



# BDE Technology BDE-MP2652P7 Wireless Module User Guide

[Home](#) » [BDE Technology](#) » BDE Technology BDE-MP2652P7 Wireless Module User Guide 

## Contents

- [1 BDE Technology BDE-MP2652P7 Wireless Module](#)
- [2 Introduction](#)
- [3 Specifications](#)
- [4 Hardware Diagram](#)
- [5 Get Ready](#)
- [6 Software Development Kit \(SDK\) installation](#)
- [7 Run an example/demo code](#)
- [8 FAQ](#)
  - [8.1 Q: What is the recommended power supply for BDE-MP2652P7?](#)
  - [8.2 Q: Can BDE-MP2652P7 communicate on both 2.4 GHz and Sub-1GHz bands?](#)
  - [8.3 Q: What software tools are recommended for developing with BDE-MP2652P7?](#)
- [9 Documents / Resources](#)
  - [9.1 References](#)
- [10 Related Posts](#)

**BDE Technology BDE-MP2652P7 Wireless Module**



## USER GUIDE

### Introduction

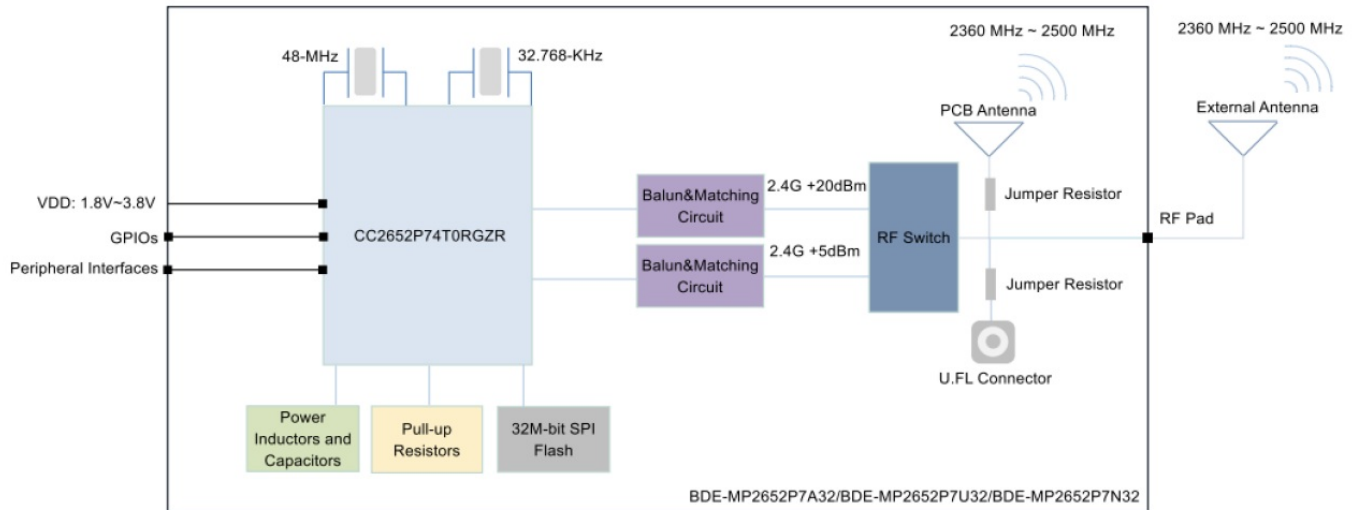
This user guide is for BDE-MP2652P7, a Wireless Module based on TI CC2652P7. It is a quick start guide for how to connect the module with the evaluation board BDE-EVB07 or with the TI launchpad, and how to build the first application. It also shows a demo for how BDE-MP2652P7 receives a data packet that is sent from the mobile terminal.

### Specifications

- Product Name: BDE-MP2652P7
- Wireless Module based on TI CC2652P7
- TX Power: 5 dBm or 20 dBm
- Frequency Band: 2.4 GHz (RX and TX), Sub-1GHz (RX only)
- Antenna Selection: Switch-based

### Hardware Diagram

#### A. Block Diagram



## B. RF Switch True Table

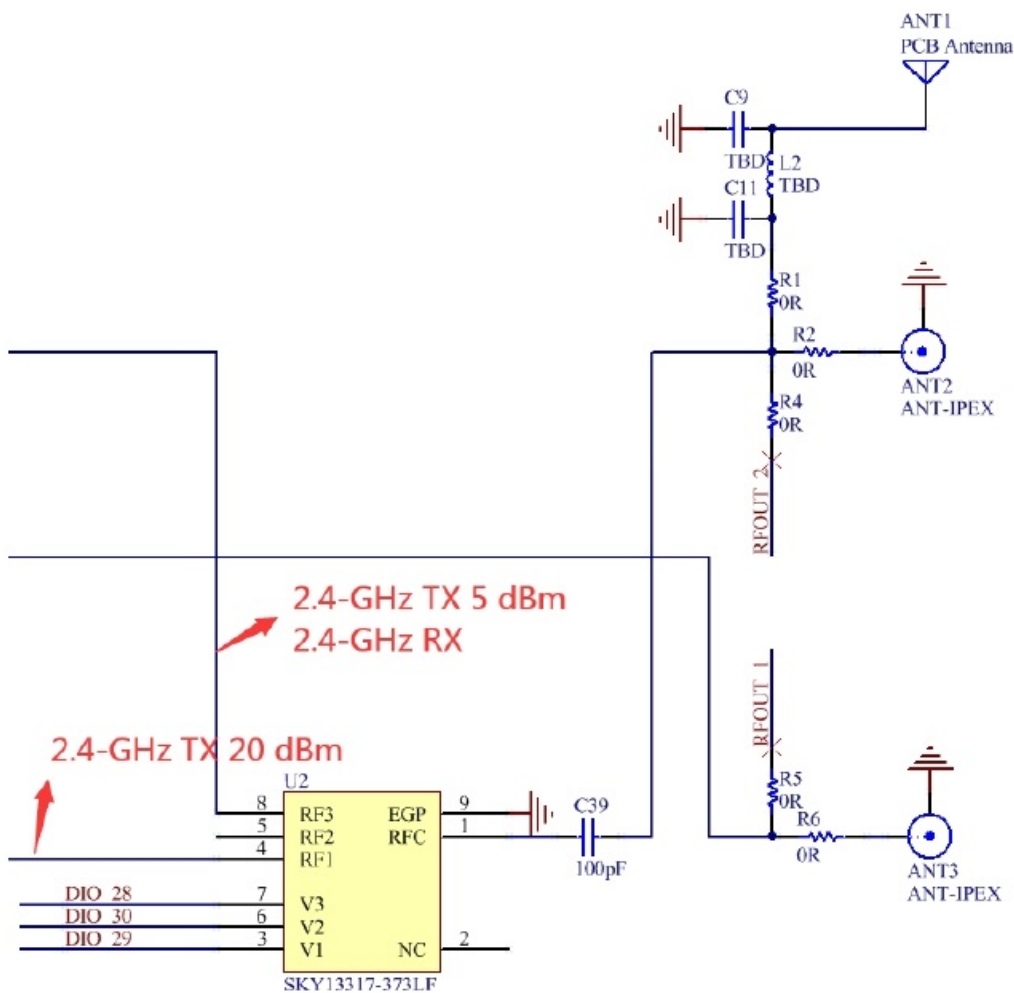
**Table 4. SKY13317-373LF Truth Table**

Low Insertion Loss Path	V1 (Pin 3)	V2 (Pin 6)	V3 (Pin 7)
RFC to RF1	High	Low	Low
RFC to RF2	Low	High	Low
RFC to RF3	Low	Low	High

**Note:** "High" = 1.8 to 5.0 V, "Low" = 0 to 0.25 V. Any state other than described in this Table places the switch into an undefined state. An undefined state will not damage the device.

## C. Antenna Selection Schematic

The module is using the switch to select 5 dBm or 20 dBm TX power and also the RX path for the 2.4-GHz band. Sub-1GHz band is standalone for having its own antenna.



## Get Ready

The following tools are recommended to develop with BDE-MP2652P7.

### Hardware tools:

- BDE-MP2652P7 BDE-MP2652P7-BDE Technology Inc. (bdecomm.com))
- Two BDE-ADP208 V1.0 (adaptor board)
- PC or Laptop
- A BDE-EVB07 ( BDE-EVB07-BDE Technology Inc. (bdecomm.com))
- USB cable for power supply and debugging Software tools:
- Terminal software such as CCS, IAR.

### Wireless Module

BDE Technology Inc. info@bdecomm.com

- CCS download
- Software Development Kit (SDK)
- Lightblue

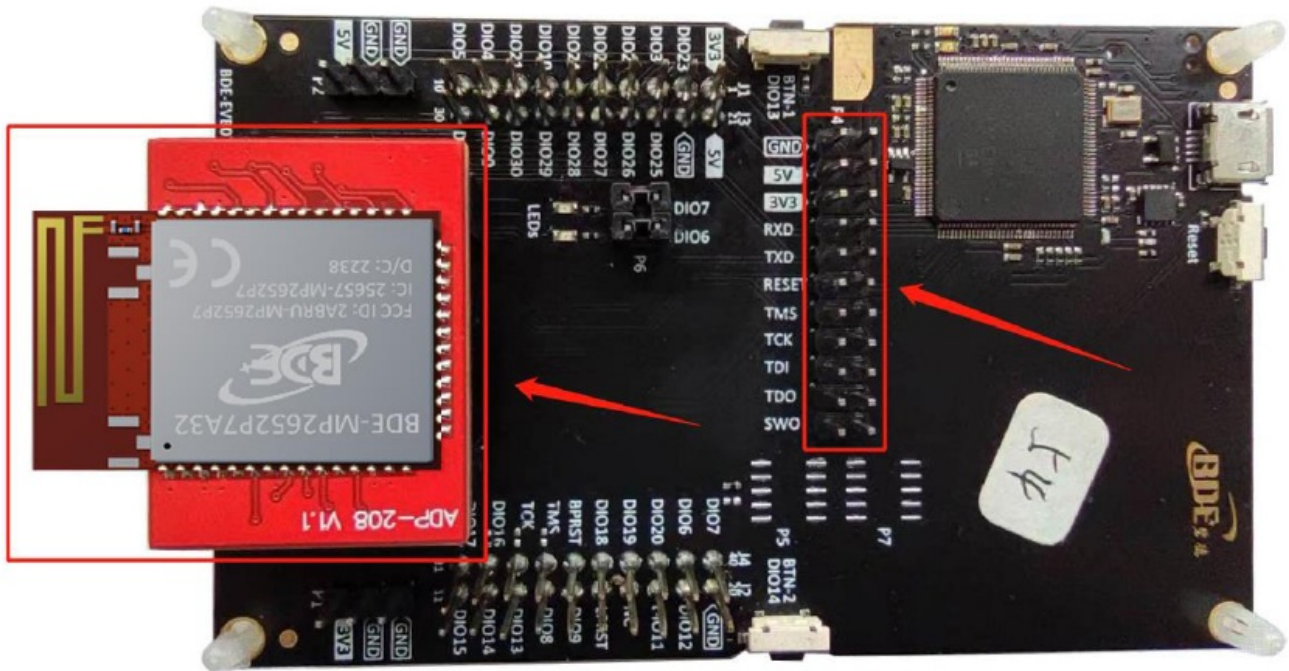
## Build Your First Application

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-MP2652P7 with the adaptor board into the dev board and connect all the pins with Jumpers as the following picture shows.



## 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

CCSTUDIO-WCS [Downloads](#)

[Overview](#) [Downloads](#) [Technical documentation](#) [Support & training](#)

## Downloads

IDE, CONFIGURATION, COMPILER OR DEBUGGER

 **CCSTUDIO** — Code Composer Studio (CCS) Integrated Development Environment (IDE)

Code Composer Studio is an integrated development environment (IDE) that supports TI's Microcontroller and Embedded Processors portfolio. Code Composer Studio comprises a suite of tools used to develop and debug embedded applications. It includes an optimizing C/C++ compiler, source code editor (...)

[Supported products & hardware](#)

[Download options](#)

## 2. Select an option to download CCS

### Download options



#### Code Composer Studio (CCS) Integrated Development Environment (IDE)

Version: 10.3.0.00007

Release date: 05 Apr 2021

##### SINGLE FILE INSTALLERS

↓ Windows single file installer for CCS IDE (1181753652 KB)

↓ Linux single file installer for CCS IDE (1102001729 KB)

↓ macOS single file installer for CCS IDE (1083552986 KB)



##### ON-DEMAND INSTALLERS

↓ Windows on-demand installer for CCS IDE (40136960 KB)

↓ Linux on-demand installer for CCS IDE (25338386 KB)

↓ macOS on-demand installer for CCS IDE (24595266 KB)

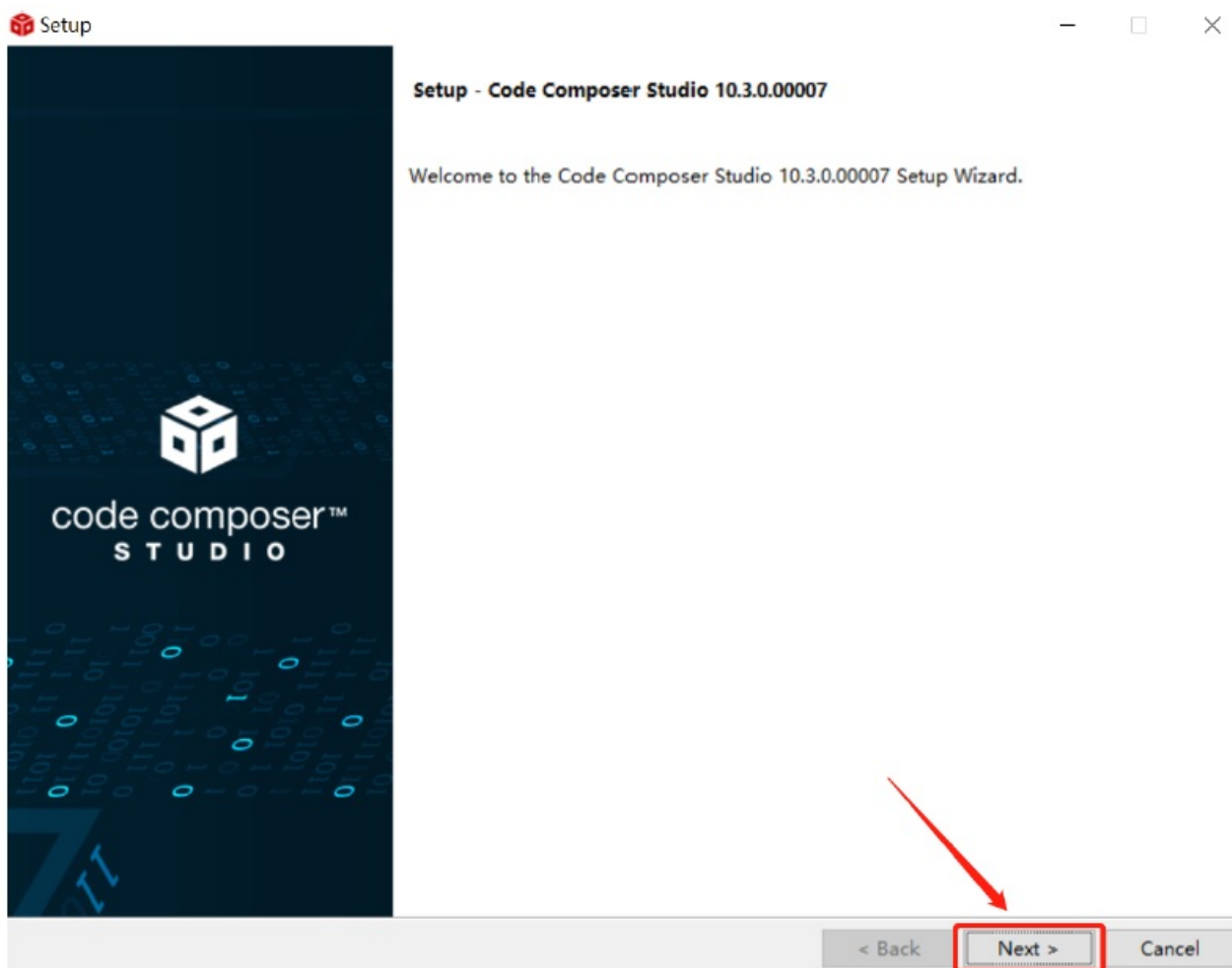
## 3. Unzip the package to a local disc

 CCS10.3.0.00007_win64.zip	2021/4/19 11:11	WinRAR ZIP J
 CCS10.3.0.00007_win64	2021/4/20 11:36	文件夹
...		

## 4. Click the setup of CCS

binary	2021/3/29 21:38
CCS10.3.0.00007_win64	2021/4/19 11:23
components	2021/3/29 21:38
features	2021/3/29 21:38
artifacts.jar	2021/3/29 21:38
<b>ccs_setup_10.3.0.00007.exe</b>	2021/3/29 21:37
content.jar	2021/3/29 21:38
README_FIRST_win64.txt	2021/3/29 21:38
timestamp.txt	2021/3/29 21:38

##### 5. Click “Next”



##### 6. Select the default option



**License Agreement**

Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.

**TECHNOLOGY SOFTWARE PUBLICLY AVAILABLE**

Copyright (c) 2016 Texas Instruments Incorporated

All rights reserved not granted herein.

**Limited License Agreement.**

This Limited License Agreement ("Agreement") is a legal agreement between you (either an individual or entity) and Texas Instruments Incorporated ("TI"). The "Software" consists of the following materials: (a) the materials identified as TI proprietary software programs in the software manifest for the software subject to the terms herein, and any "on-line" or electronic documentation associated with these programs, or any portion thereof (the "Licensed Materials"), and (b) the materials identified as open source materials or third party proprietary software in the software manifest for the Software, or any portion thereof ("Public Software"). For clarification, your use of the Licensed Materials is subject to the licensing terms contained in this Agreement and your use of the Public Software is subject to the separate licensing terms specified in the applicable software manifest and/or identified or included with the materials to which they apply. This Agreement does not limit your rights under, or grant you rights that supersede, the license

Do you accept this license?

☒ I accept the agreement

☐ I do not accept the agreement

VMware InstallBuilder

< Back

Next >

Cancel

**7. Click "Next"**





Please read the information carefully to determine if you need to take any action prior to continuing.

Operating System Check -> OK

Installer Path Check -> OK

Unicode Character Check -> OK

Anti-virus Check -> We have detected you are running anti-virus software on this computer. Anti-virus real-time file scanning may interfere with installation and it is recommended you temporarily disable this feature. Anti-virus software may also block the downloading of files that occurs during installation. If you cannot disable the anti-virus software, we recommend the offline installer, which has less interference.

Pending Reboot Check -> OK

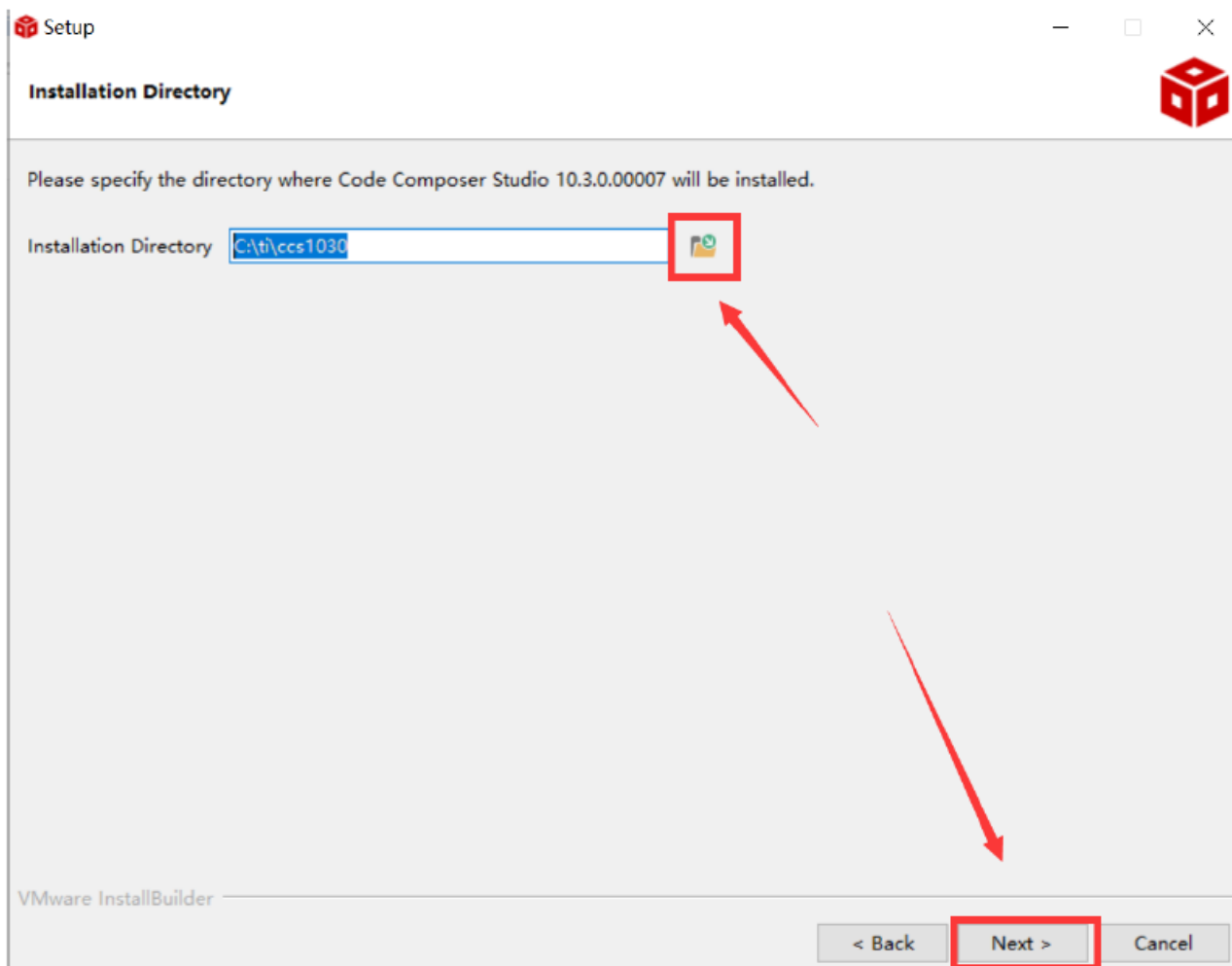
VMware InstallBuilder

< Back

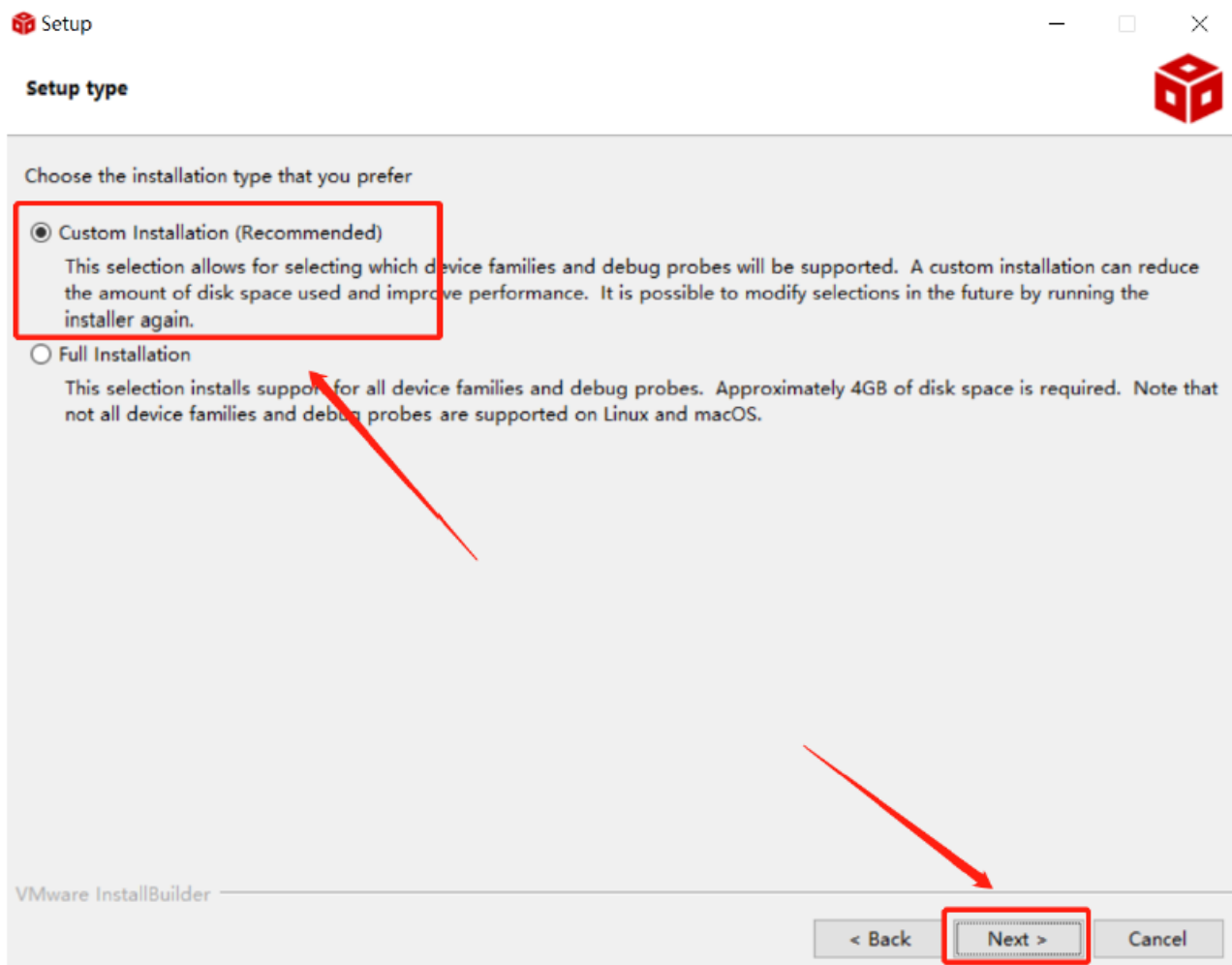
Next >

Cancel

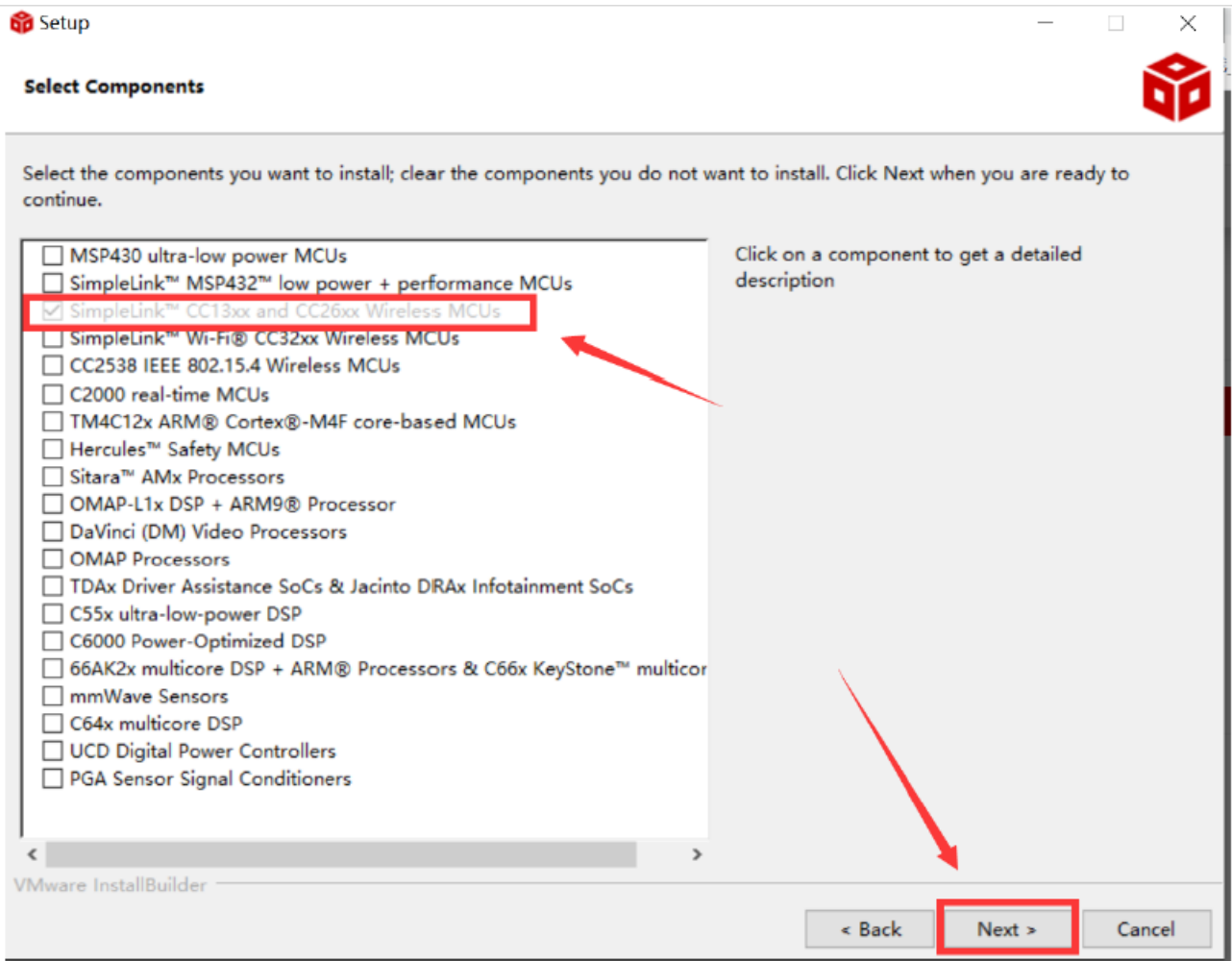
## 8. Select the Installation Directory



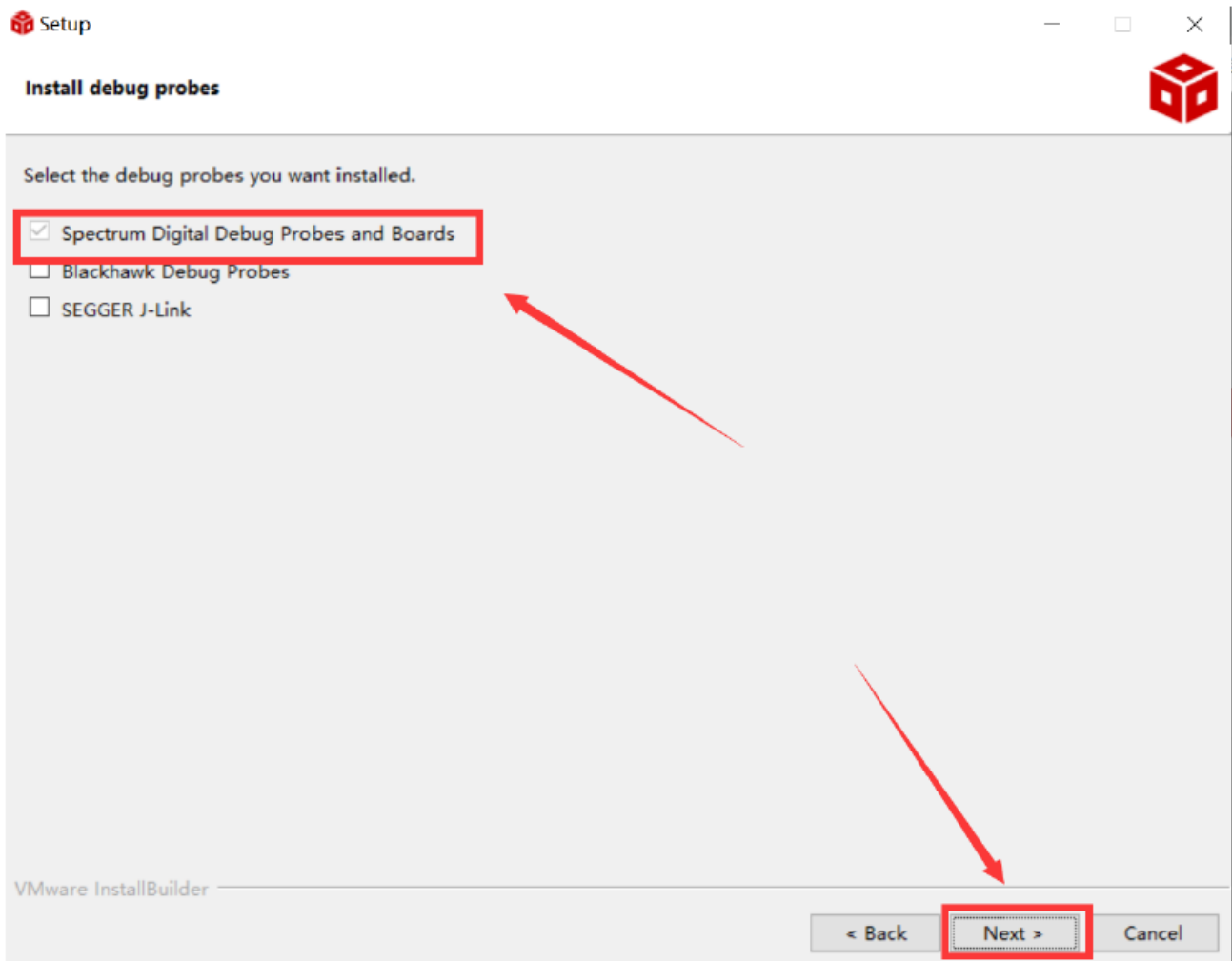
## 9. Select the default option



## 10. Select the component



## 11. Select the default option



12. Click “Next”

**Unsupported Boards**

Please note, the following debug probes and boards with onboard debug probes are not supported:

**XDS510 Debug Probes**

C6x1x DSP Starter Kit

C5510 DSP Starter Kit

C5509 DSP Starter Kit

VMware InstallBuilder

&lt; Back

Next &gt;

Cancel

**13. Click “Next”**

**Ready to Install**

Setup is now ready to begin installing Code Composer Studio 10.3.0.00007 on your computer.

VMware InstallBuilder

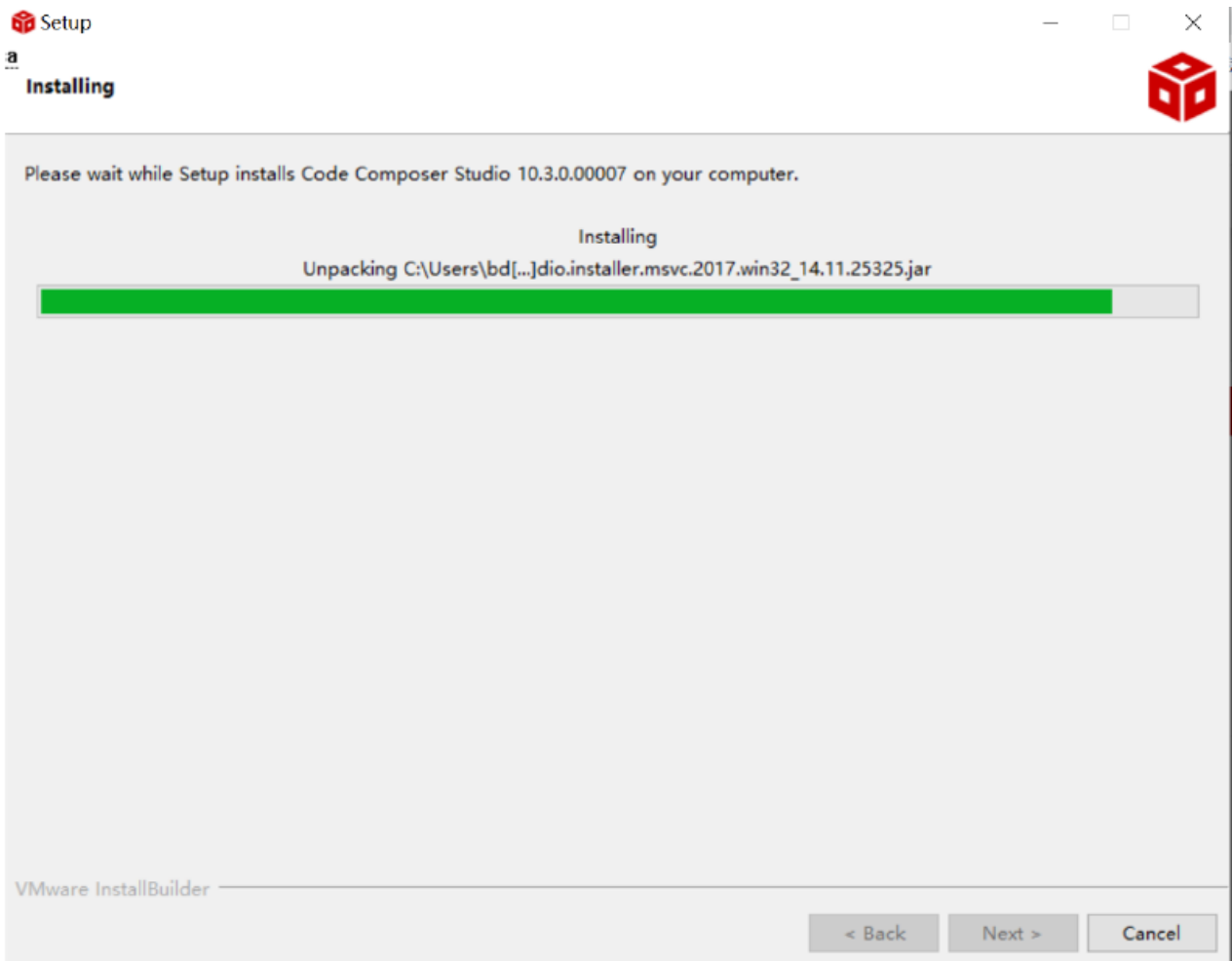
< Back

Next >

Cancel

**14. Waiting for installation to complete**





## Software Development Kit (SDK) installation

### 1. Click on this option

CC2652P7 ACTIVE Data sheet Order now


Product details | Technical documentation | **Design & development** | Ordering & quality | Support & training

Technical article | [Your microcontroller deserves a nap – designing “sleepy” wireless applications](#) | 28 Mar 2018

### Design & development

For additional terms or required resources, click any title below to view the detail page where available.

All | Hardware development | **Software development** | Design tools & simulation | CAD/CAE symbols



SOFTWARE DEVELOPMENT KIT (SDK)  
**SIMPLELINK-CC13XX-CC26XX-SDK** | SimpleLink™ CC13xx and CC26xx software development kit (SDK)  
The SimpleLink™ CC13xx and CC26xx software development kit (SDK) provides a comprehensive software package for the development of Sub-1 GHz and 2.4 GHz applications including support for *Bluetooth®* Low Energy, Mesh, Zigbee®, Matter, Thread, 802.15.4-based, proprietary, and multiprotocol (...)  
[Supported products & hardware](#)

Evaluate in the cloud  
Download options







### 2. Select an option you need to download SDK

## SIMPLELINK-CC13XX-CC26XX-SDK — SimpleLink™ CC13xx and CC26xx software development kit (SDK)

Latest version Version: 6.40.00.13 Release date: 19 Dec 2022

[Release notes](#) [View all versions](#)

**Downloads** Supported products & hardware

 Windows Installer for SimpleLink CC13XX CC26XX SDK — 838130 K	Checksum 68753d7c2c0ce364993b5562c78e00e7 
 Linux Installer for SimpleLink CC13XX CC26XX SDK — 835066 K	Checksum 36bfac6193296352c32d45577ab7ee1 
 Mac OS Installer for SimpleLink CC13XX CC26XX SDK — 830397 K	Checksum ef17961f4f6605ff827887e9df26990d 

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

[myTI FAQ](#)

## Existing myTI user?

Your email address

Your myTI password



Remember me

Login

[Forgot your password?](#)

By logging in, you agree to  
[TI's Terms of use & Privacy policy.](#)

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

ort

II

e will  
d 1-

## U.S. Government export approval:

All fields are Required. Incomplete information will be DENIED.

First name:

Last name:

Your email address:

Your full company/university name:

Country this file will be used in:

What end-equipment/application will you use this file for:

☐ Military

☒ Civil

I certify that the following is true:

### 5. Select "Yes" and submit

I CERTIFY ALL THE ABOVE IS TRUE:

Yes ☒

No ☐

Submit

Thank you,  
Texas Instruments

### 6. Download SDK

# TI Request

You have been approved to receive this file.  
Click "Download" to proceed.

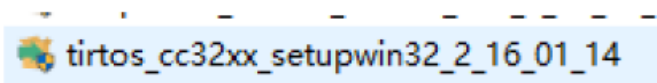
In a few moments, you will also receive an email with the link to this file.

**Download**

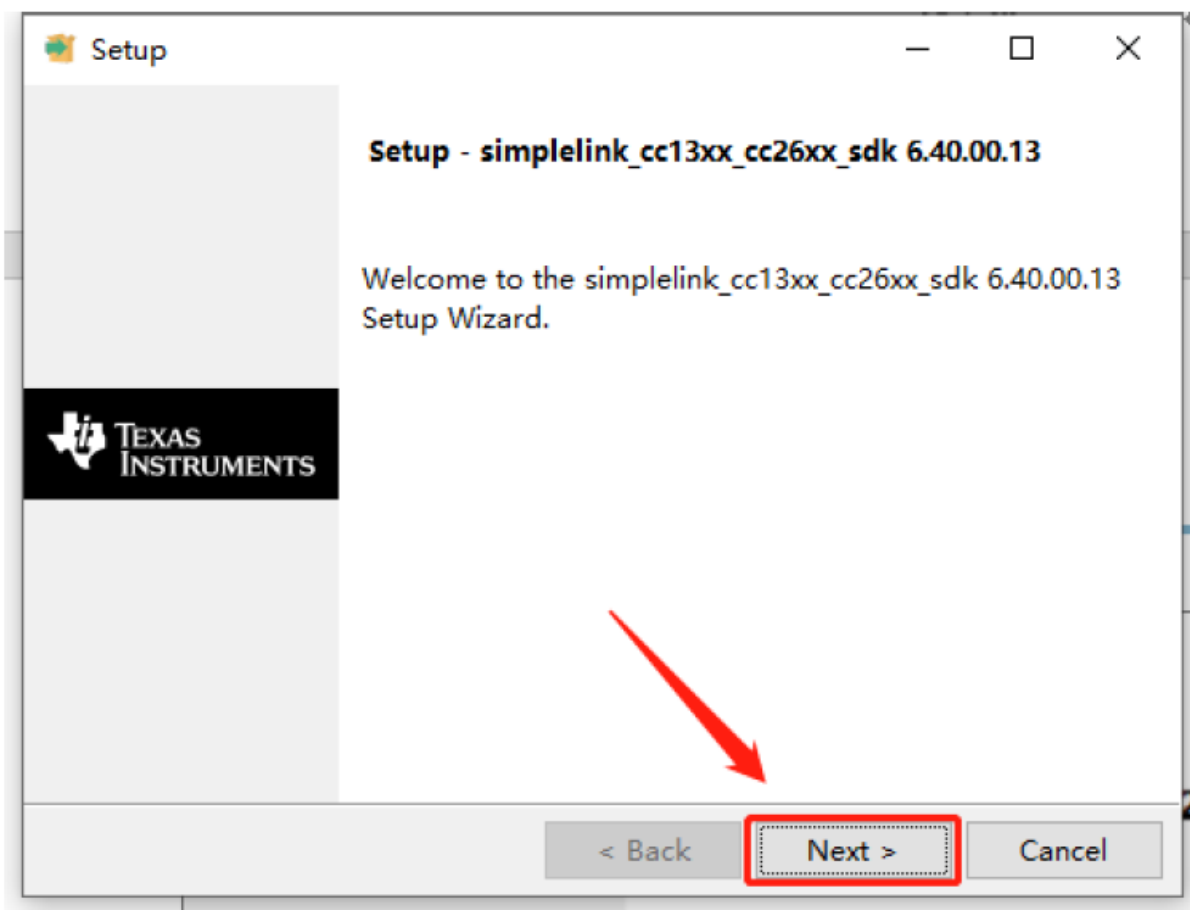
Having trouble downloading? Try [www.ti.com/software-help](http://www.ti.com/software-help)

Thank you,  
Texas Instruments

## 7. Installation



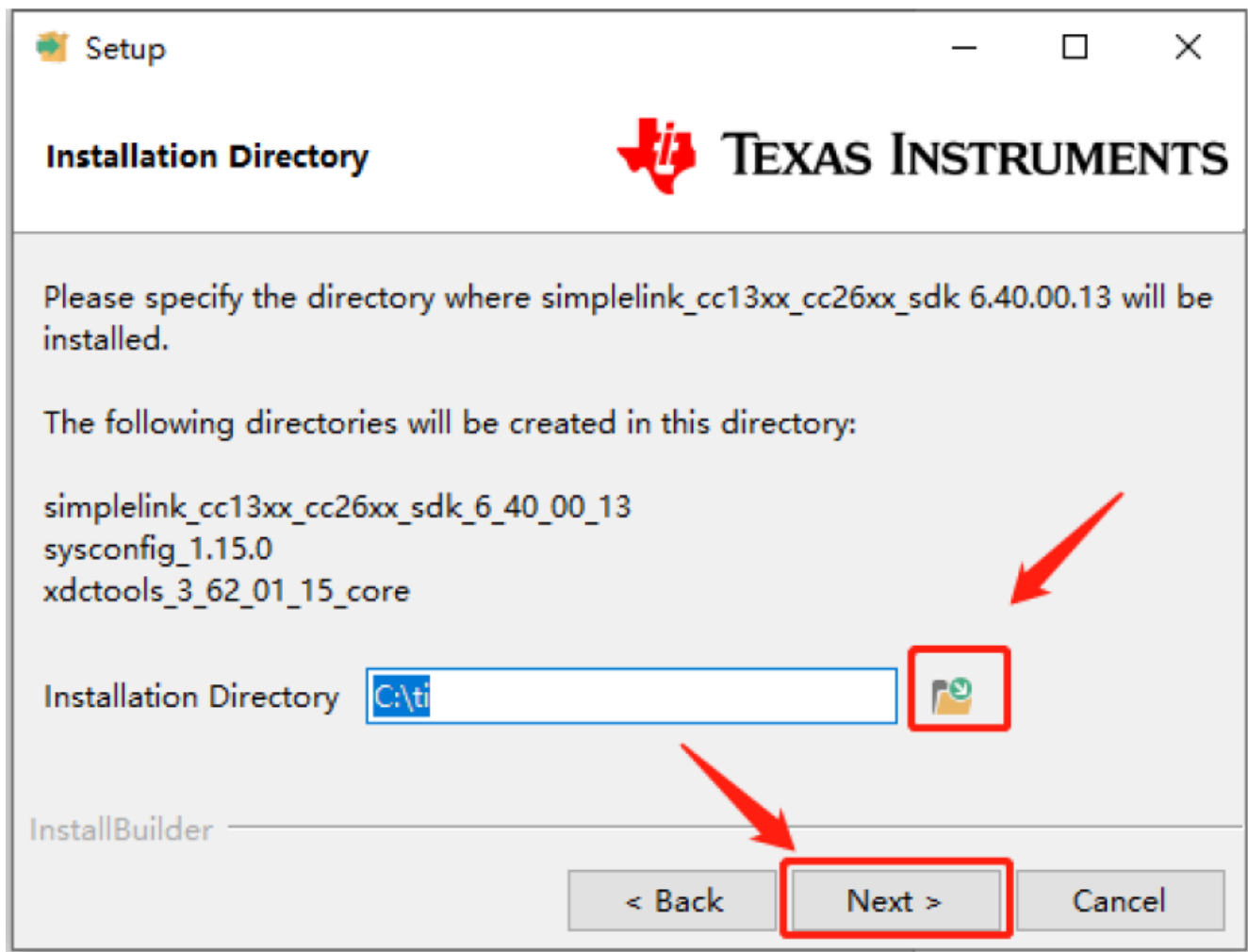
## 8. Click "Next"



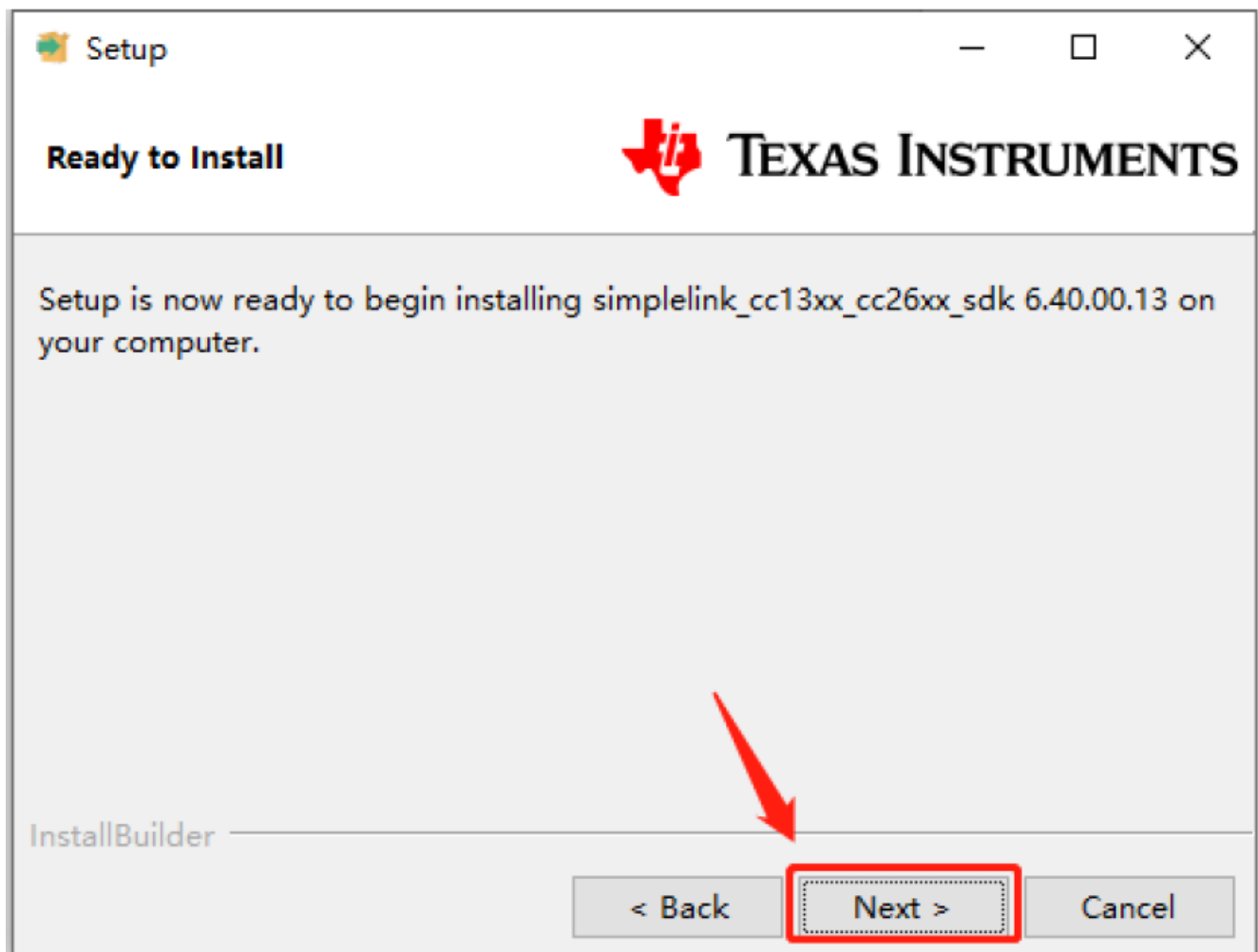
9. Select the default option



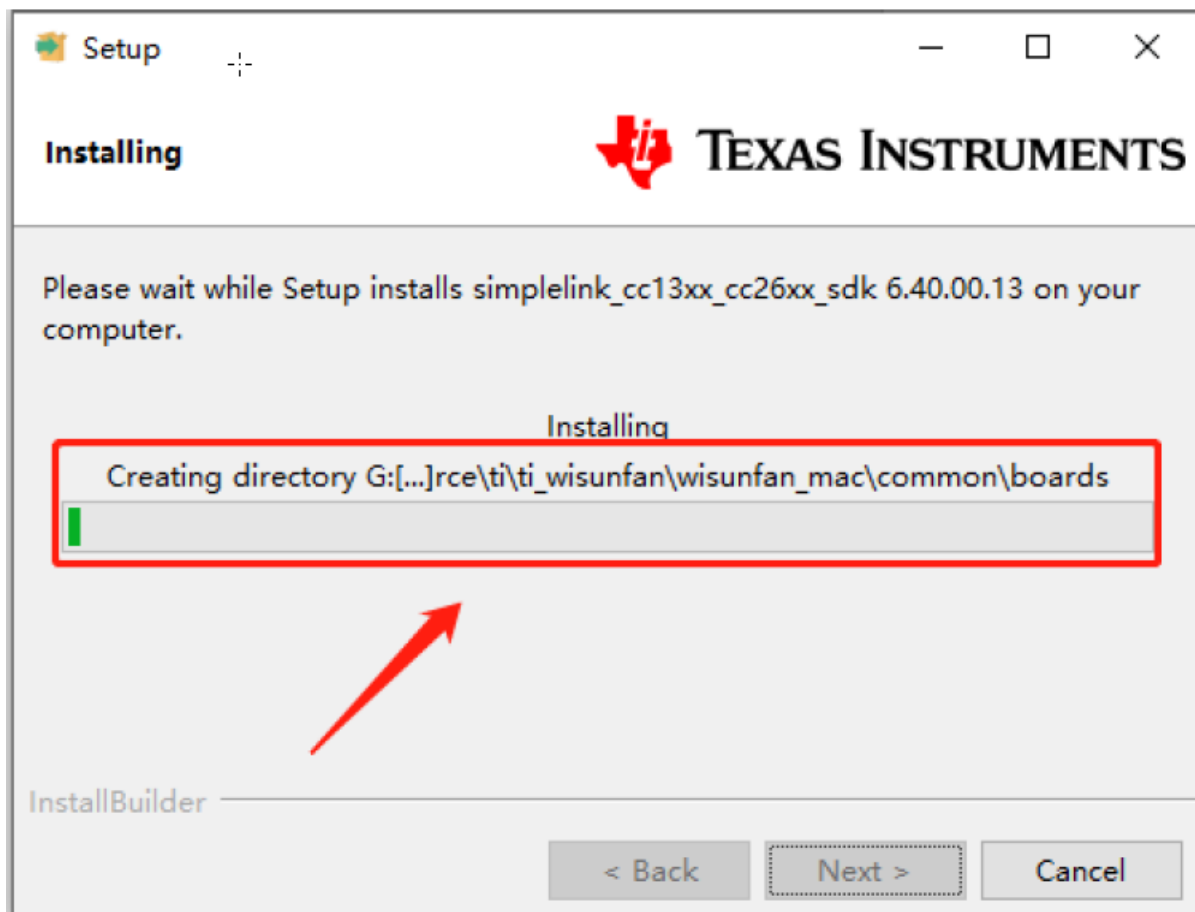
10. Select the Installation directory



11. Click "Next"



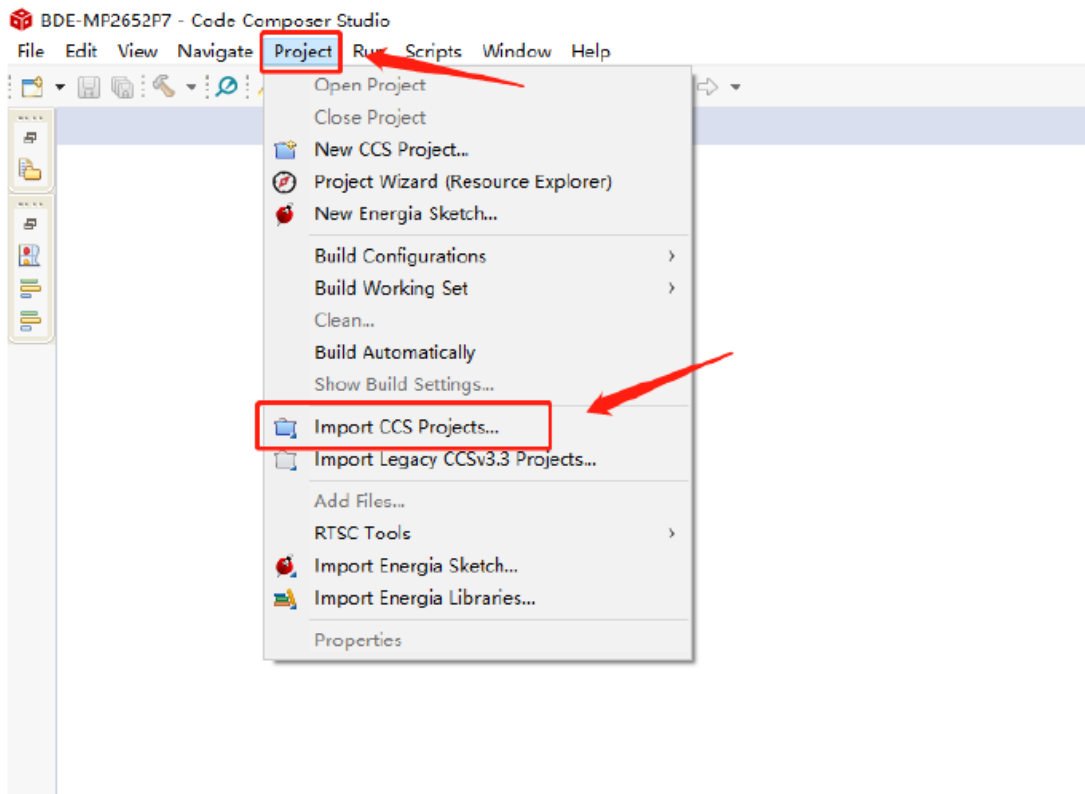
## 12. Waiting for installation to complete





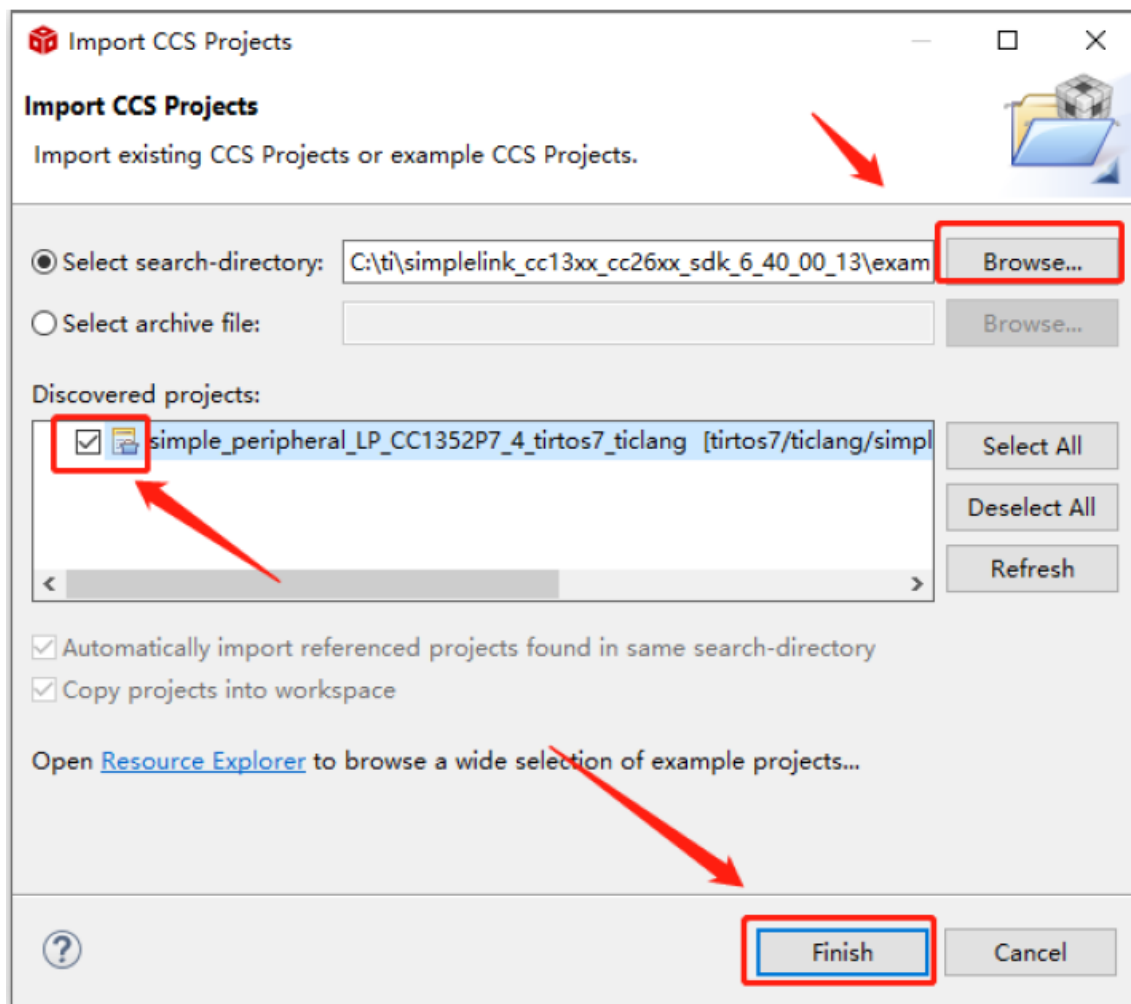
## Run an example/demo code

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

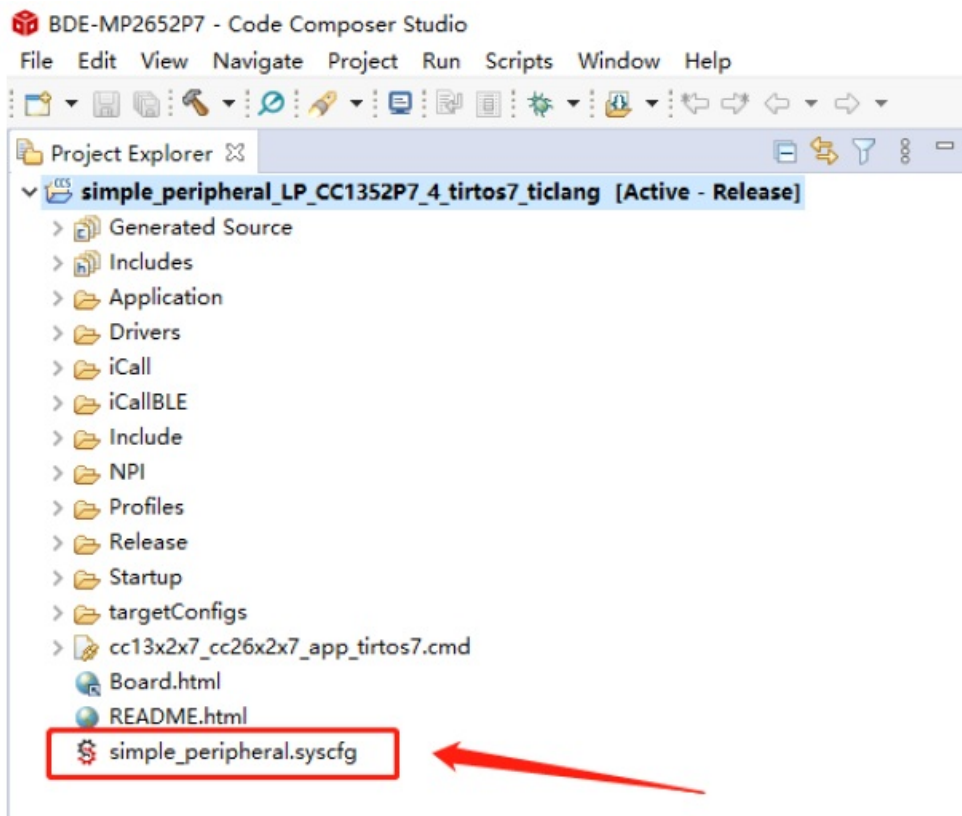


### 2. According to the following path to find the sending end project:

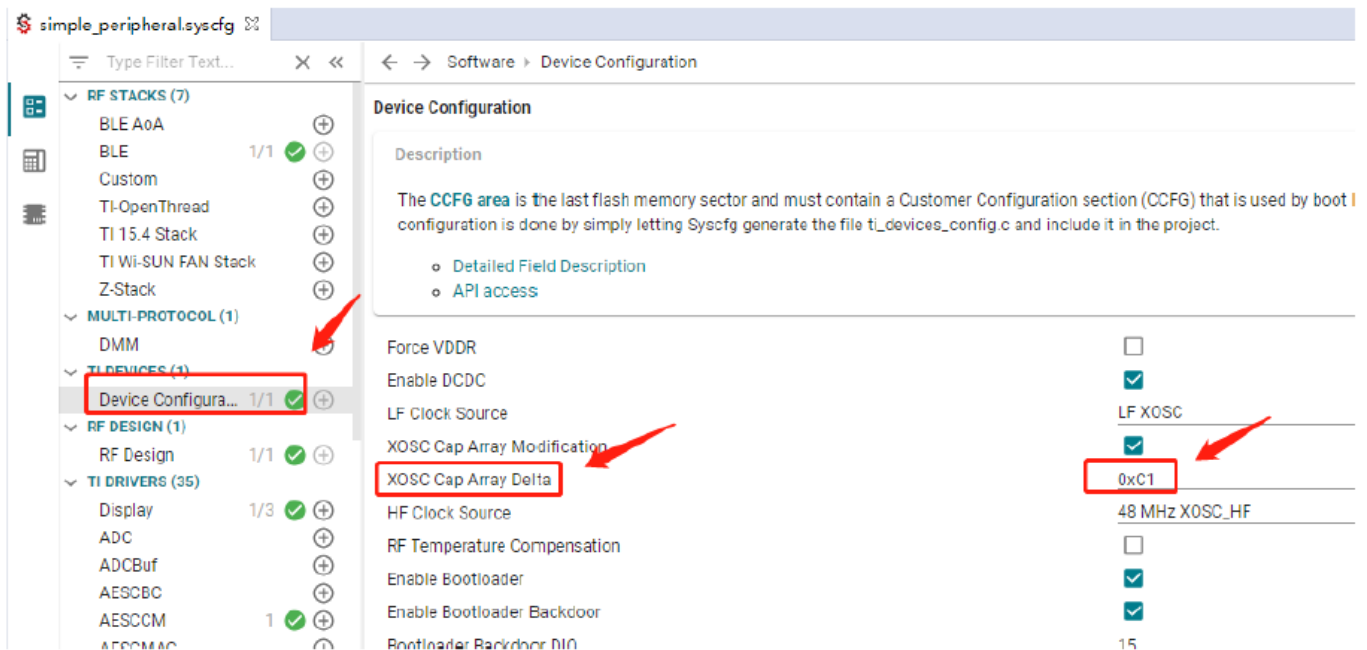
ti\simplelink\_cc13xx\_cc26xx\_sdk\_6\_40\_00\_13\examples\rtos\LP\_CC1352P7\_4\ble5stack\simple\_peripheral  
(Since TI does not have a dedicated SDK for CC2652P7, we use LP\_CC1352P7\_4 instead, which can also run normally on CC2652P7 devices)



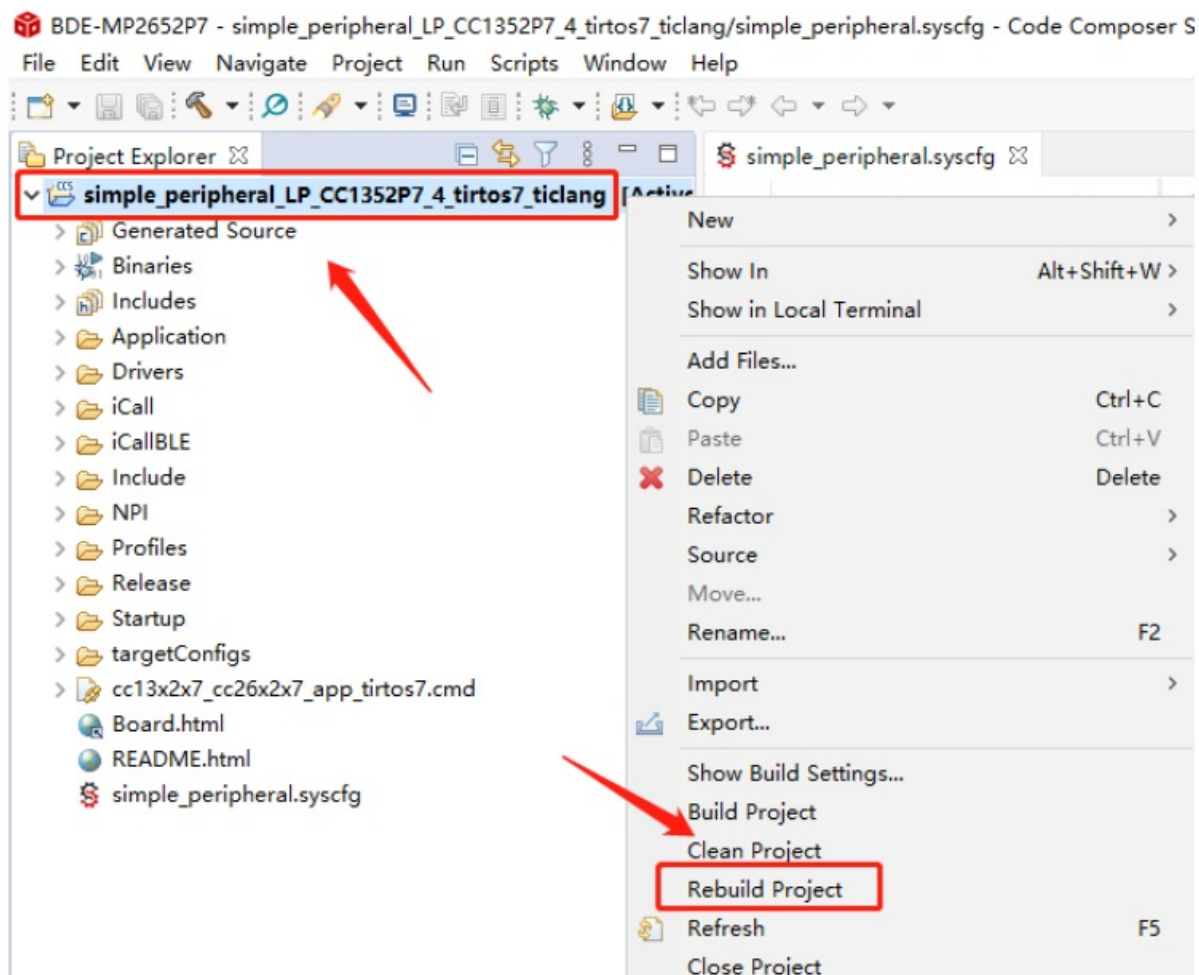
### 3. Open the file: simple\_peripheral.syscfg



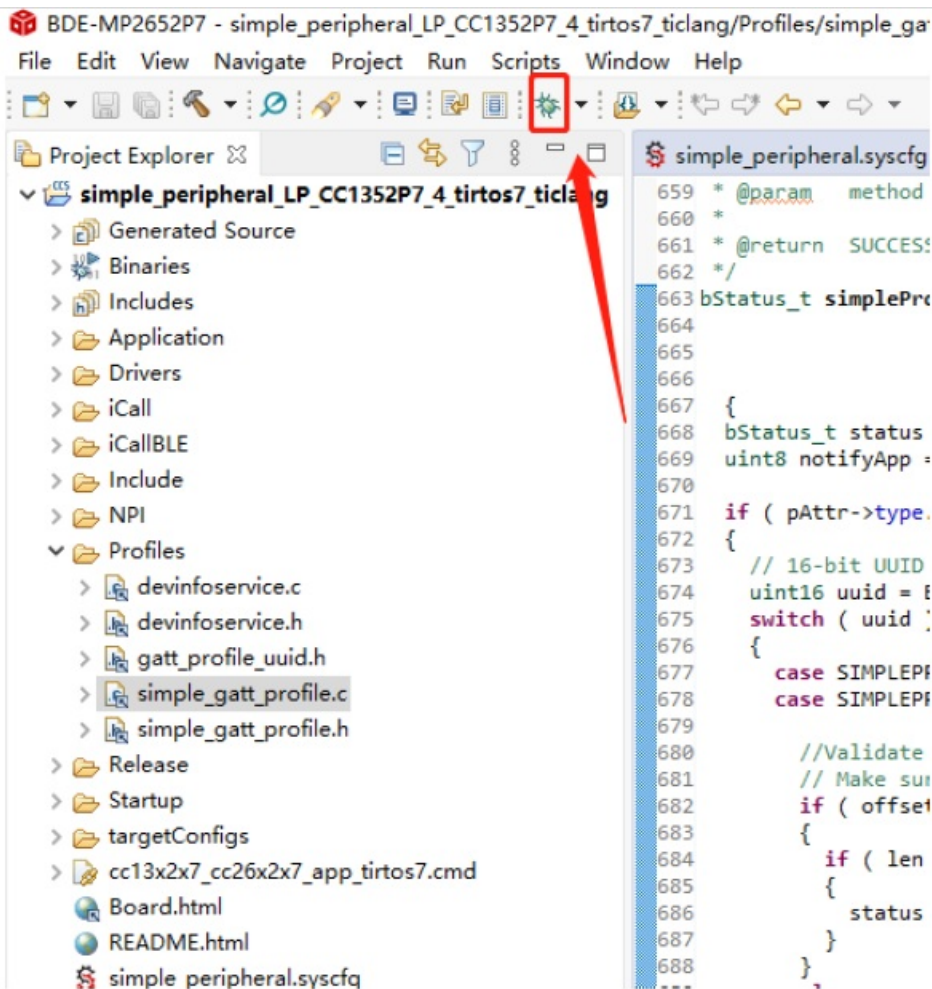
### 4. Chang the “0xC1” to “0x00”.



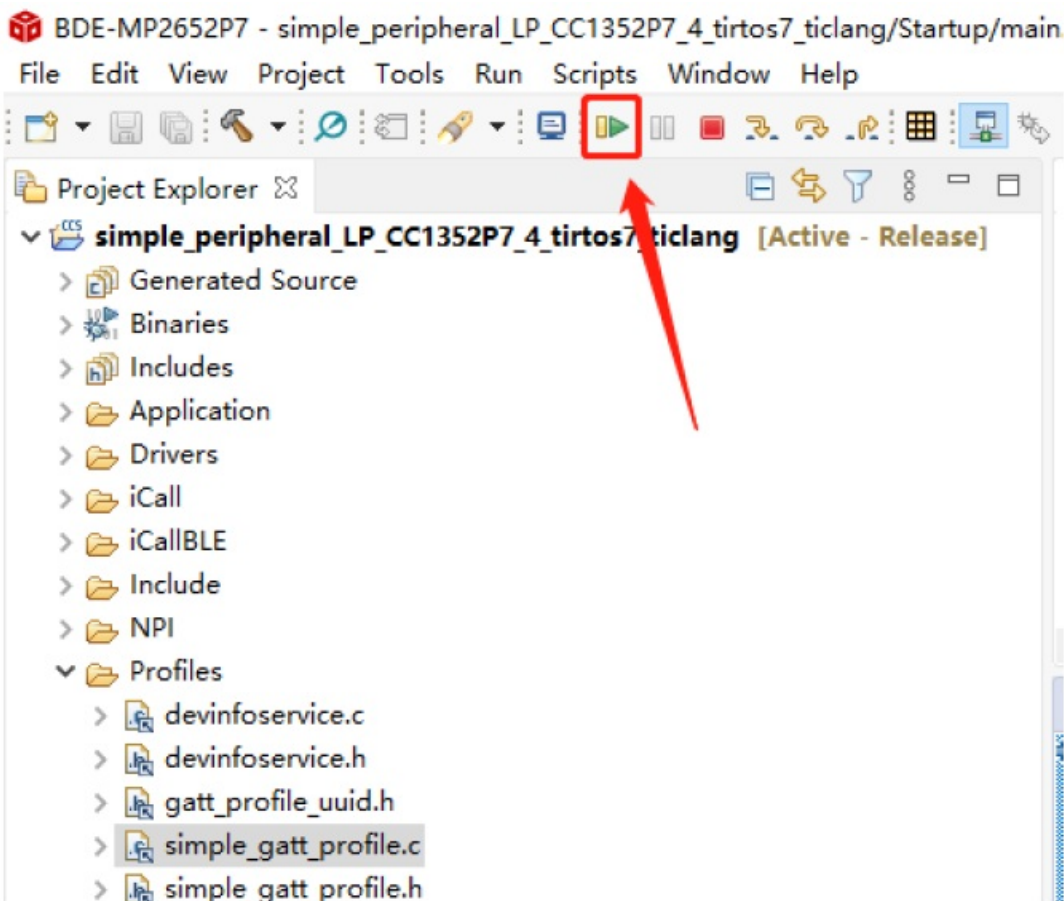
##### 5. Right Click the project to build the receiving end project



##### 6. Click this bug icon (means download and debugging)

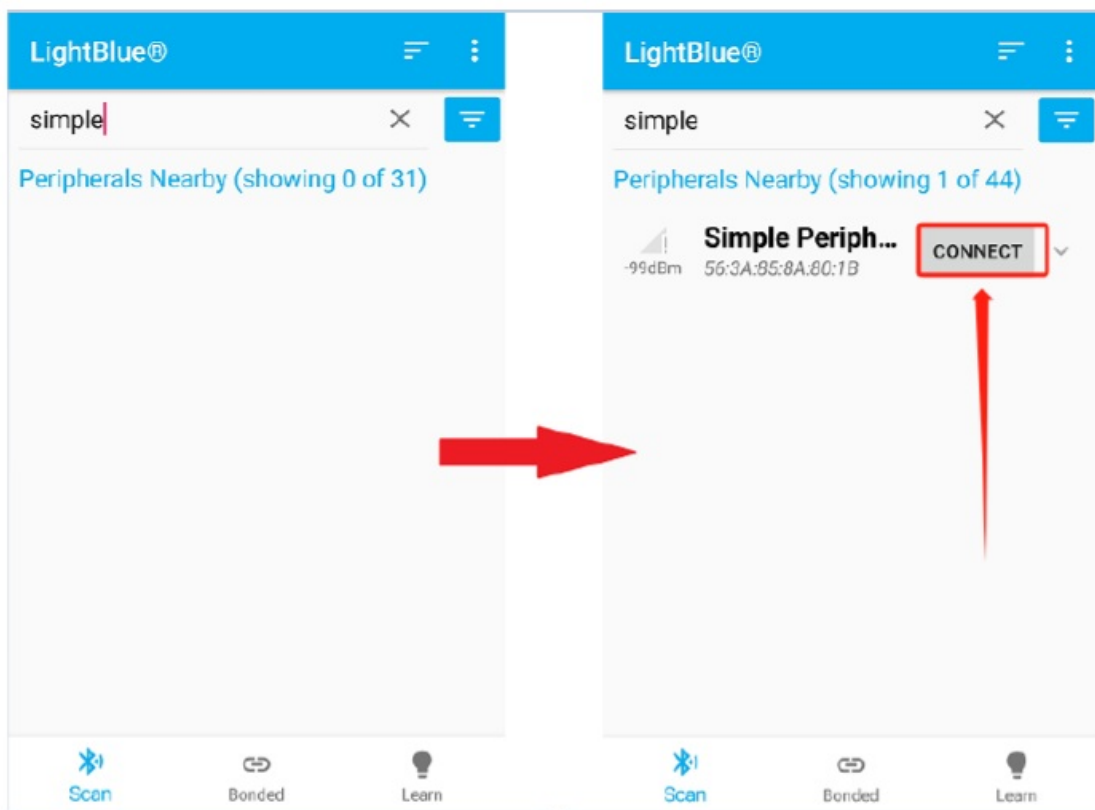


7. Click on this option to start debugging



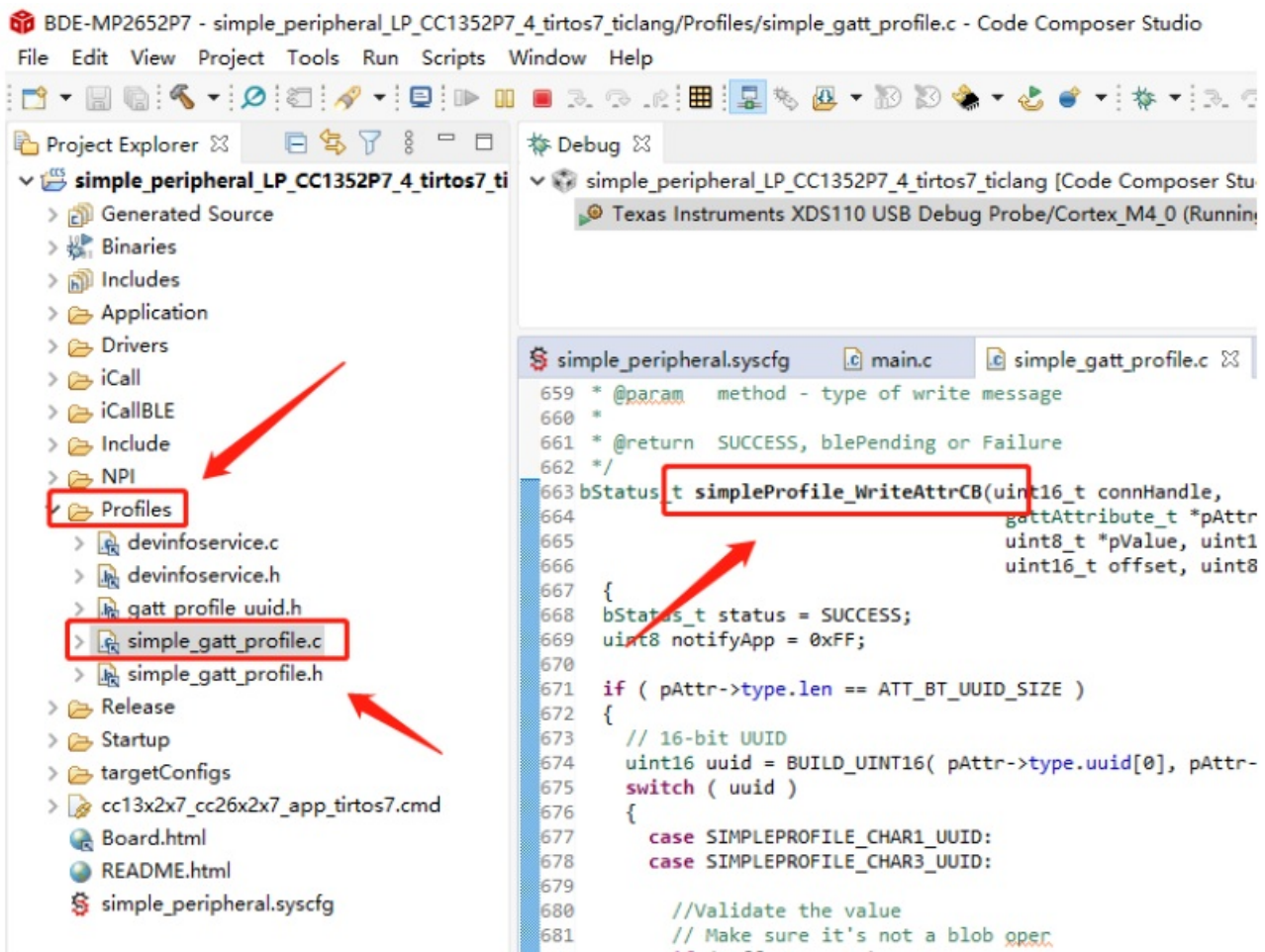
8. [Download and start Lightblue](#) (an APP on your mobile device)

9. BDE-MP2652P7 is advertising, you can receive the signal on Lightblue, then click “**connect**” to connect the mobile phone and the BDE-MP2652P7.



10. Find the file which is named “**simple\_gatt\_profile.c**” and the function which is named “**simpleProfile\_WriteAttrCB**”

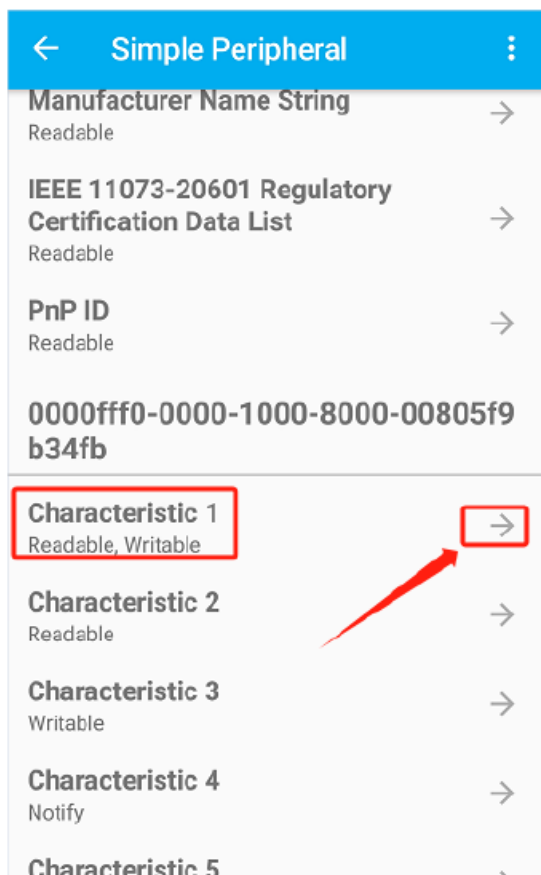




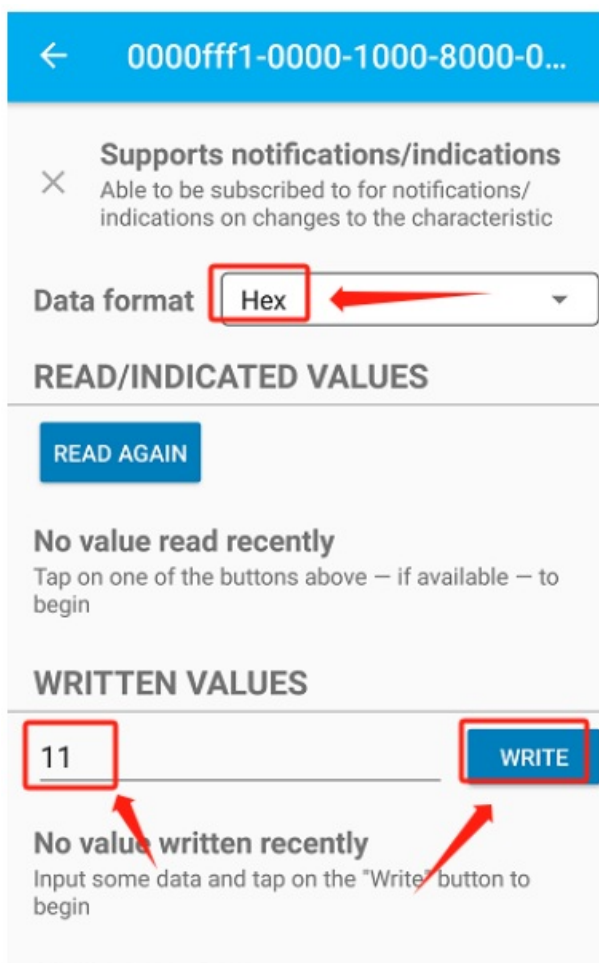
11. Find “pValue” in the function and set a breakpoint at the same line



12. Click the up arrow to send a message to the BDE-MP2652P7

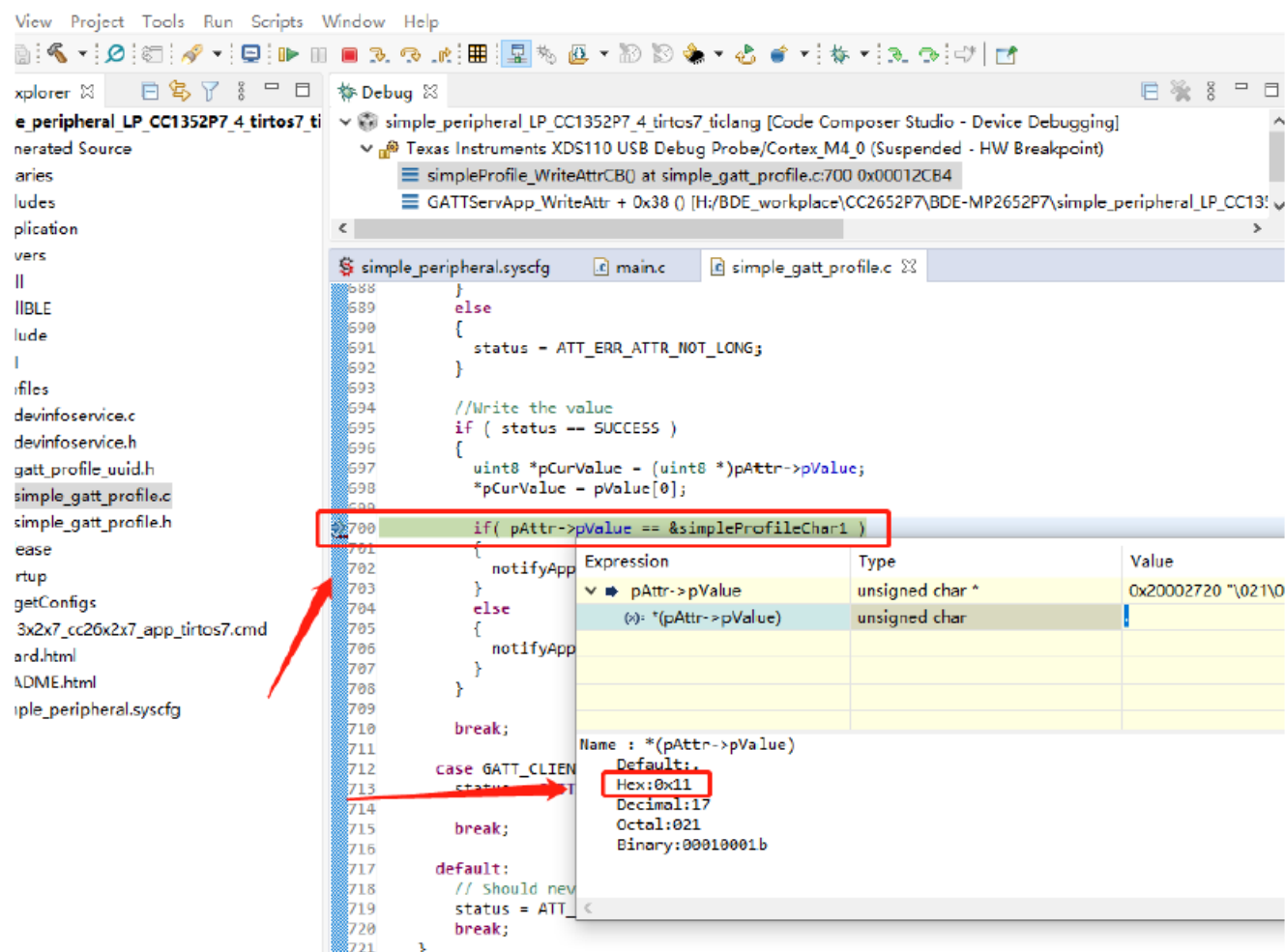


### 13. Send 0x11 to the BDE-MP2652P 7





## 14. 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 CC2652P7 datasheet, product information and support | TI.com page and download the User guide

### Other Resources

Windows Installer for SimpleLink CC13XX CC26XX SDK

Linux Installer for SimpleLink CC13XX CC26XX SDK

Mac OS Installer for Code Composer Studio IDE

Linux Installer for Code Composer Studio IDE

Windows Installer for SmartRF Flash Programmer 2

### More Questions:

Please search existing answers on TI E2E support forums

Contact your local TI sales representative.

Or

**Contact BDE Technology, Inc.**

China:

B2-403, 162 Science Ave, Huangpu District, Guangzhou, 510663

Tel: +86-020-28065335

Website: <http://www.bdecomm.com/cn/> Email: [shu@bdecomm.com](mailto: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](mailto:info@bdecomm.com)

## FAQ

**Q: What is the recommended power supply for BDE-MP2652P7?**

A: A USB cable can be used for power supply and debugging.

**Q: Can BDE-MP2652P7 communicate on both 2.4 GHz and Sub-1GHz bands?**

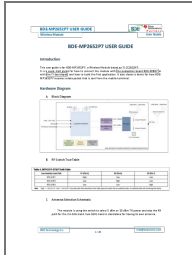
A: Yes, BDE-MP2652P7 can communicate on both frequency bands.  
The 2.4 GHz band is used for both transmission and reception, while the Sub-1GHz band is only used for reception.

**Q: What software tools are recommended for developing with BDE-MP2652P7?**

A: Terminal software such as CCS or IAR, CCS download, Software Development Kit (SDK), and Lightblue are recommended software tools for developing with BDE-MP2652P7.

---

## Documents / Resources

	<p><a href="#">BDE Technology BDE-MP2652P7 Wireless Module</a> [pdf] User Guide BDE-MP2652P7 Wireless Module, BDE-MP2652P7, Wireless Module, Module</p>
---	---

## References

- [TI E2E support forums](#)
- [CCSTUDIO IDE, configuration, compiler or debugger | TI.com](#)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

This website is an independent publication and is neither affiliated with nor endorsed by any of the trademark owners. The "Bluetooth®" word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. The "Wi-Fi®" word mark and logos are registered trademarks owned by the Wi-Fi Alliance. Any use of these marks on this website does not imply any affiliation with or endorsement.