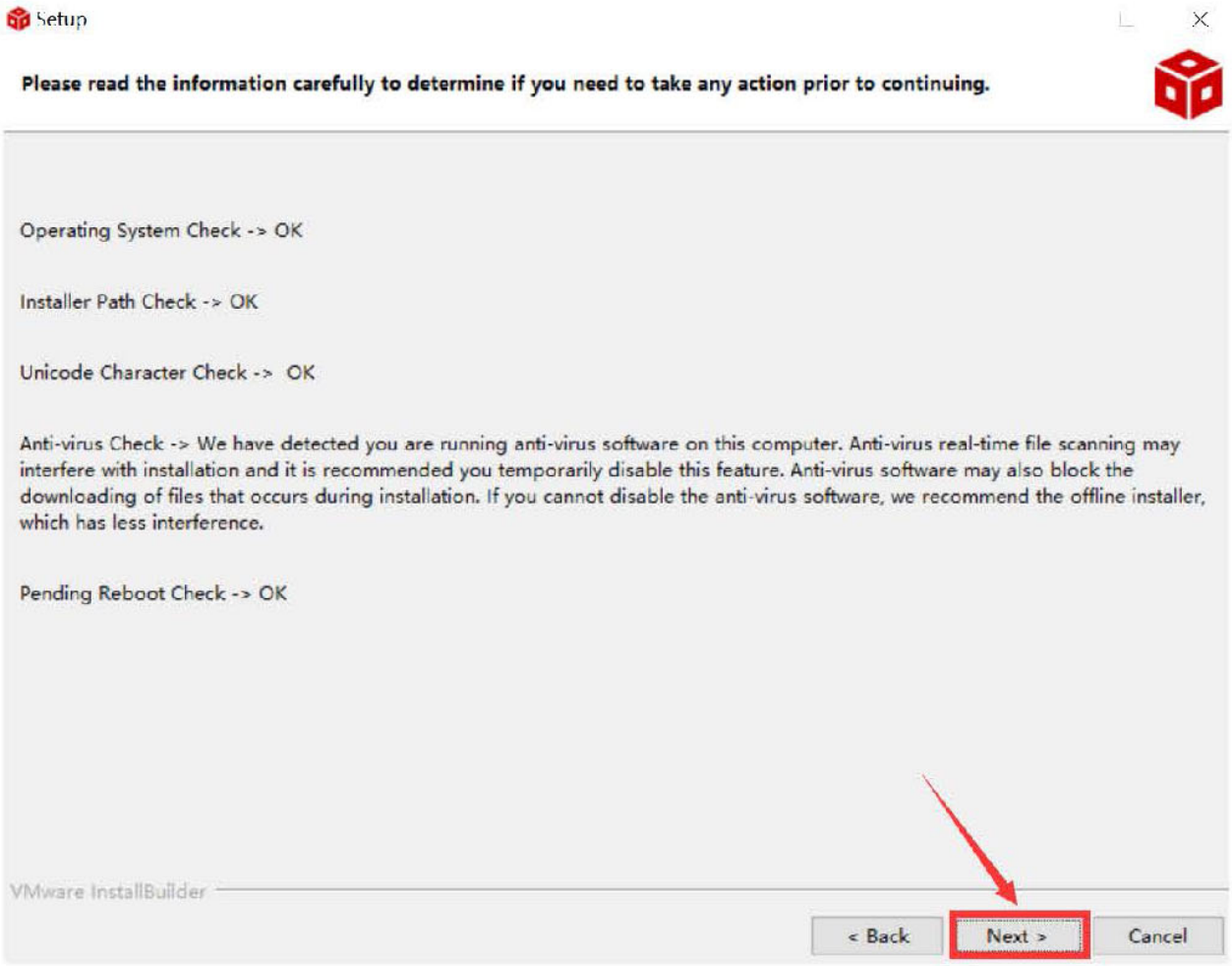


5. Click “Next”

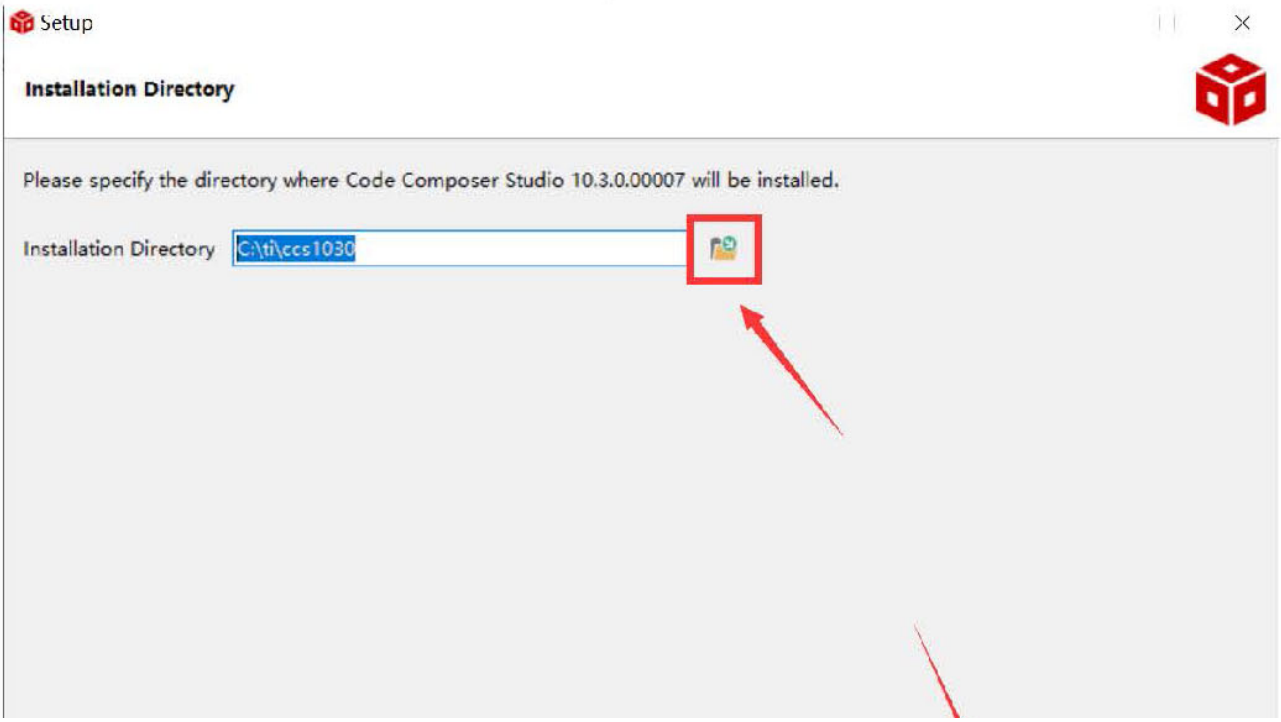


6. Select the default option

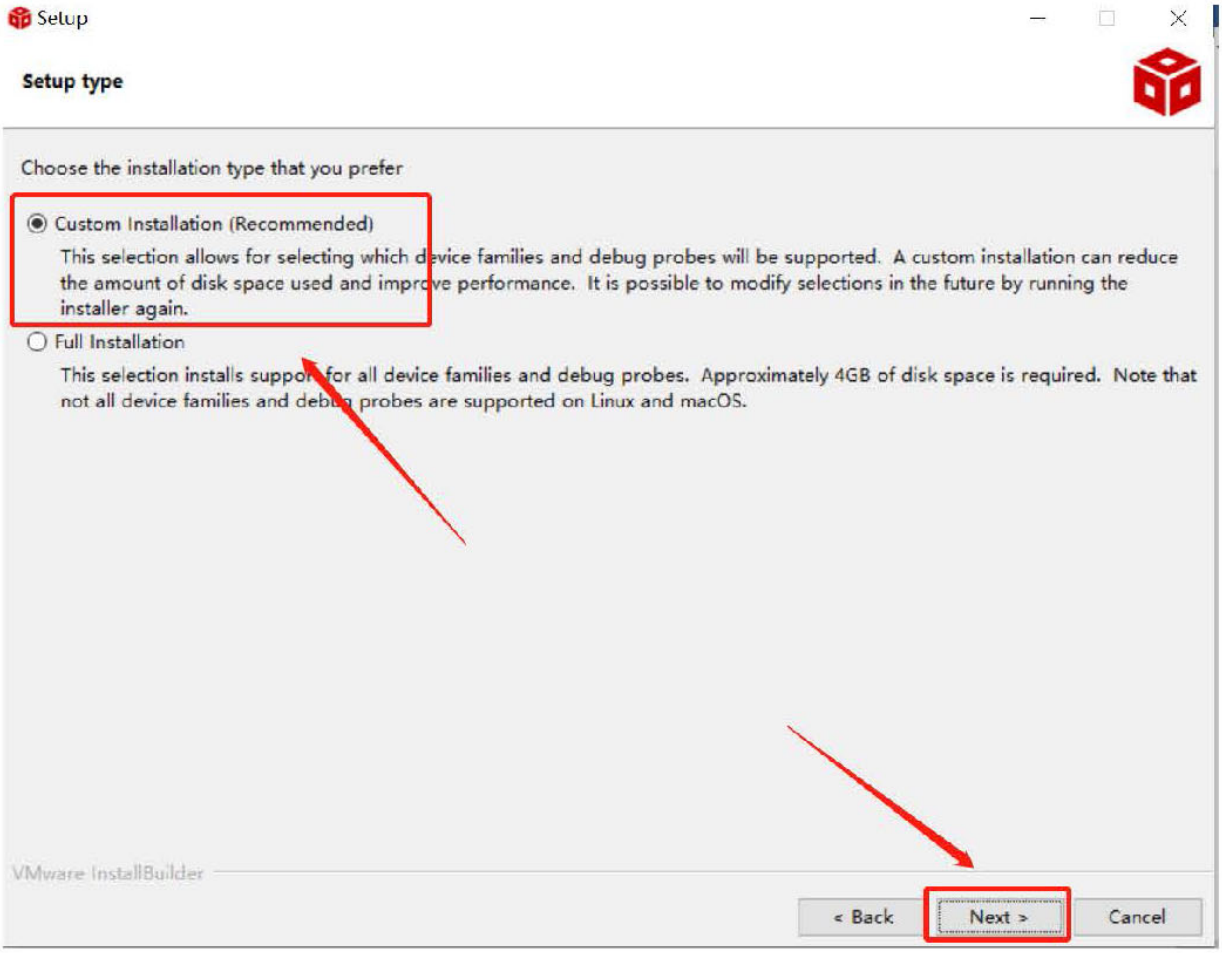
7. Click “Next”



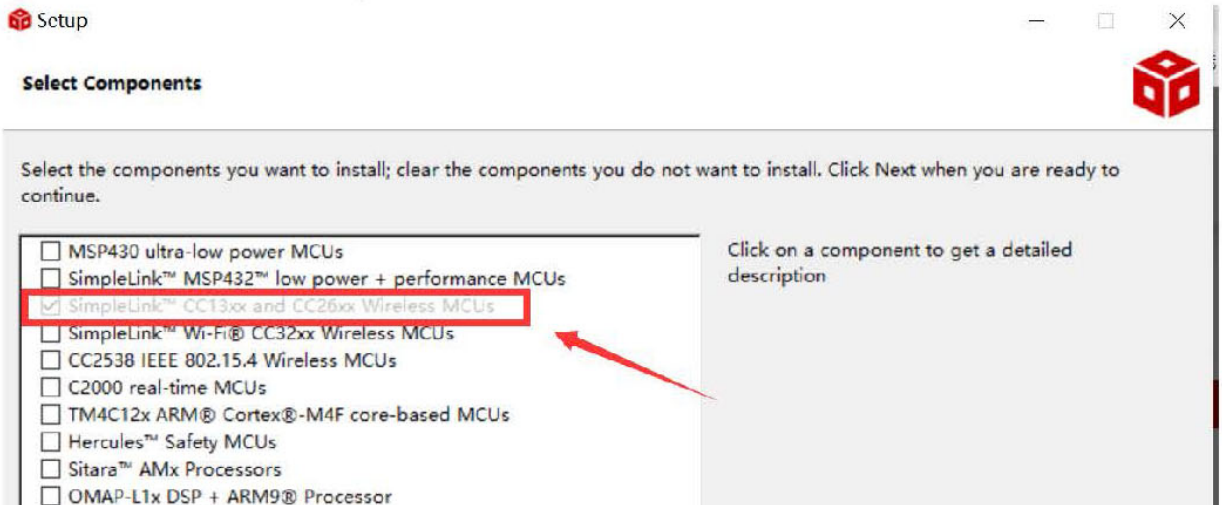
8. Select the Installation Directory

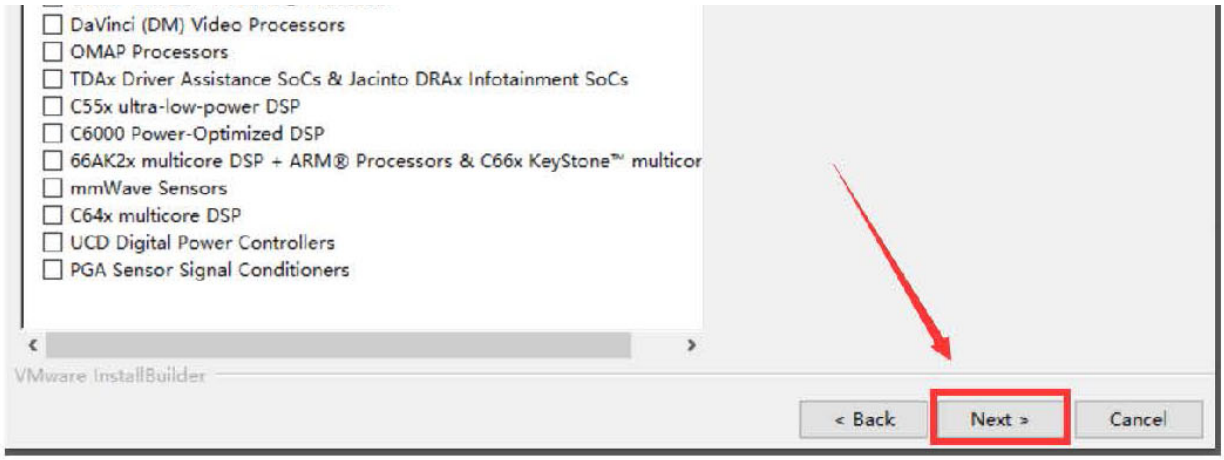


9. Select the default option

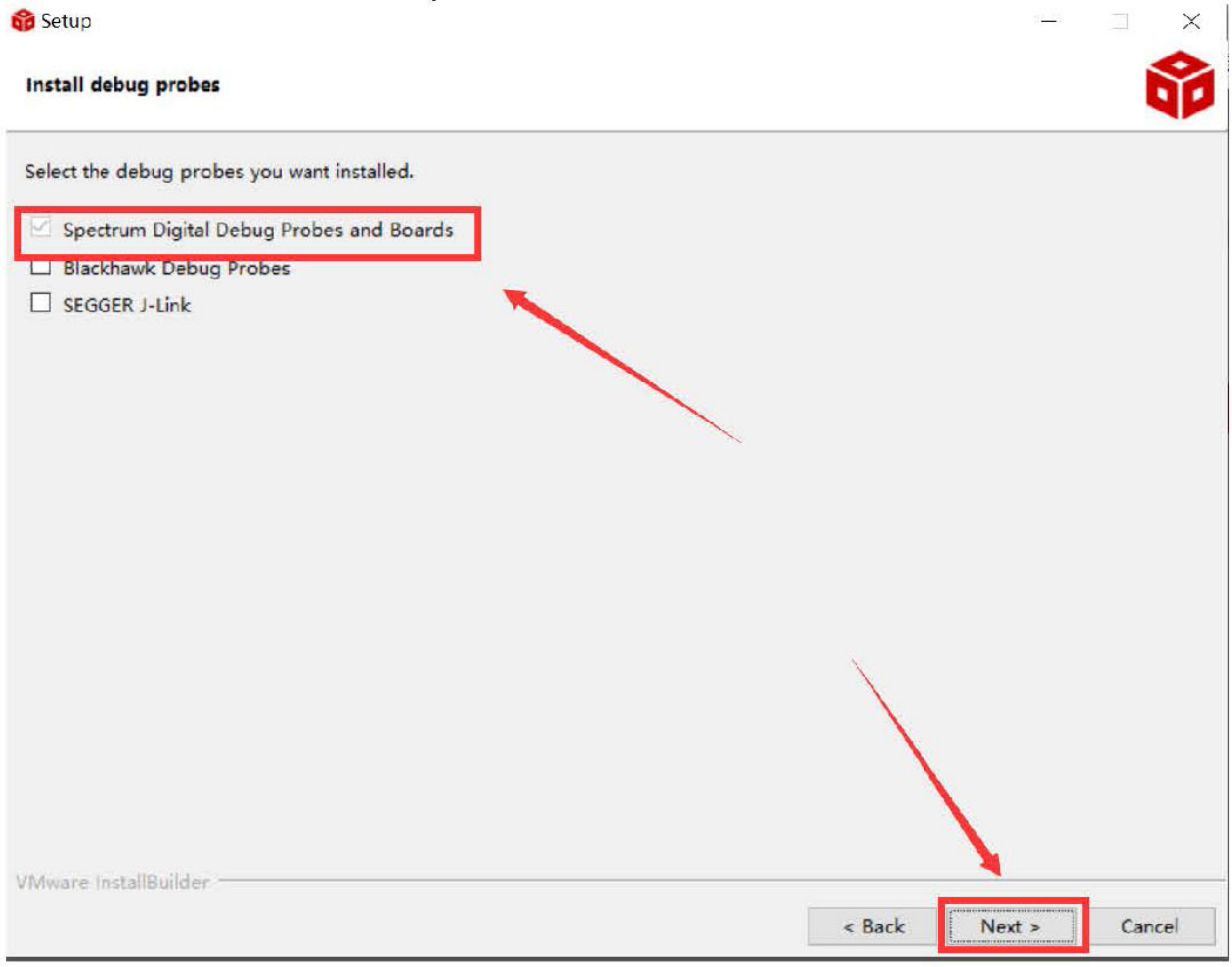


10. Select the component

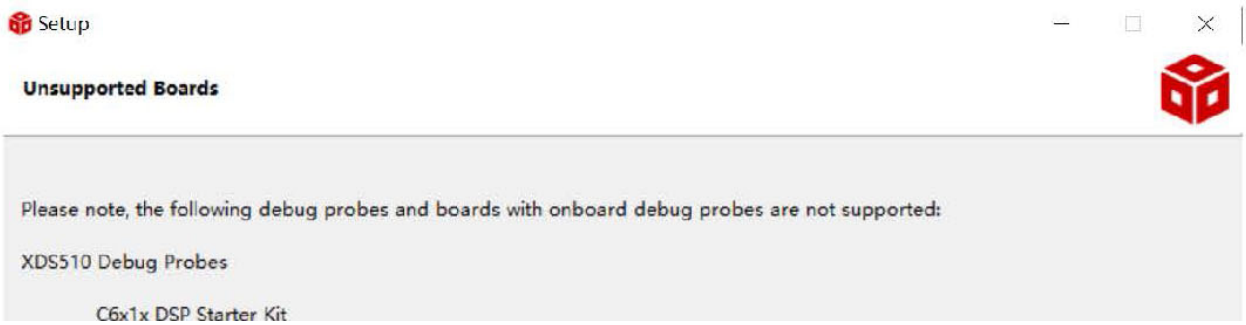


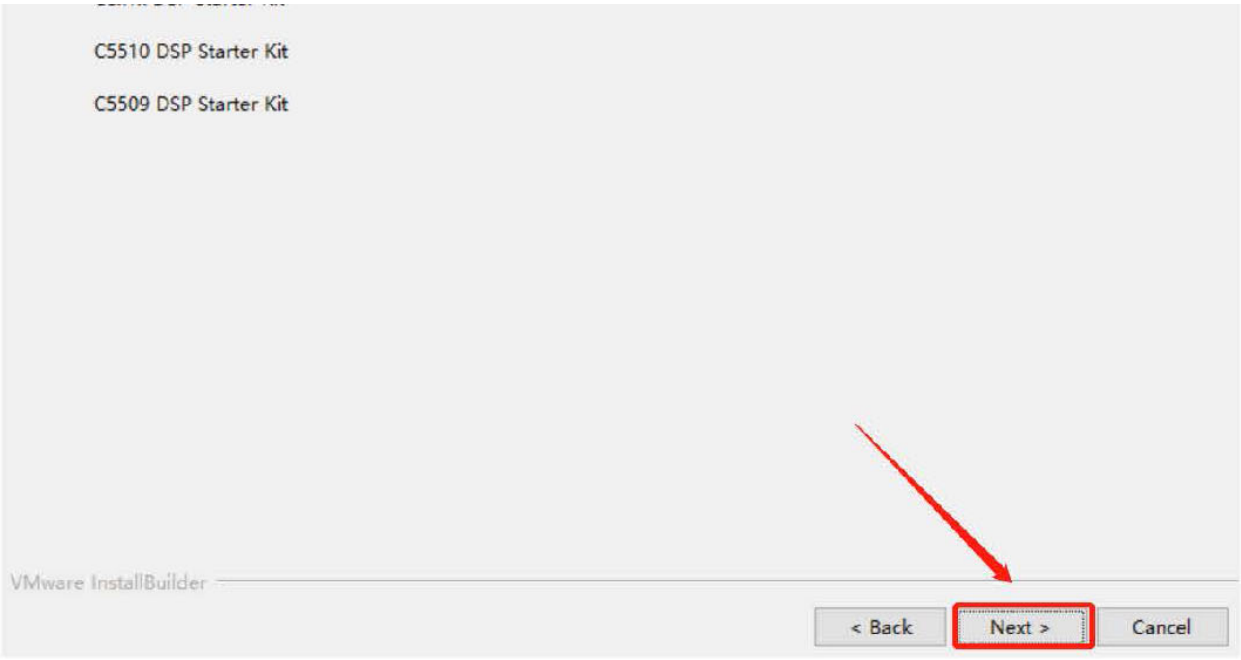


11. Select the default option

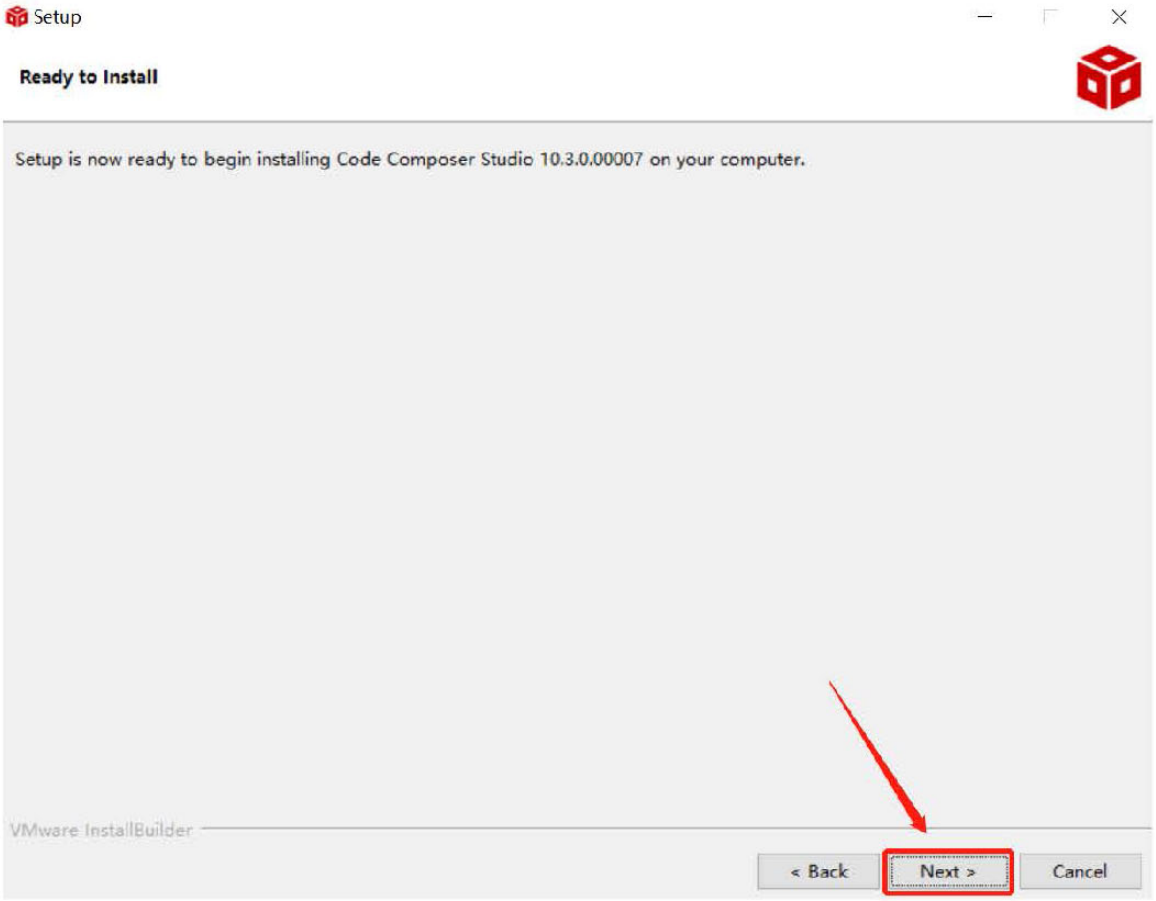


12. Click “Next”

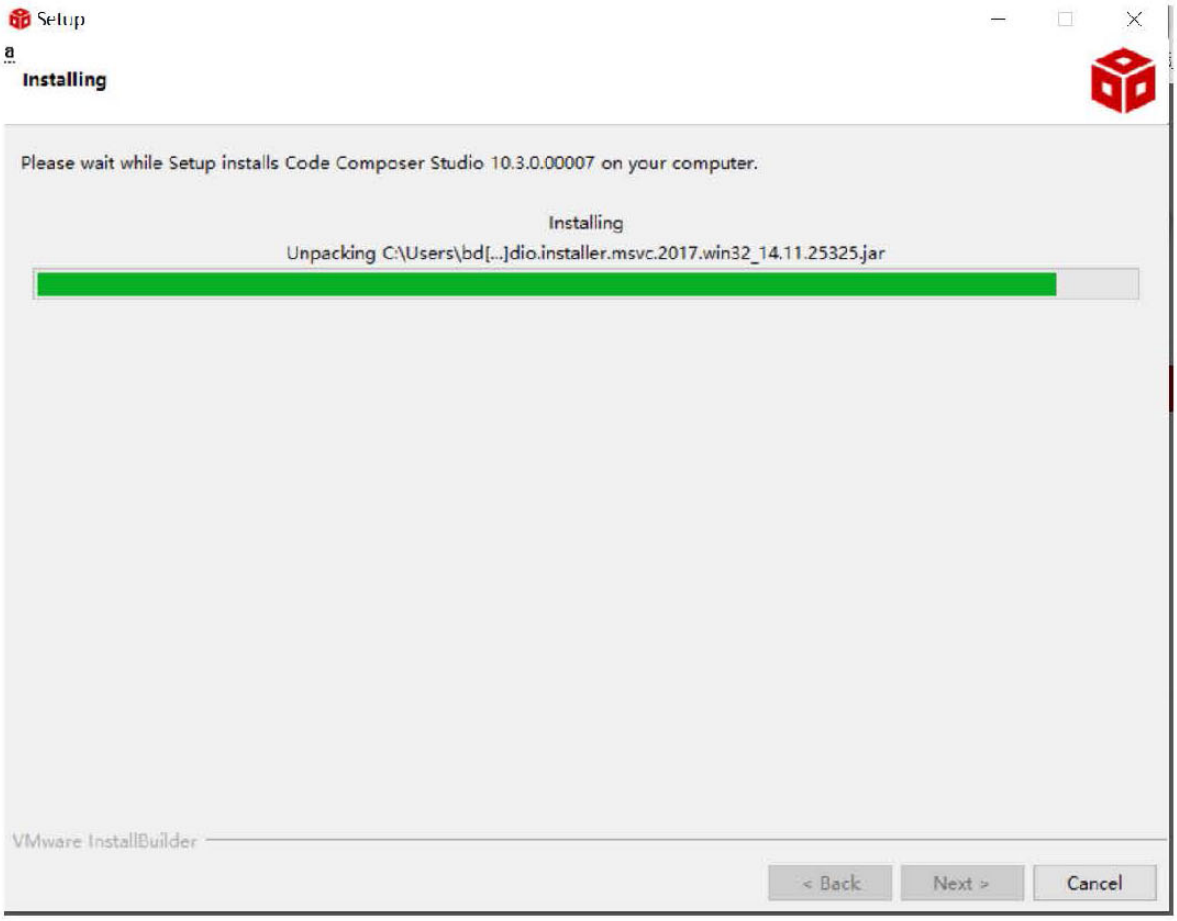



C5510 DSP Starter Kit
C5509 DSP Starter Kit
VMware InstallBuilder
< Back
Next >
Cancel

13. Click “Next”

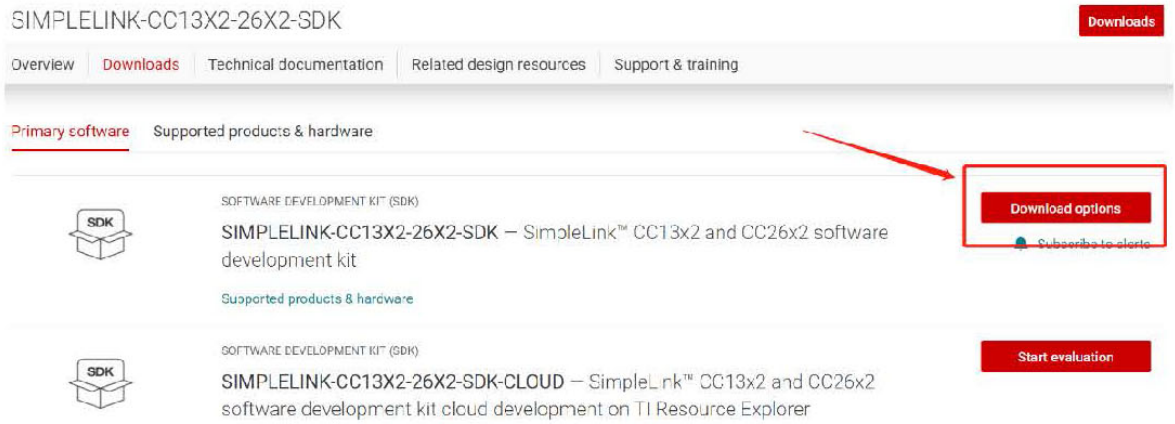


14. Waiting for installation to complete

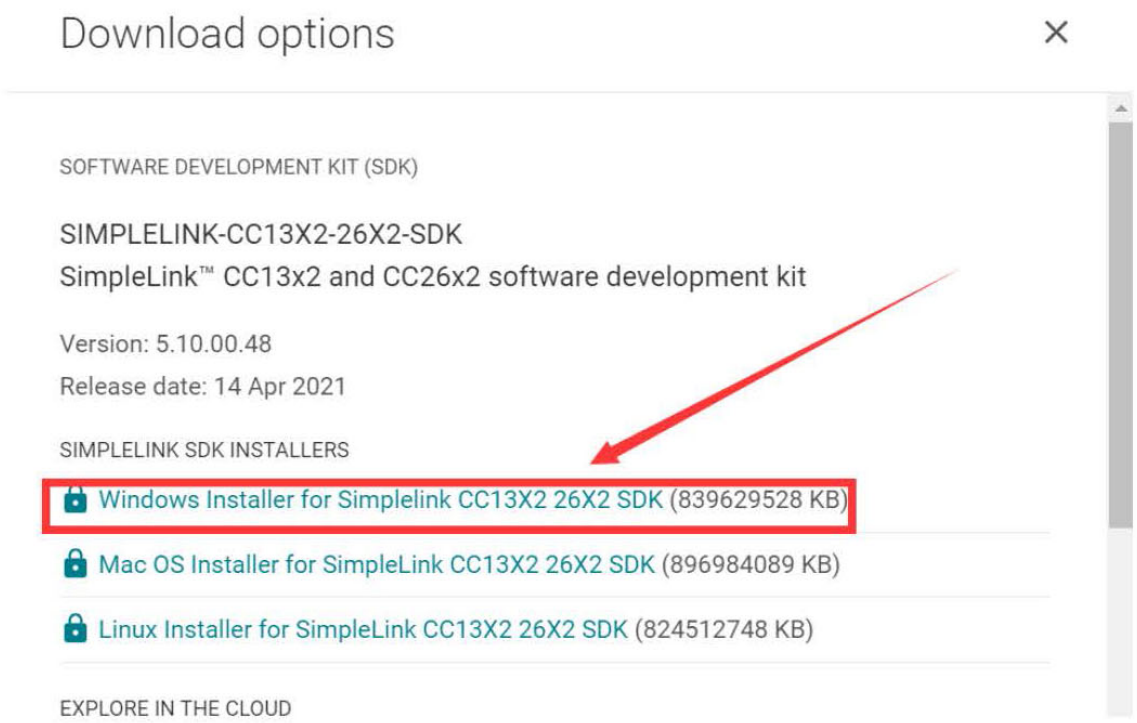


- ## Software Development Kit (SDK) installation

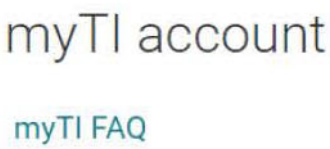
1. Click on this option



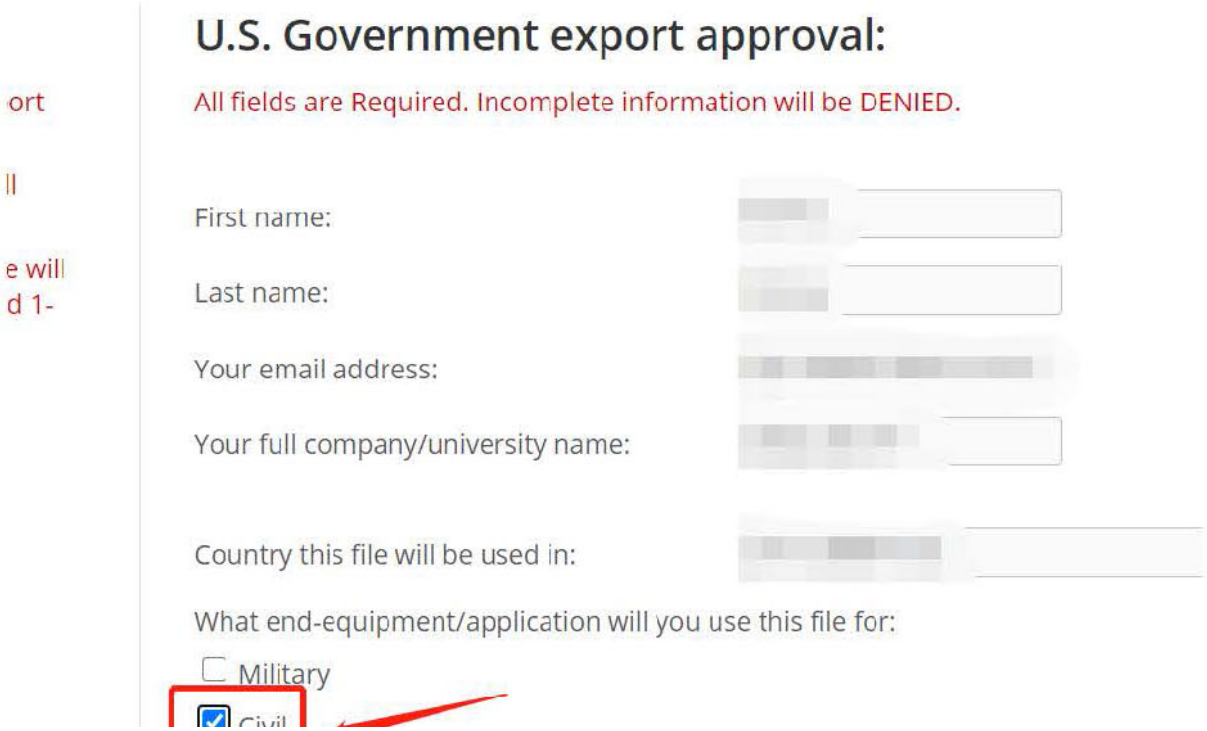
2. Select an option you need to download SDK



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

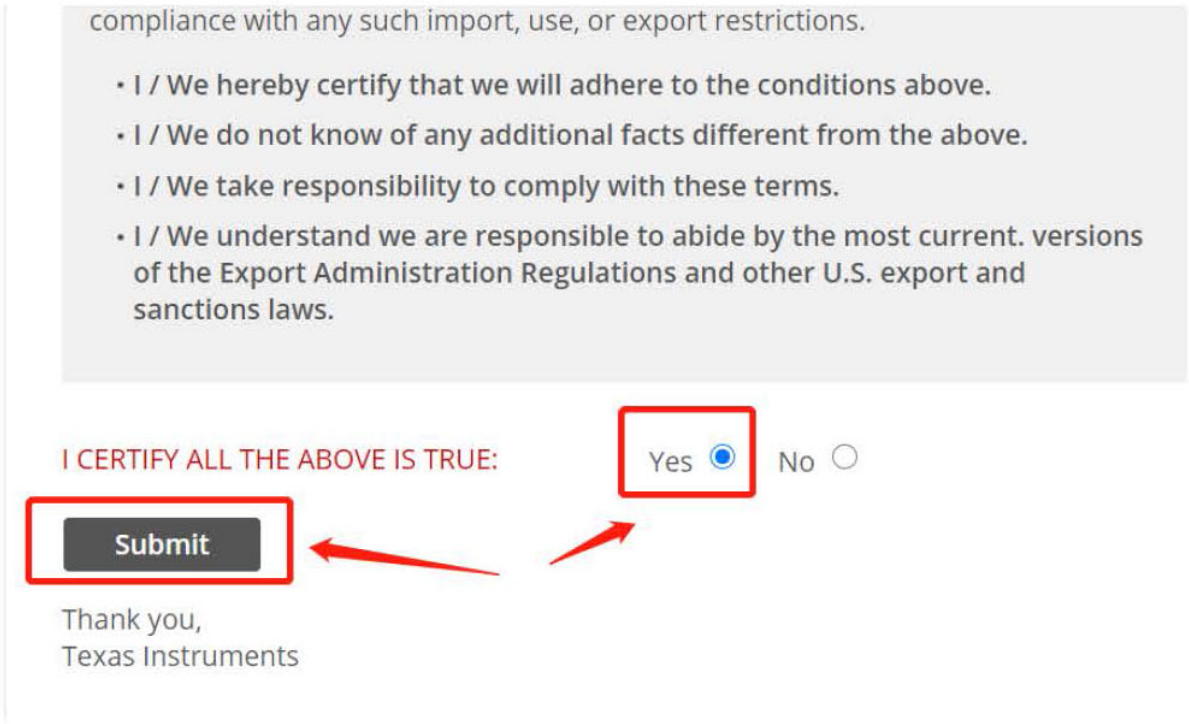


4. Select "civil" if your application is for civil use

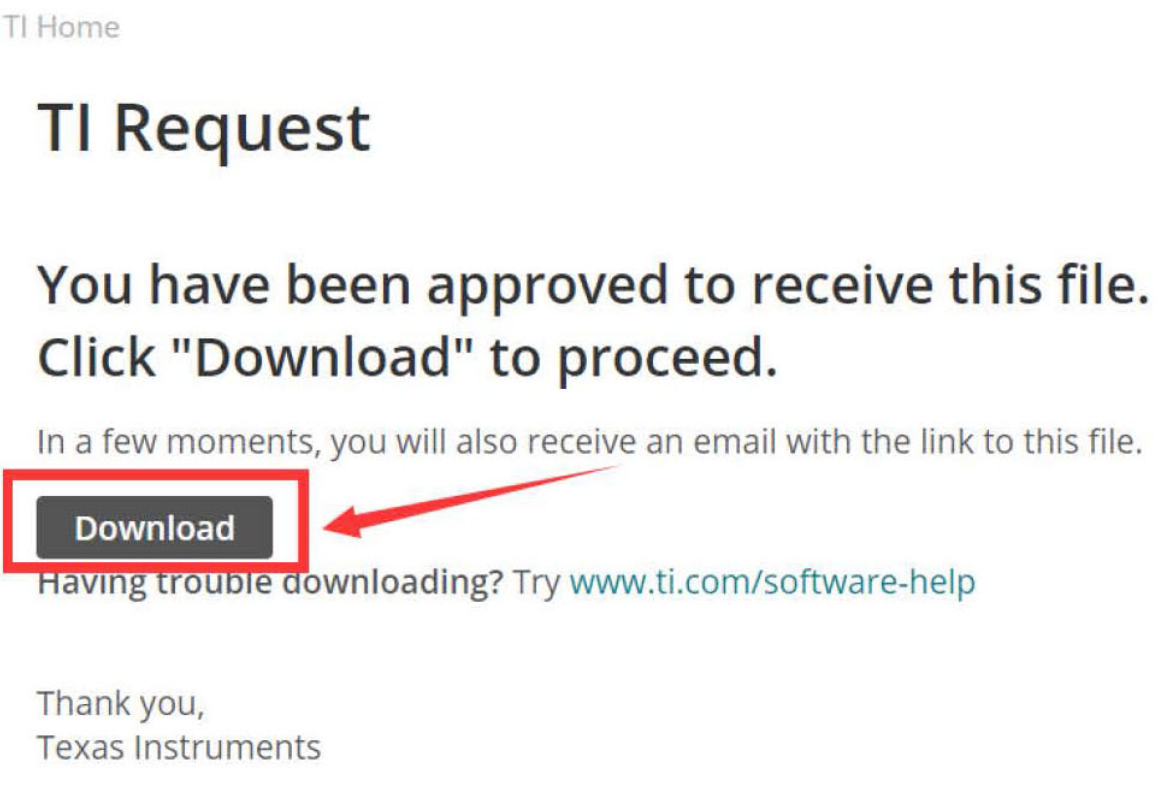


I certify that the following is true:

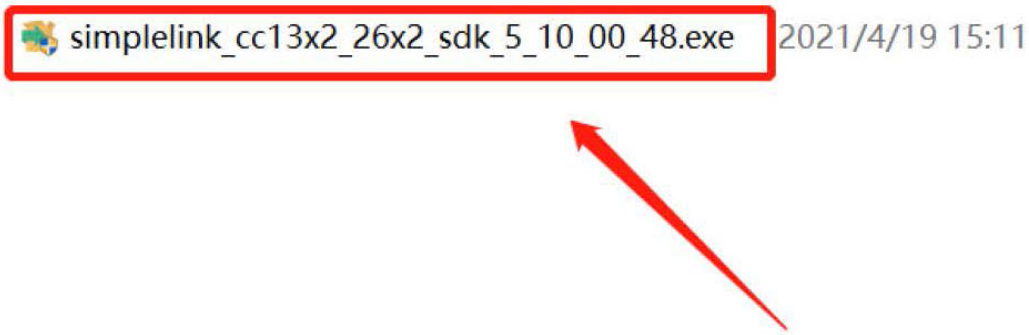
5. Select “Yes” and submit



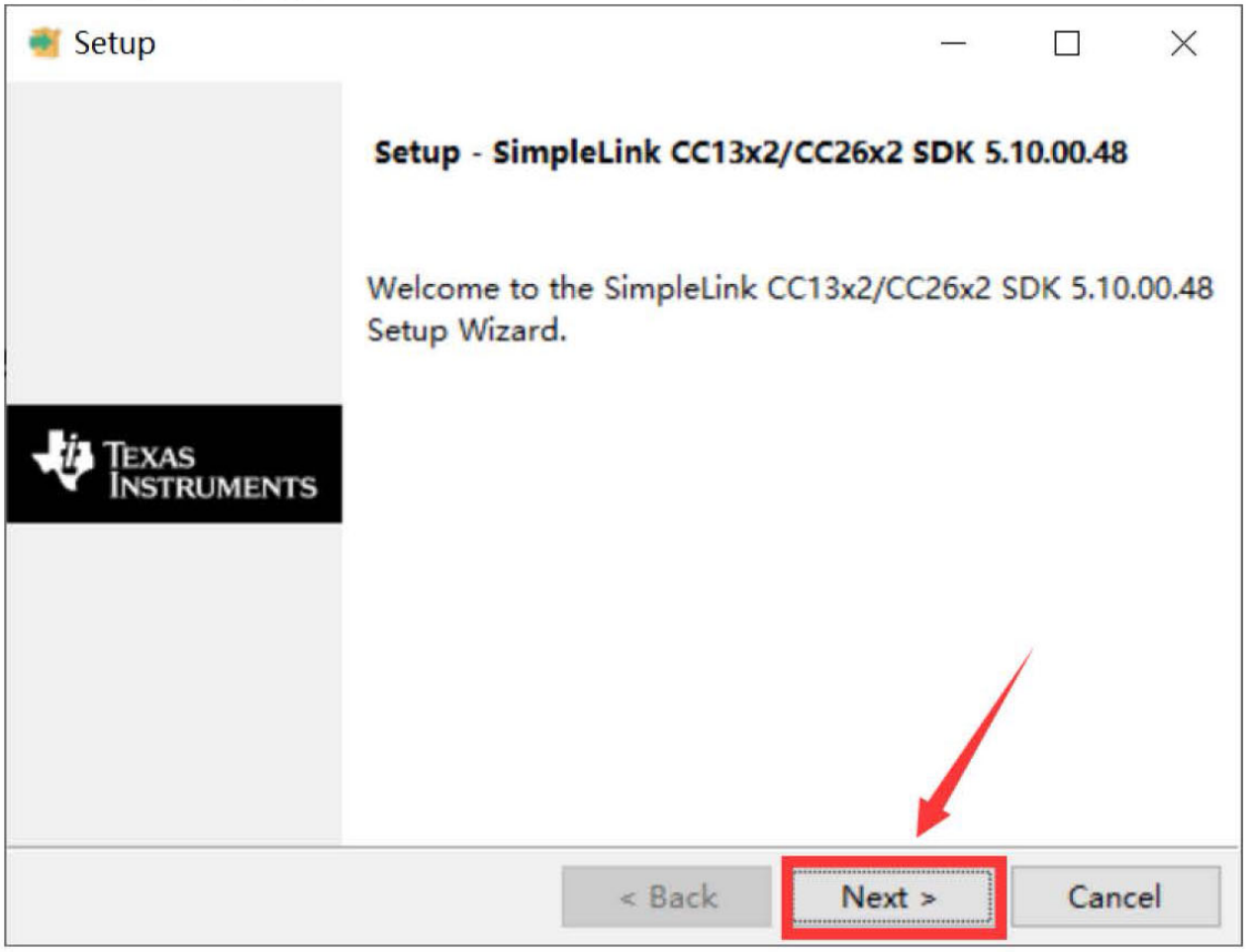
6. Download SDK



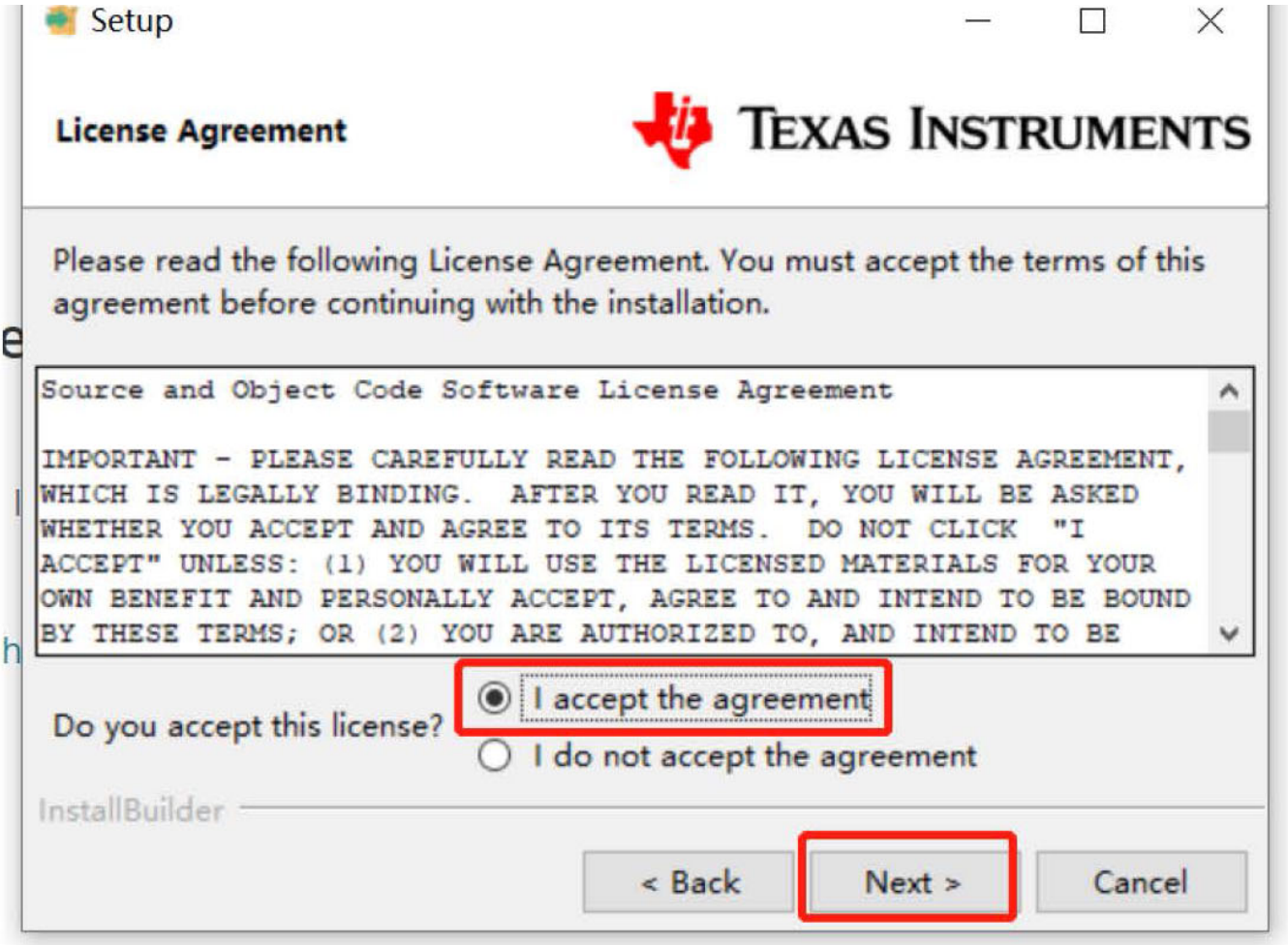
7. Installation



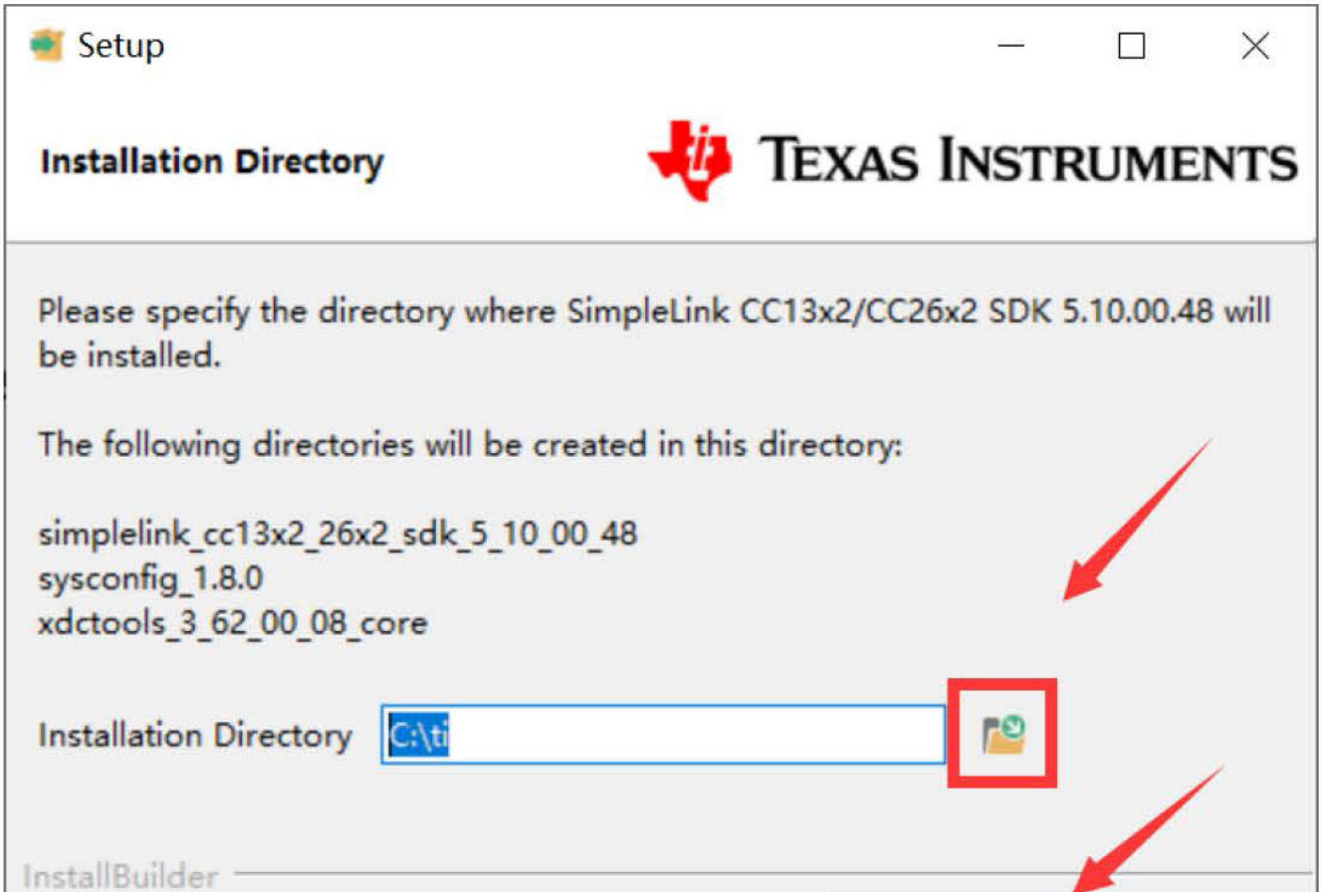
8. Click “Next”

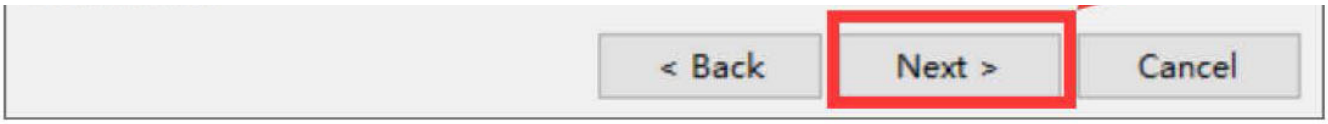


9. Select the default option

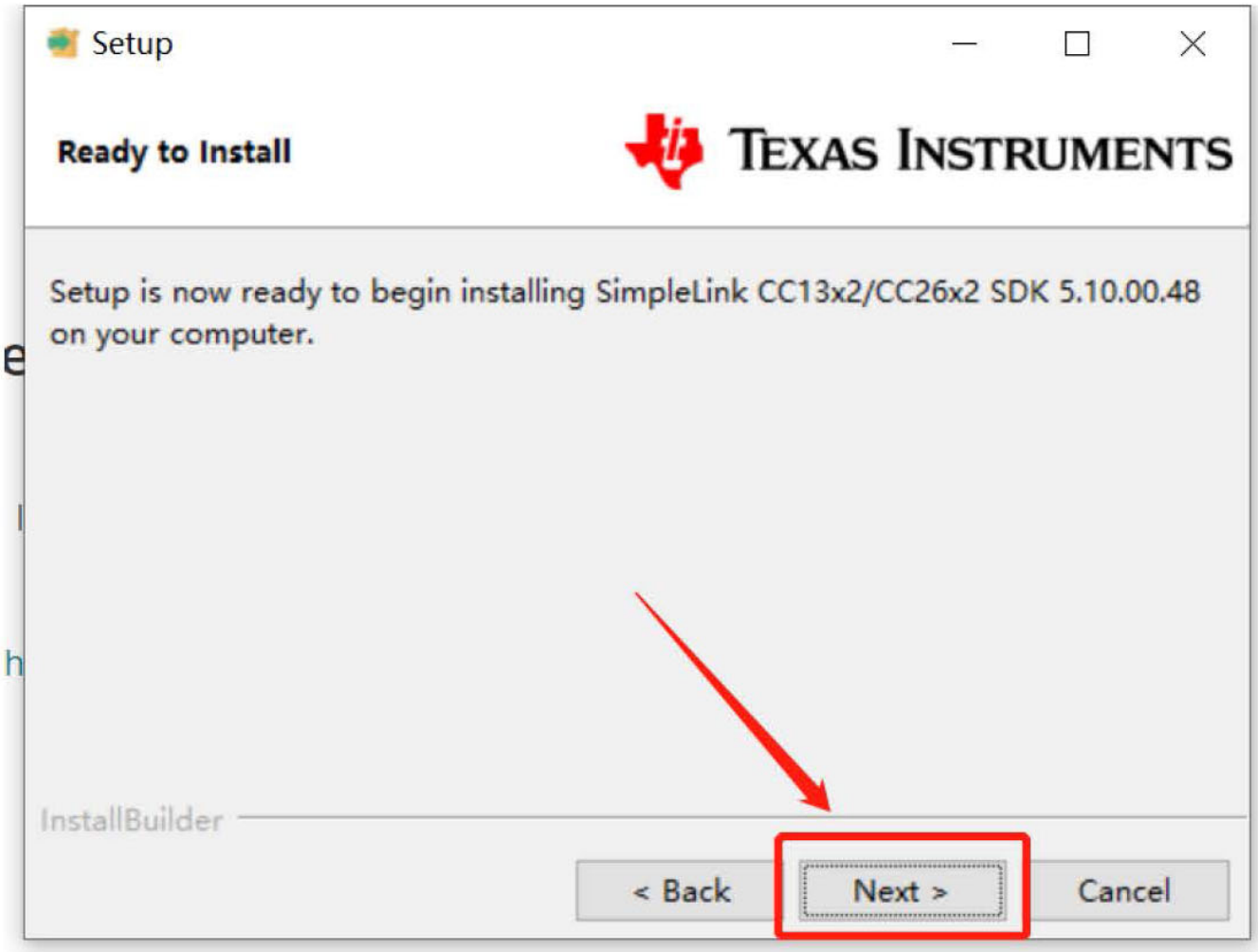


10. Select the Installation directory

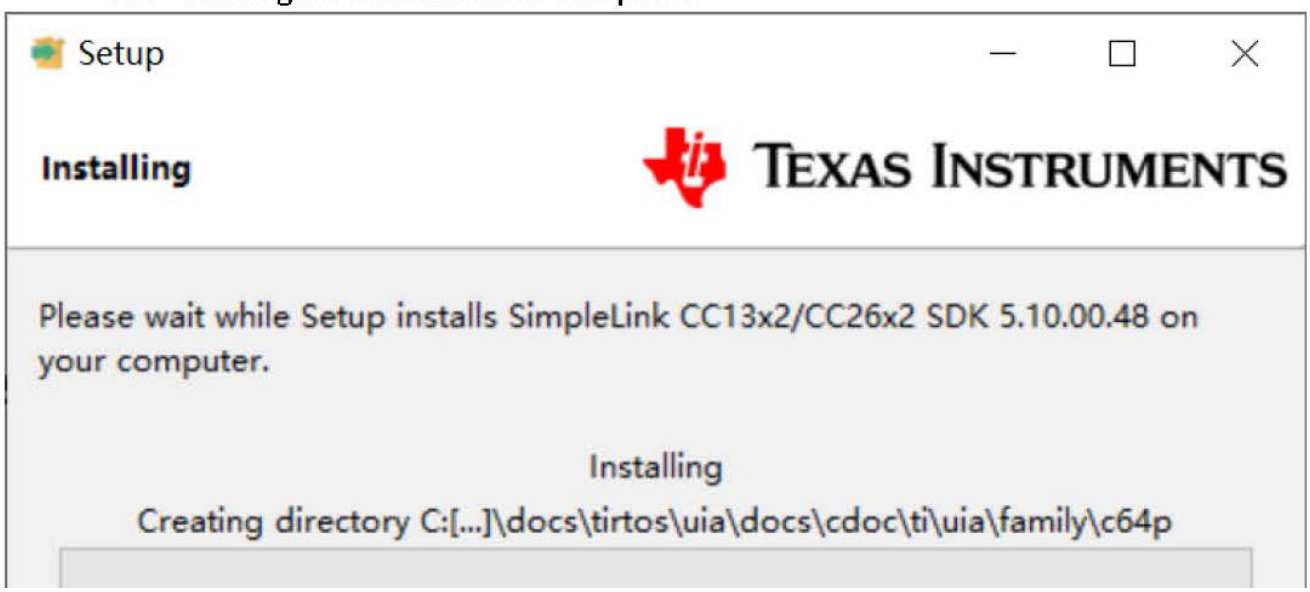


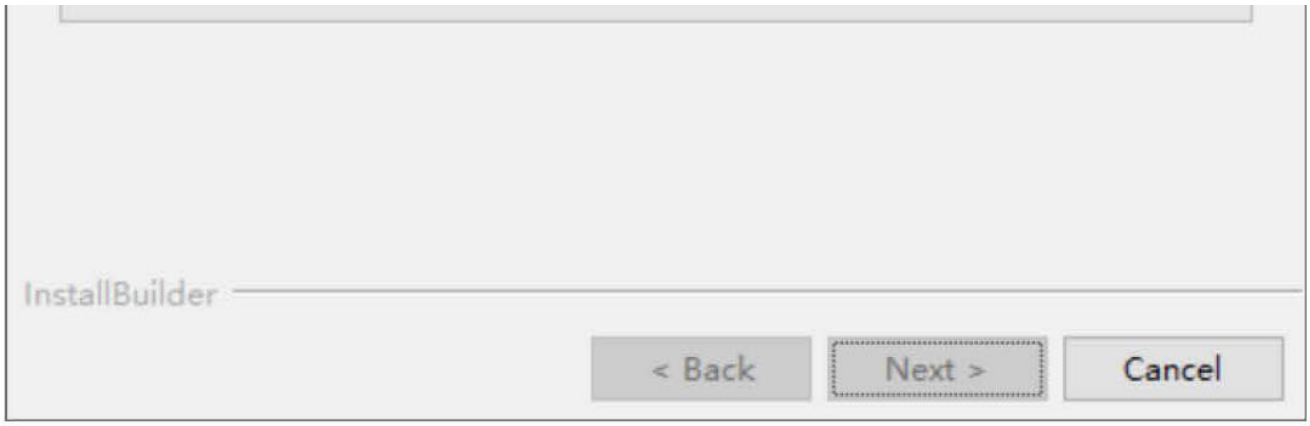


11. Click “Next”



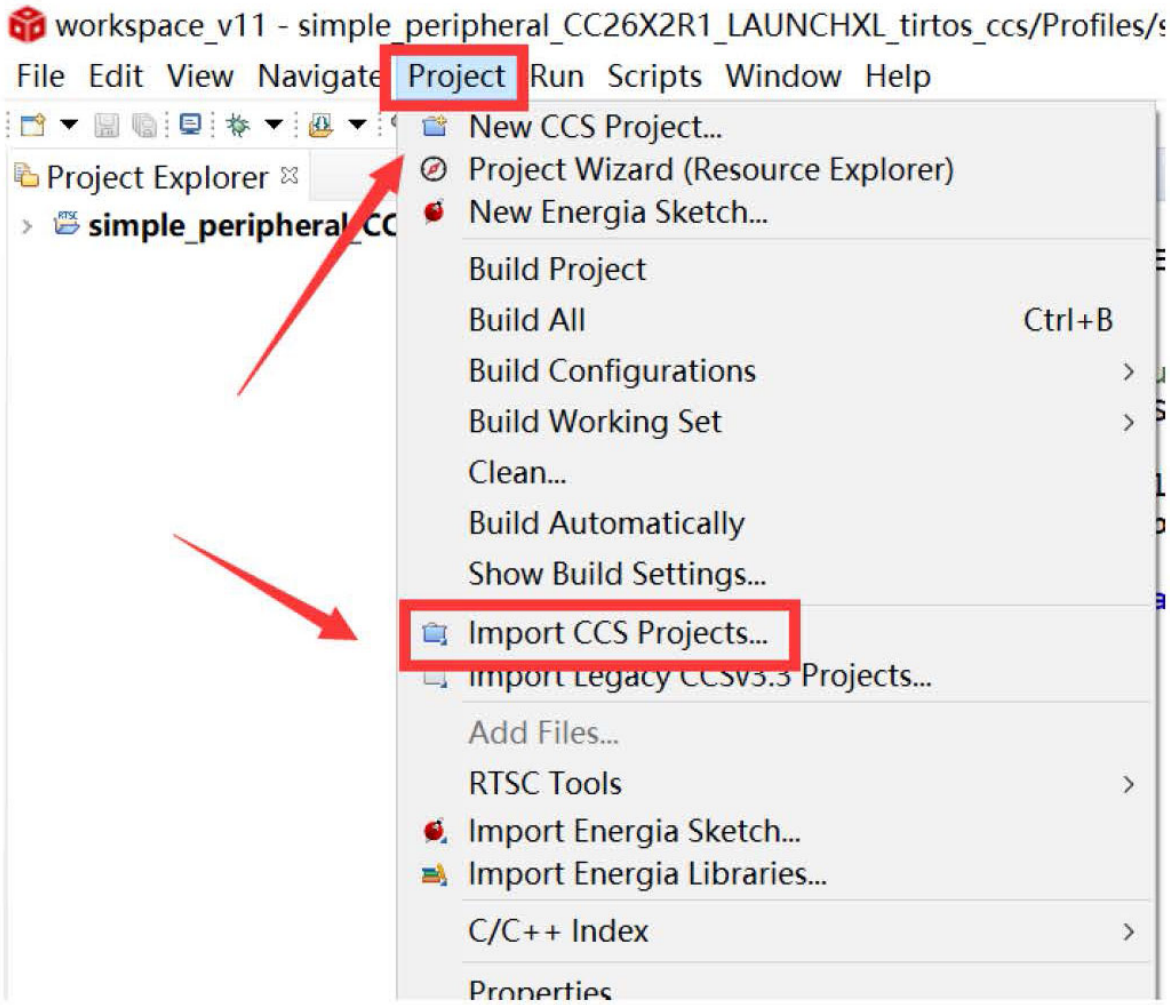
12. Waiting for installation to complete



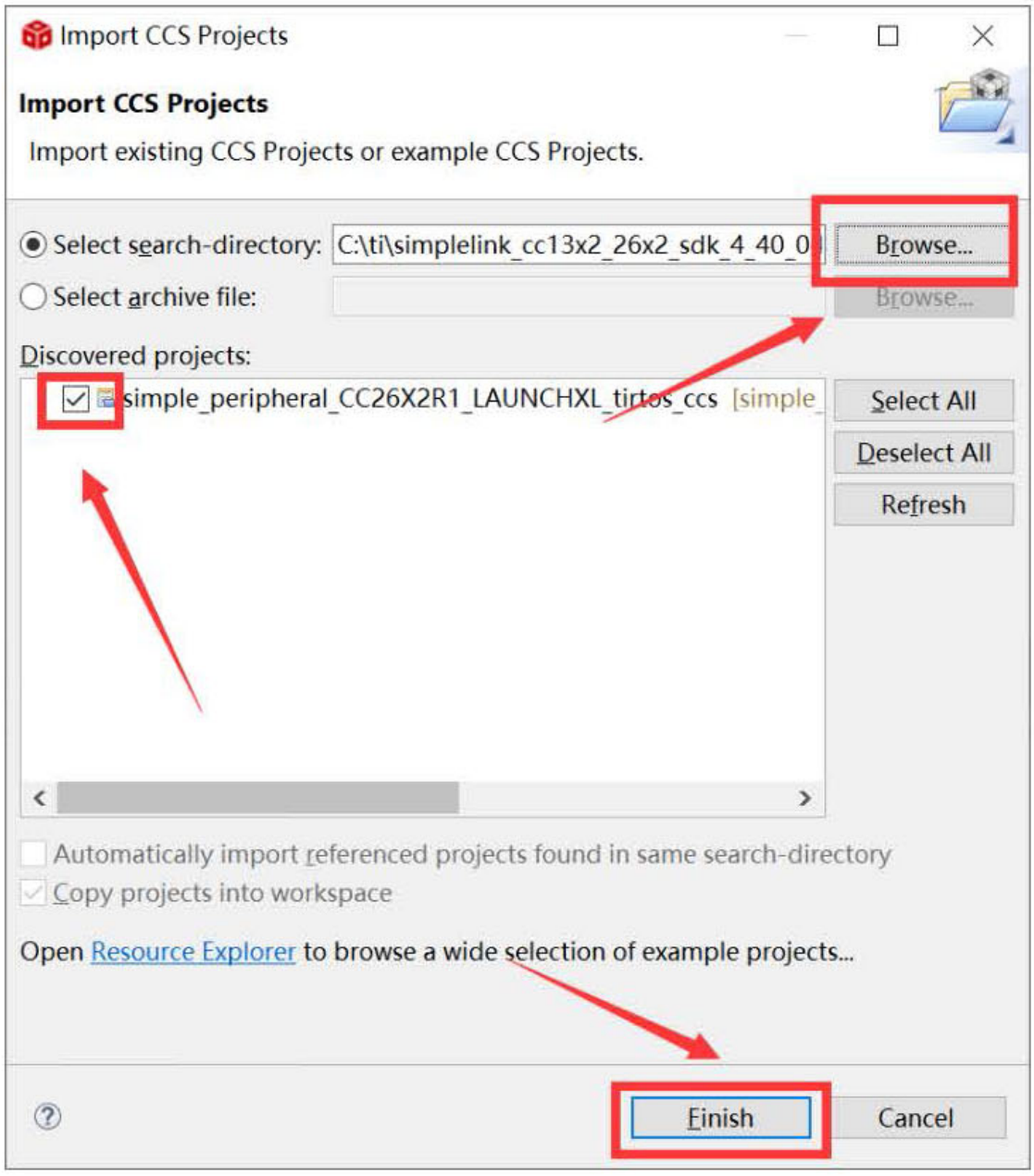


Run an example/demo code

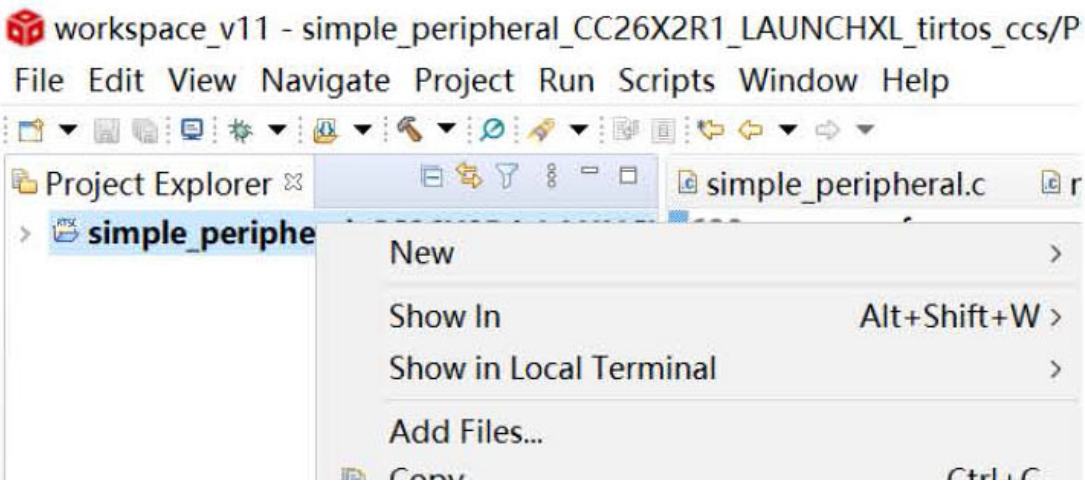
1. Find the option named “Import CCS project...”

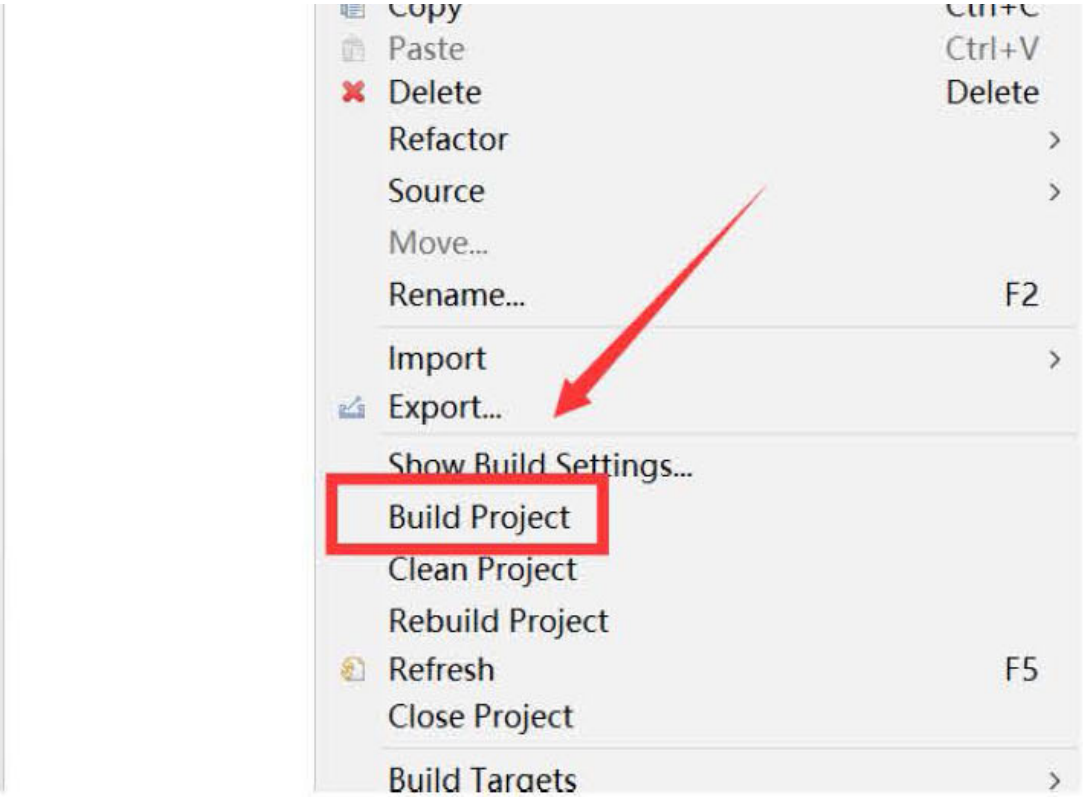


2. According to the following path to find the project:
ti\simplelink_cc13x2_26x2_sdk_5_10_00_48\examples\rtos\CC26X2R1_LAUNCHXL\ble5stack\simple_peripheral\tirtos\ccs

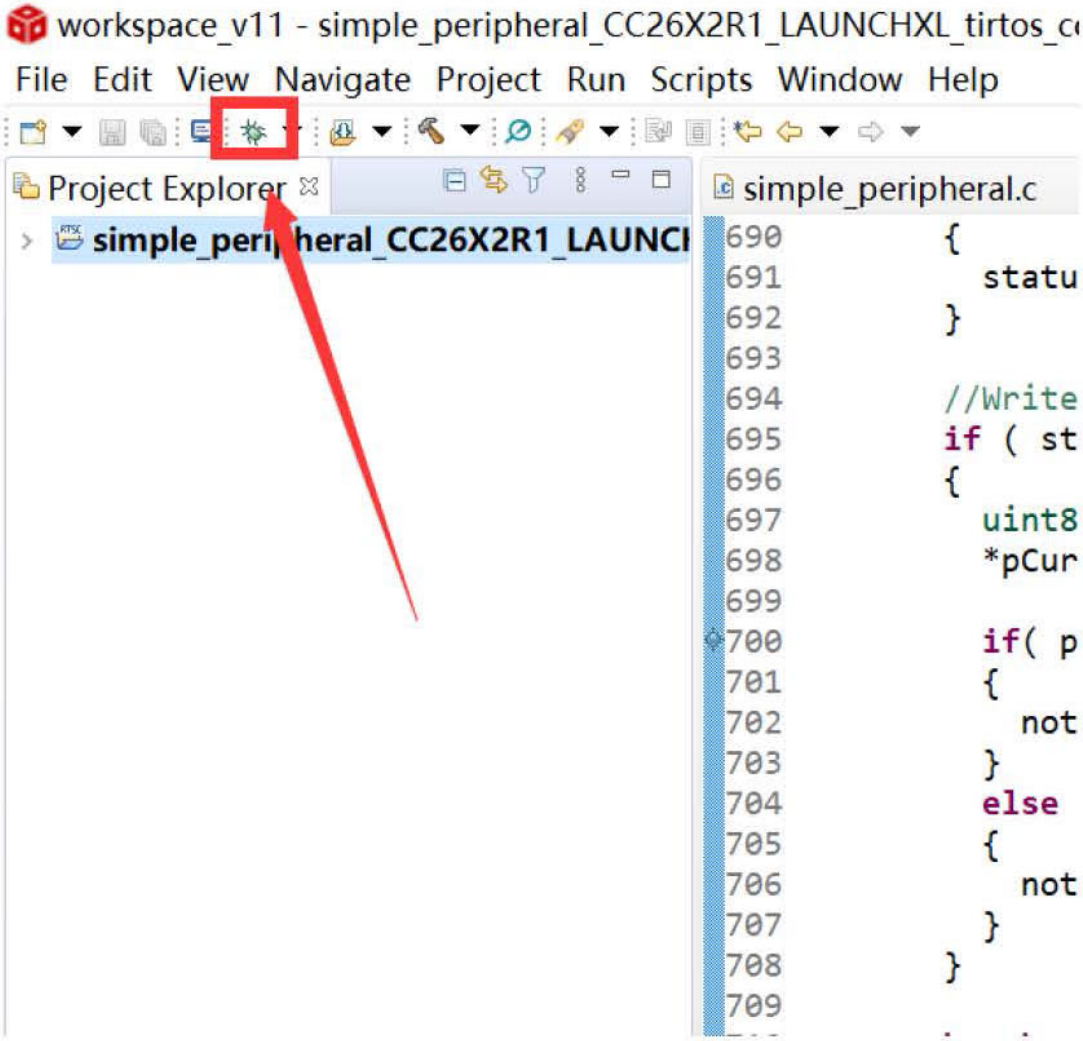


3. Right Click the project to build project



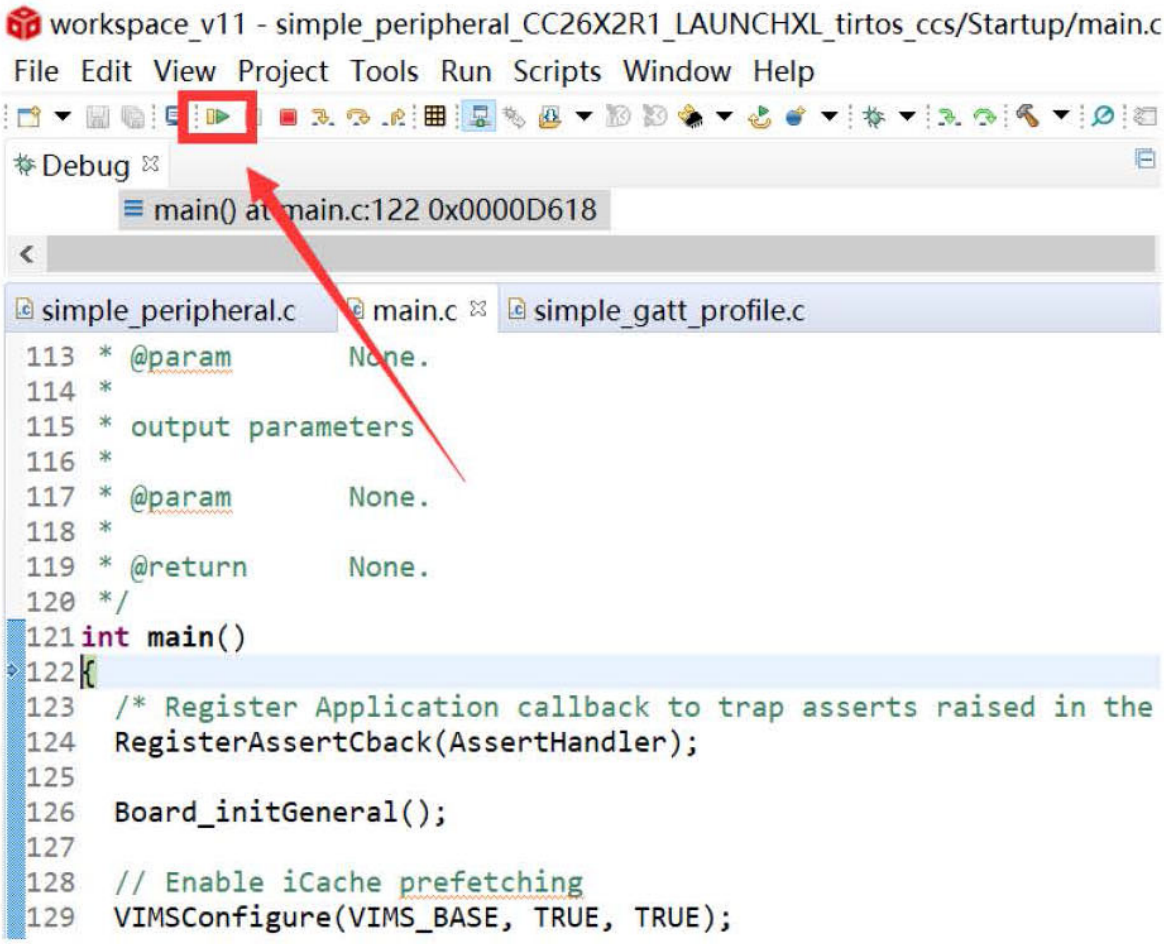

Copy Ctrl+C
Paste Ctrl+V
Delete Delete
Refactor
Source
Move...
Rename... F2
Import
Export...
Show Build Settings...
Build Project
Clean Project
Rebuild Project
Refresh F5
Close Project
Build Targets

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

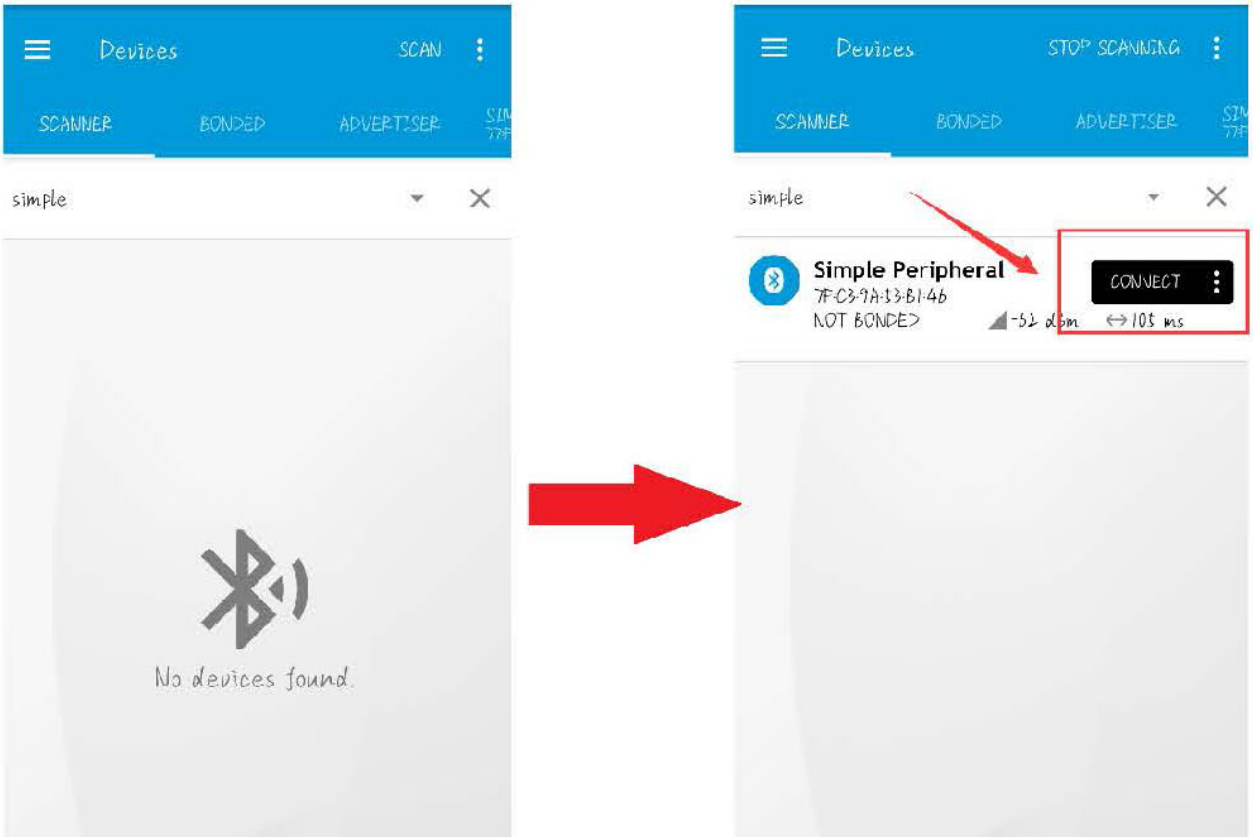


5. Download and start nRF Connect (an APP on your mobile device)

6. C lick on this option to start debugging

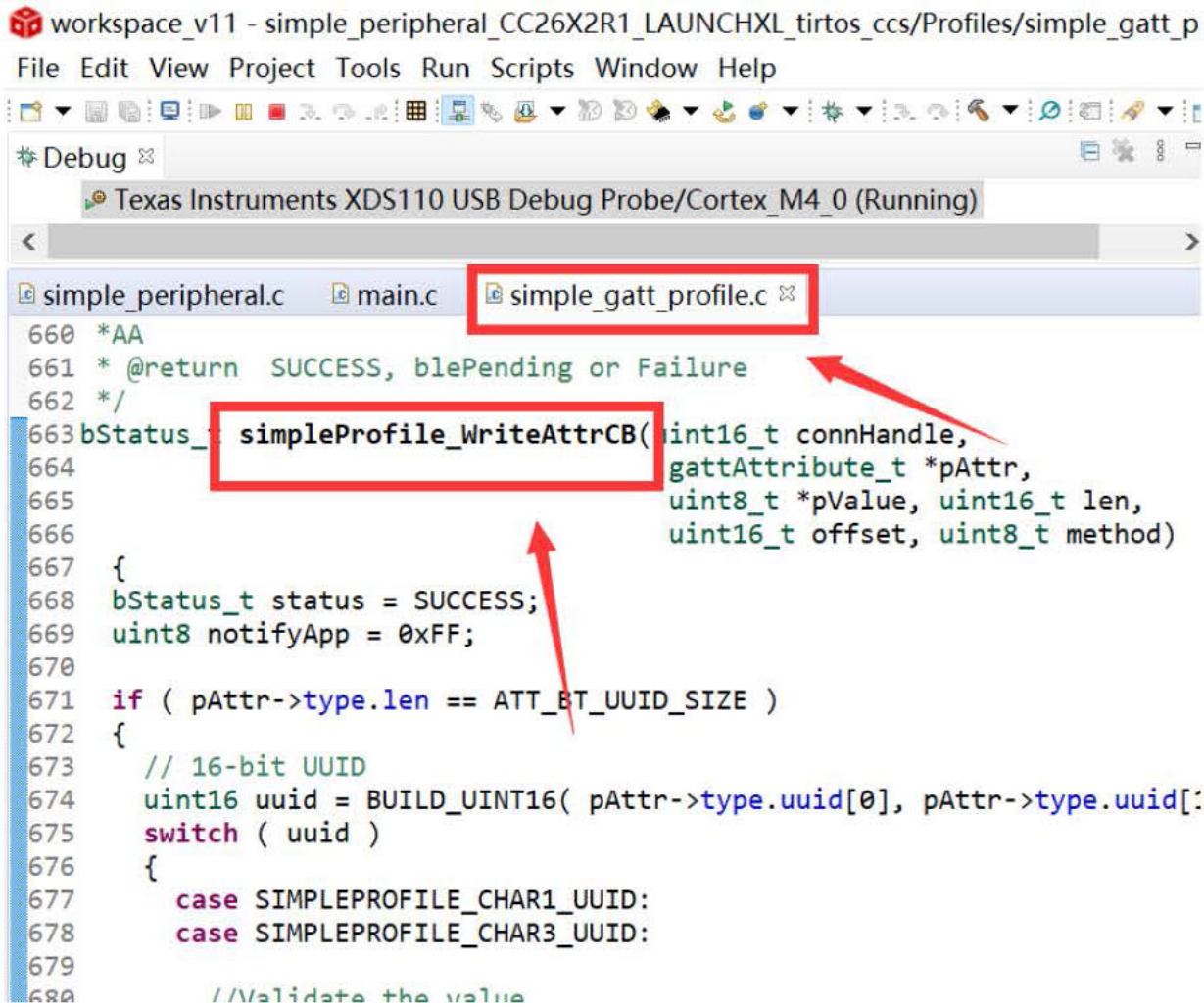


7. BDE-RFM207B is advertising, you can receive the signal on nRF Connect, then click “connect” to connect the mobile phone and the BDE-RFM207B

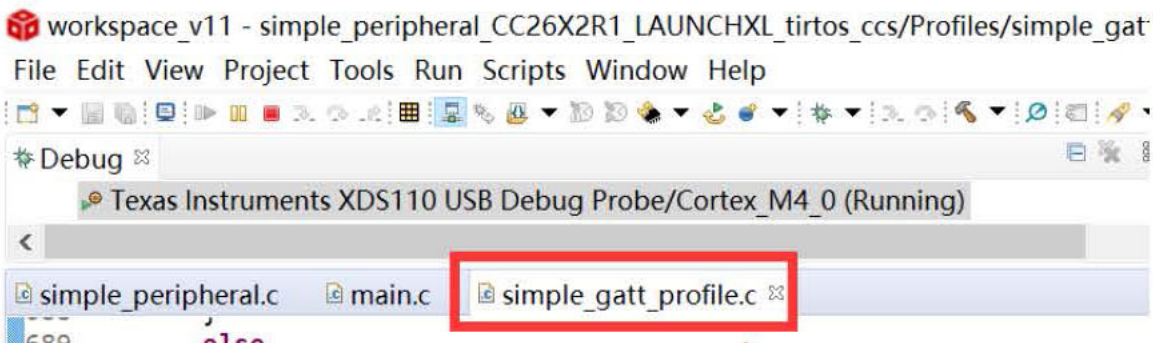


Wireless by Nordic

8. Find the file which is named “simple_gatt_profile.c” and the function which is named “simpleProfile_WriteAttrCB”

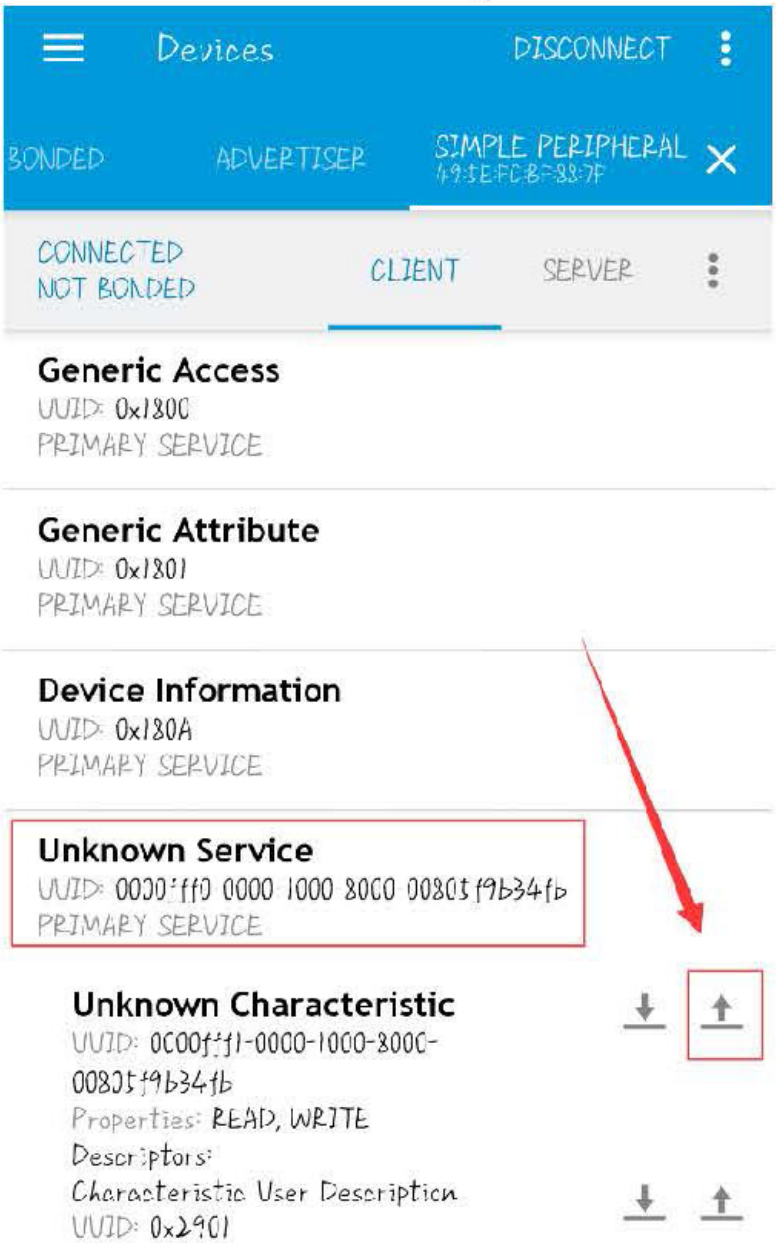


9. Find “pValue” in the function and set a breakpoint at the same line

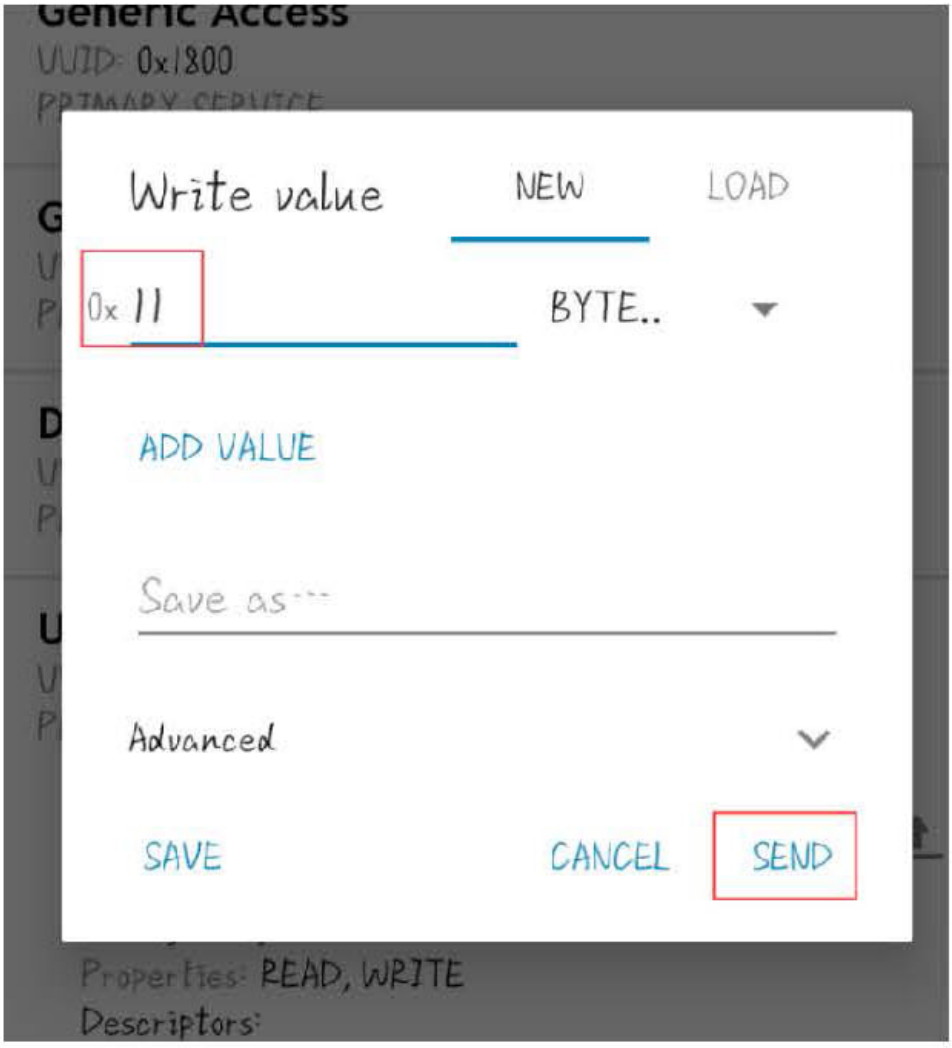


```
689         else
690         {
691           status = ATT_ERR_ATTR_NOT_LONG;
692         }
693
694         //Write the value
695         if ( status == SUCCESS )
696         {
697           uint8 *pCurValue = (uint8 *)pAttr->pValue;
698           *pCurValue = pValue[0];
699
700           if( pAttr->pValue == &simpleProfileChar1 )
701           {
702             notifyApp = SIMPLEPROFILE_CHAR1;
703           }
704           else
705           {
706             notifyApp = SIMPLEPROFILE_CHAR3;
707           }
708         }
```

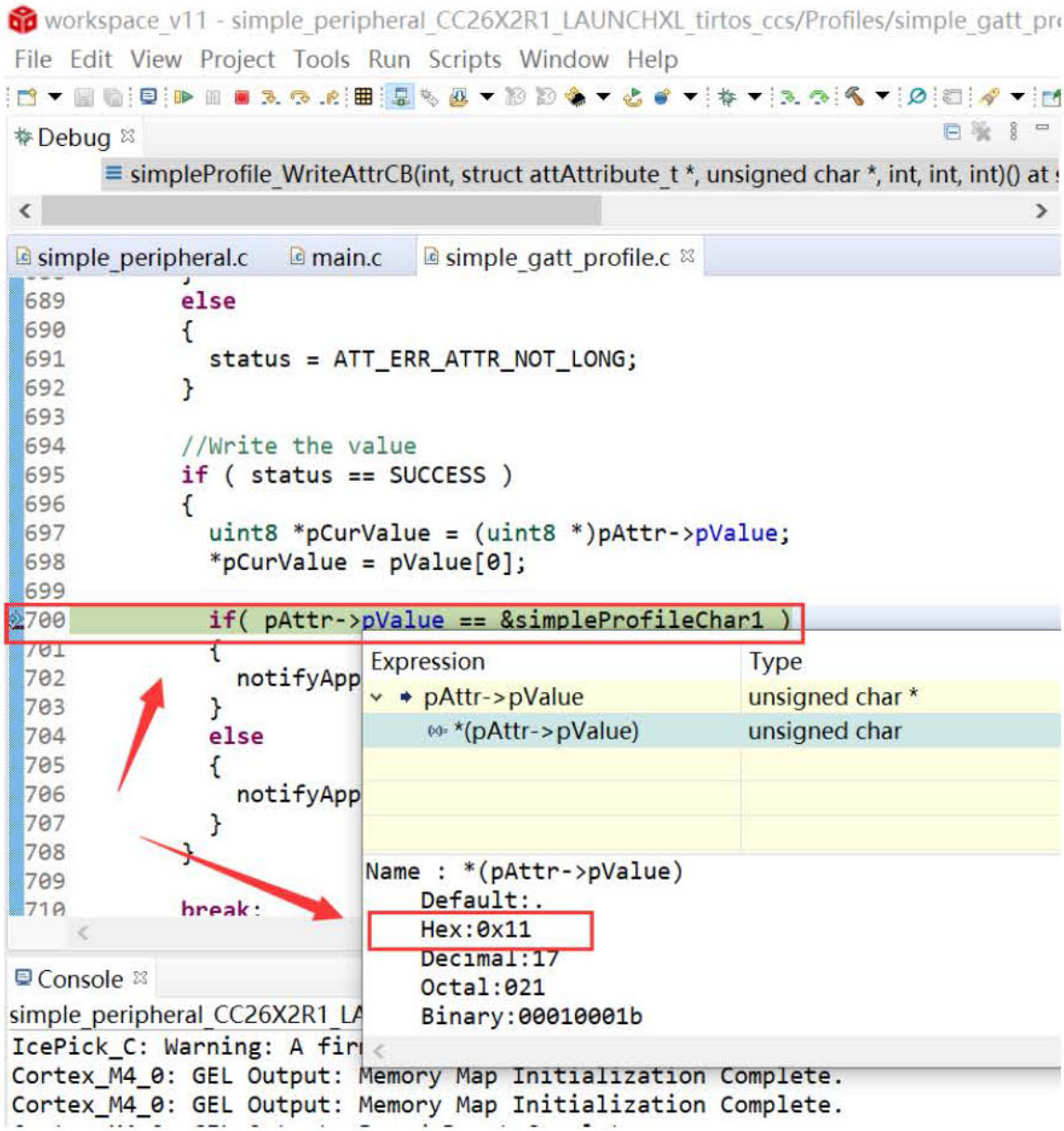
10. Click the up arrow to send a message to the BDE-RFM207B



11. Send 0x11 to the BDE-RFM207B



12. The program stops at the breakpoint, the value received is 0x11



By far you should've built your first application successfully.
For further development, please check out the CC2652RB data sheet, product information and support | TI.com page and download the User guide (**https://www.ti.com/lit/pdf/swcu185**)

Revision History

Revision	Date	Description
V1.0	21-Mar-2020	Initial Released
V2.0	14-Apr-2021	Replacement of 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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B2-403, 162 Science Ave, Huangpu District, Guangzhou, 510663
Tel: +86-020-28065335
Website: http://www.bdecomm.com/cn/

Email: shu@bdecomm.com
USA:
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 BDE-RFM207B Multiprotocol 2.4G Wireless Module [pdf] User Guide BDE-RFM207B, Multiprotocol 2.4G Wireless Module

Manuals+,