

## Quick Start Guide - BDE-BDM209A

### 1. Introduction

This document is a quick guide for how to connect BDE-BDM209A module with MSP432P401R LaunchPad (MSP-EXP432P401R) and CC3200 AUDIO BOOSTERPACK (CC3200AUDBOOST) to run the demos in “CC2564C TI Dual-mode Bluetooth Stack on MSP432 MCUs” SDK. It provides an instruction of how to modify the Demo source code to run the Demos on BDE-BDM209A modules.

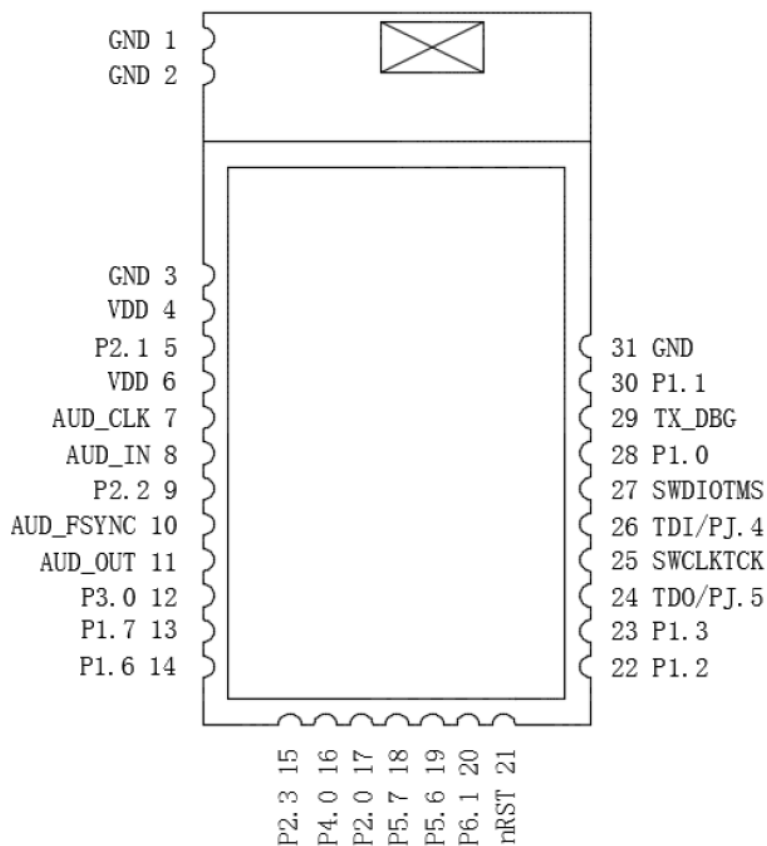


Figure 1: BDE-BDM209A Pinout Diagram Top View

### 2. Program and Debug on BDE-BDM209A

Developers can use MSP432P401R LaunchPad to program and to debug BDE-BDM209A.

Pins needed for Programming BDE-BDM209A: VDD, GND, TMS, TCK

Additional Pins needed when uses IDE to debug on BDE-BDM209A: TDO, TDI

Additional Pins needed if uses serial ports to debug BDE-BDM209A: P1.2/RXD, P1.3/TXD

Figure 2 shows the connection between BDE-BDM209A and MSP-EXP432P401R. Figure 3 shows the Pin matching between BDE-BDM209A and MSP-EXP432P401R.

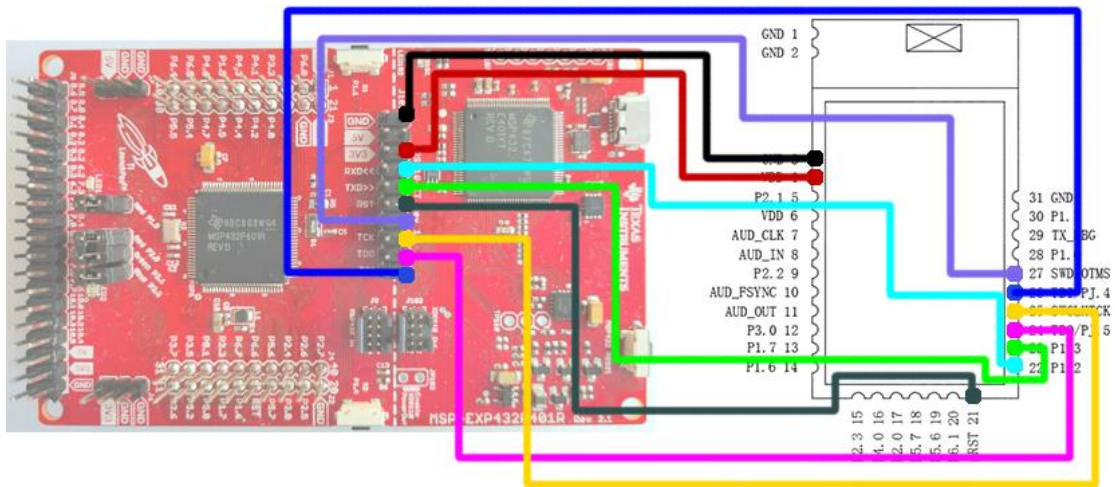


Figure 2: Connection between BDE-BDM209A and MSP-EXP432P401R

Connection Designator	BDM209A Pin	MSP-EXP432P401R Pin
3V3 Power	VDD	XDSET-VCCTARGET
Ground	GND	XDSET-GND
RST	nRST	XDSET-RESET-OUT
TMS	SWDIO/TMS	XDSET-TMS-SWDIO
TCK	SWCLK/TCK	XDSET_TCK_SWCLK
TDO	TDO/PJ.5	XDSET_TDO_SWO
TDI	TDI/PJ.4	XDSET_TDI
RXD	P1.2	XDSET_TXD
TXD	P1.3	XDSET_RXD

Figure 3: Pin Matching between BDE-BDM209A and MSP-EXP432P401R

### 3. Download SDK

CC2564C TI Dual-mode Bluetooth Stack on MSP432 MCUs SDK includes many profiles and demo codes. Download SDK from the following link:

<https://www.ti.com/tool/CC2564CMSP432BTBLESW>

Part Number	Buy from Texas Instruments or Third Party	Alert Me	Status	Current Version	Version Date
CC2564CMSP432BTBLESW1: CC2564C TI Dual-mode Bluetooth® Stack on MSP432 MCUs	<a href="#">Download</a>	<a href="#">Alert Me</a>	ACTIVE	v4.2.1.1	24-JUL-2018

User's Guide for the SDK: '[CC2564C TI Dual-Mode Bluetooth® Stack on MSP432™ MCUs](#)'.

Please follow the above User's Guide when develop or evaluate with MSP-EXP432P401R and CC256XCQFN-EM.



After your code is able to run on MSP-EXP432P401R and CC256XCQFN-EM, please follow the following steps to make your code run on BDE-BDM209A.

### 4. Run the Demos in the CC2564CMSP432BTBLESW SDK on BDE-BDM209A

To run the sample Demo codes in the CC2564CMSP432BTBLESW SDK on BDE-BDM209A, please take the following step.

1. Find HRDWCFG.h file, change the I2C pins to P1.6 and P1.7

```
#define HRDWCFG_I2C_MODULE           EUSCI_B0_BASE

#define HRDWCFG_I2C_SDA_PORT_NUM     GPIO_PORT_P1
#define HRDWCFG_I2C_SDA_PIN_NUM     GPIO_PIN6

#define HRDWCFG_I2C_SCL_PORT_NUM     GPIO_PORT_P1
#define HRDWCFG_I2C_SCL_PIN_NUM     GPIO_PIN7
```

### 5. Run Bluetooth Stereo Audio Streaming Demo on BDE-BDM209A

CC2564CMSP432BTBLESW SDK provides two A3DP demos for Audio streaming: A3DP Sink Demo and A3DP Source Demo.

Before trying to run the demos on BDE-BDM209A, please make sure you can run the demos on MSP-EXP432P401R and CC3200AUDBOOST (follow the user guide CC2564C TI Dual-Mode Bluetooth® Stack on MSP432™ MCUs:

<https://www.ti.com/lit/ug/swru497a/swru497a.pdf>)

You will need two BDE-BDM209A and two CC3200AUDBOOST boards to run Audio streaming from A3DP Source to A3DP Sink.

Connect BDE-BDM209A and CC3200AUDBOOST board:

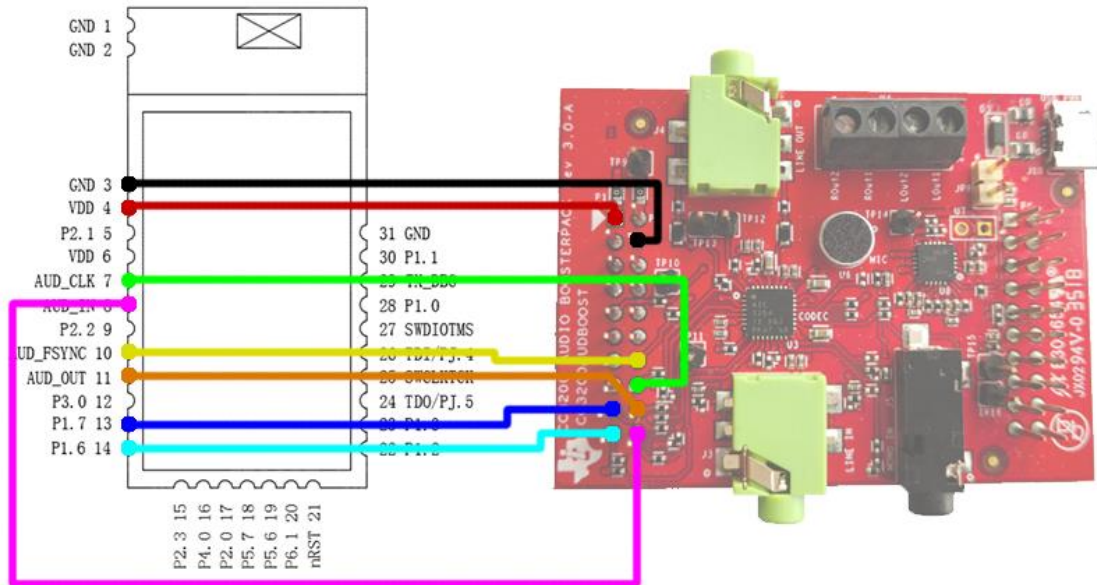


Figure 4: Connection between BDE-BDM209A and CC3200AUDBOOST

Connection Designator	BDM209A Pin	CC3200AUDBOOST Pin
Ground	GND	J1-4
3V3 Power	VDD	J1-1
AUD_CLK	AUD_CLK	J1-16
AUD_IN	AUD_IN	J1-20
AUD_FSYNC	AUD_FSYNC	J1-14
AUD_OUT	AUD_OUT	J1-18
I2C_SCL	P1.7	J1-17
I2C_SDA	P1.6	J1-19

Figure 5: Pin Matching between BDE-BDM209A and CC3200AUDBOOST

A3DP Sink Demo code location:

CC256x MSP432 Bluetopia SDK\v4.2.1.1\Samples\A3DPDemo\_SNK

A3DP demo sink wiki:

[https://processors.wiki.ti.com/index.php/CC256x\\_TI\\_Bluetooth\\_Stack\\_AssistedA2DPSinkDemo\\_App](https://processors.wiki.ti.com/index.php/CC256x_TI_Bluetooth_Stack_AssistedA2DPSinkDemo_App)

A3DP Source Demo code location:

CC256x MSP432 Bluetopia SDK\v4.2.1.1\Samples\A3DPDemo\_SRC

A3DP demo source wiki:

[https://processors.wiki.ti.com/index.php/CC256x\\_TI\\_Bluetooth\\_Stack\\_AssistedA2DPSourceDemo\\_App](https://processors.wiki.ti.com/index.php/CC256x_TI_Bluetooth_Stack_AssistedA2DPSourceDemo_App)

NOTE: To run any demo in the SDK on BDE-BDM209A, you need to make the code modification



in Step 4: Run the Demos in the CC2564CMSP432BTBLESW SDK on BDE-BDM209A

### More Questions:

Please search existing answers on [TI E2E support forums](#)

Contact your local TI sales representative.

Or

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