CC256xEM Bluetooth® Adapter Kit

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ABSTRACT

This quick start guide provides an overview of the CC256XEM-STADAPT board and describes the required hardware and software tools. Furthermore, this document shows the basic settings for the CC256XEM-STADAPT board. For further details, see the *CC256xEM Bluetooth Adapter Kit User Guide* (SWRU417).

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1 Introduction

The CC256xEM Bluetooth Adapter Kit (CC256XEM-STADAPT) is a connector board aimed to help evaluate TI's CC256x Bluetooth and Dual-Mode solution with STM32 MCUs. The CC256XEM-STADAPT board serves as a translation board between a CC256xEM board (CC256XQFNEM, CC2564MODAEM and CC2564MODNEM) and a STM32 MCU Evaluation board (STM3240G-EVAL and STM32F4DISCOVERY).

2 Kit Content

- 1 CC256XEM-STADAPT Board

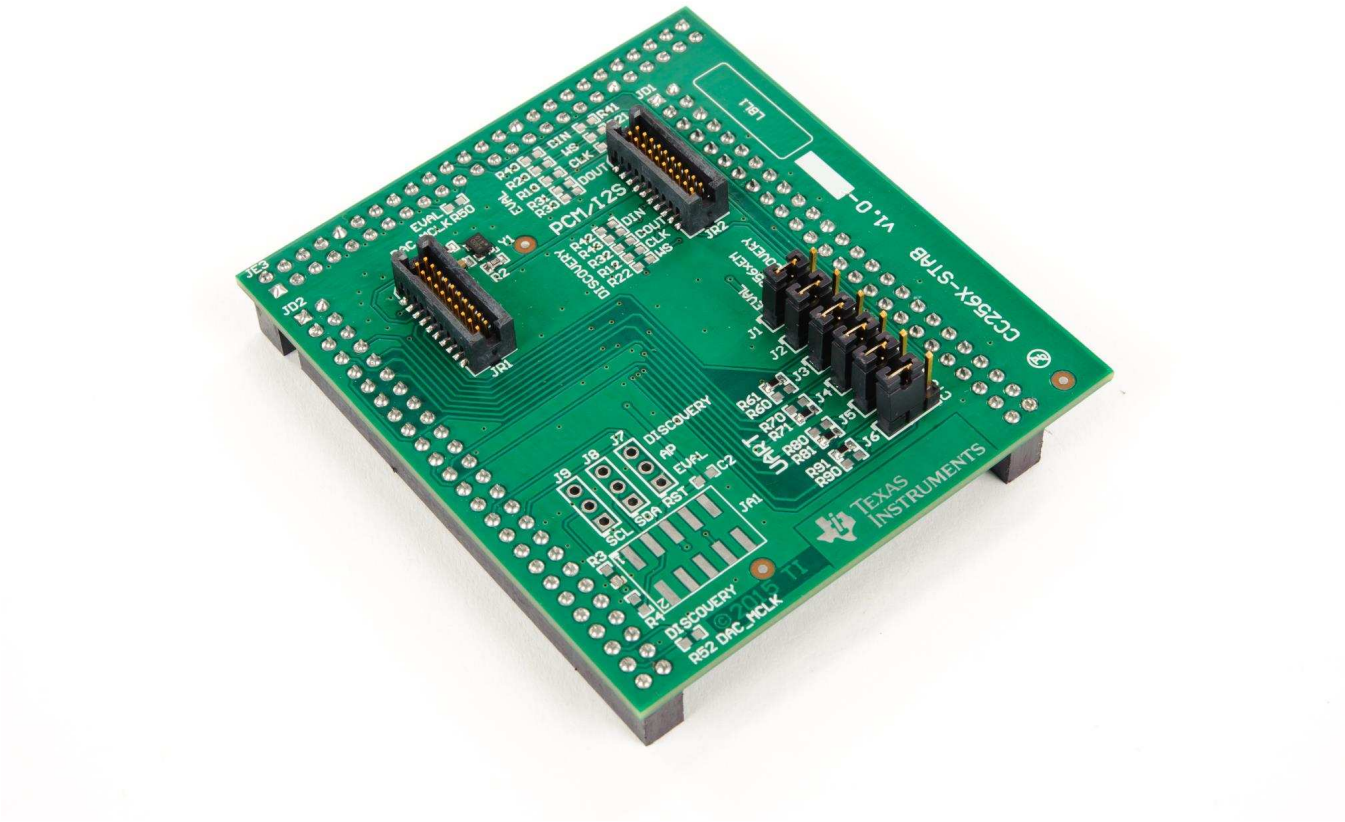


Figure 1. CC256XEM-STADAPT Board

3 Requirements

The following hardware and software tools are required in combination with the CC256XEM-STADAPT board for a complete evaluation of TI's CC256x Bluetooth and Dual-Mode solution.

Hardware:

- 1 CC256xEM Board – Sold Separately
  - CC256XQFNEM Board - http://www.ti.com/tool/cc256xqfnem
  - CC2564MODAEM Board - http://www.ti.com/tool/cc2564modaem
  - CC2564MODNEM Board - http://www.ti.com/tool/cc2564modnem
- 1 STM32 MCU Evaluation Board – Sold Separately
  - STM3240G-EVAL Board
  - STM32F4DISCOVERY Board

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Software:

- TI Bluetooth + Bluetooth Low-Energy Stack on STM32 MCUs – Free download
  - CC256XSTBTBLESW - http://www.ti.com/tool/cc256xstbtblesw

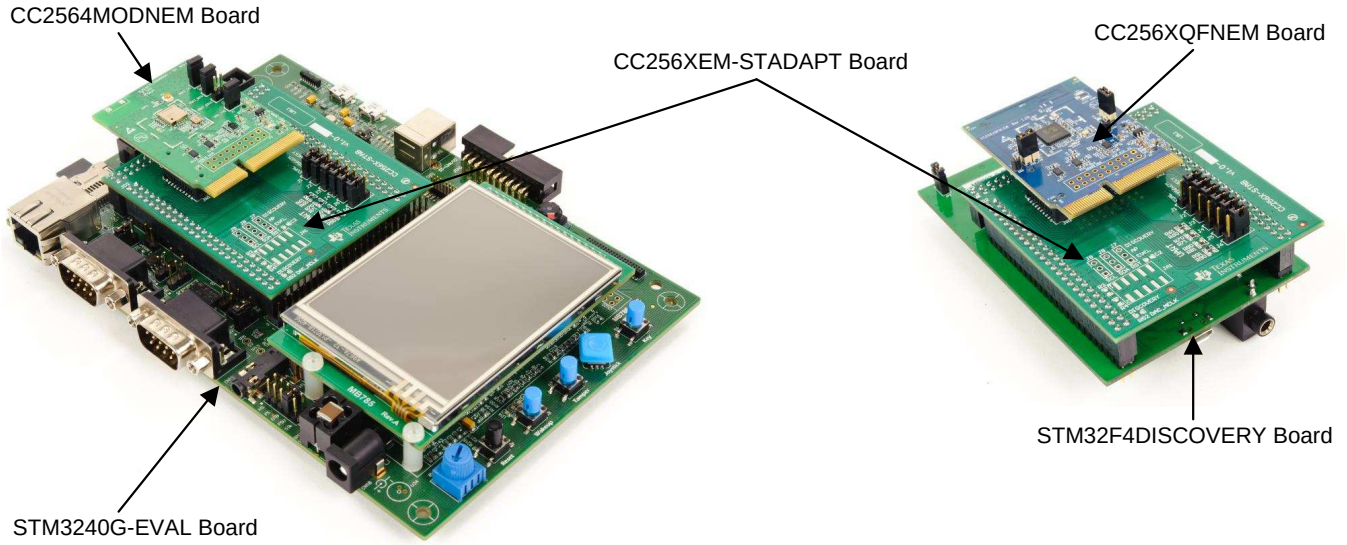


Figure 2. Hardware Setup Examples

4 Overview

The CC256XEM-STADAPT board allows the connection between a CC256xEM board (CC256XQFNEM, CC2564MODAEM and CC2564MODNEM) and a STM32 MCU Evaluation board (STM3240G-EVAL and STM32F4DISCOVERY).

On one side, the JR1 and JR2 connectors are provided to interface with a CC256xEM board; and on the other side there are two options for the STM32 MCU Evaluation boards. The first option, JE3 and JD2 connectors enable the connection to CN3 and CN4 headers in the STM3240G-EVAL board, respectively. The second option, JD1 and JD2 connectors allow the connection to headers P1 and P2 in the STM32F4DISCOVERY board, respectively.

The CC256XEM-STADAPT board provides flexibility to route the UART and PCM/I2S signals to different pins on the STM32 MCU Evaluation boards through a set of resistors and jumpers. Furthermore, an on-board 32.768 KHz crystal oscillator can provide the slow clock to the CC256xEM boards.

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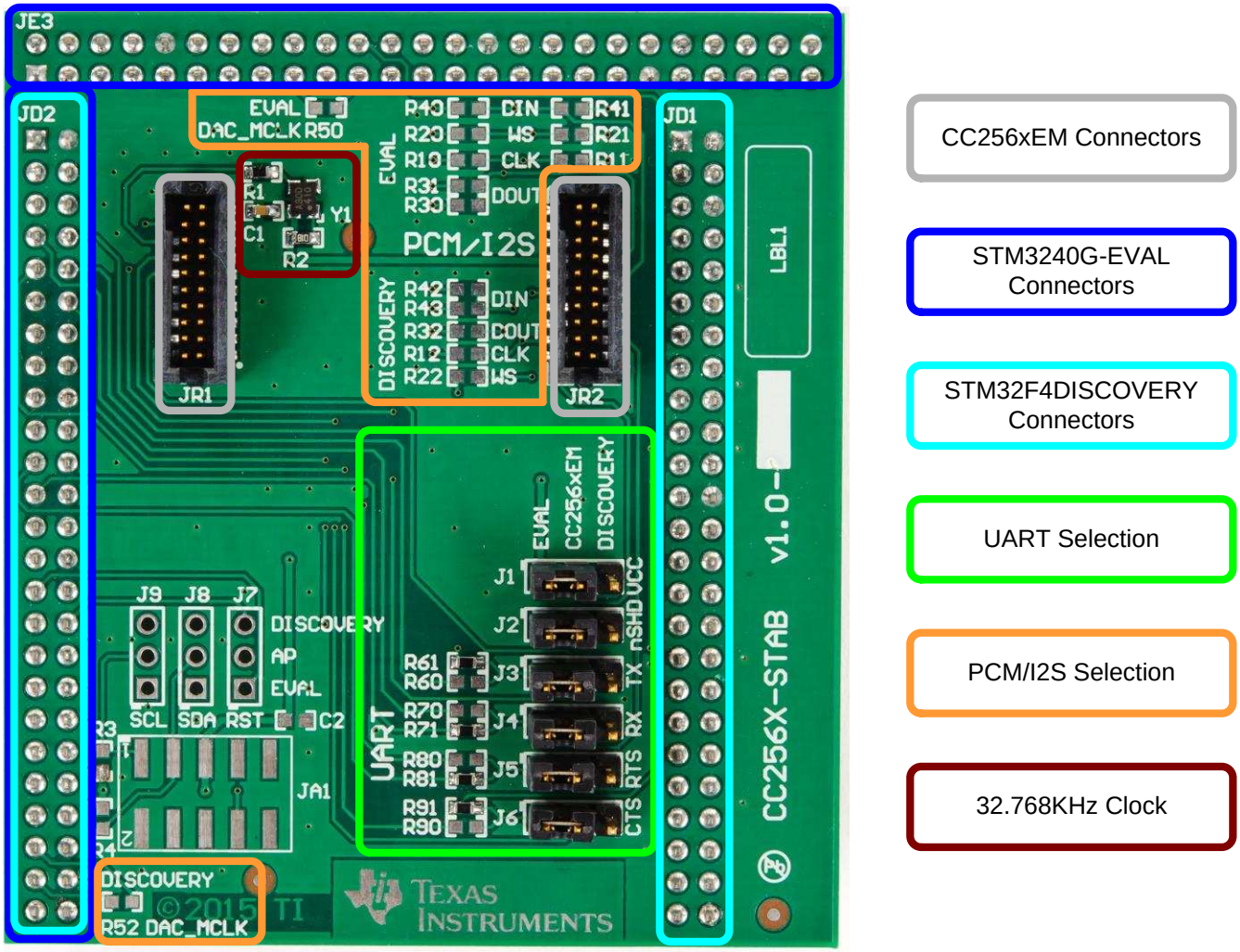


Figure 3. CC256XEM-STADAPT Overview

5 Settings

Table 1 describes the required settings on the CC256XEM-STADAPT board depending on the STM32 MCU Evaluation board and the sample applications that are used.

Table 1. Settings on the CC256XEM-STADAPT Board

Sample Application	STM32 MCU Board	
	STM3240G-EVAL	STM32F4DISCOVERY
Any Sample App Not Listed Below	EVAL USART6 (Default)	DISCOVERY USART3
A3DPDemo_SNK	EVAL USART6_I2S2 (1)	DISCOVERY USART3_I2S3 (1)
A3DPMultiRoomDemo		
HFPAGDemo		
HFPDemo		
HSPDemo		

(1) The CC256xEM board has to be enabled with CC256x PCM/I2S Slave support. The default configuration of the CC256xEM boards is CC256x PCM/12S Master mode. For further details, see the specific CC256xEM user's guide.

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5.1 EVAL USART6 (Default)

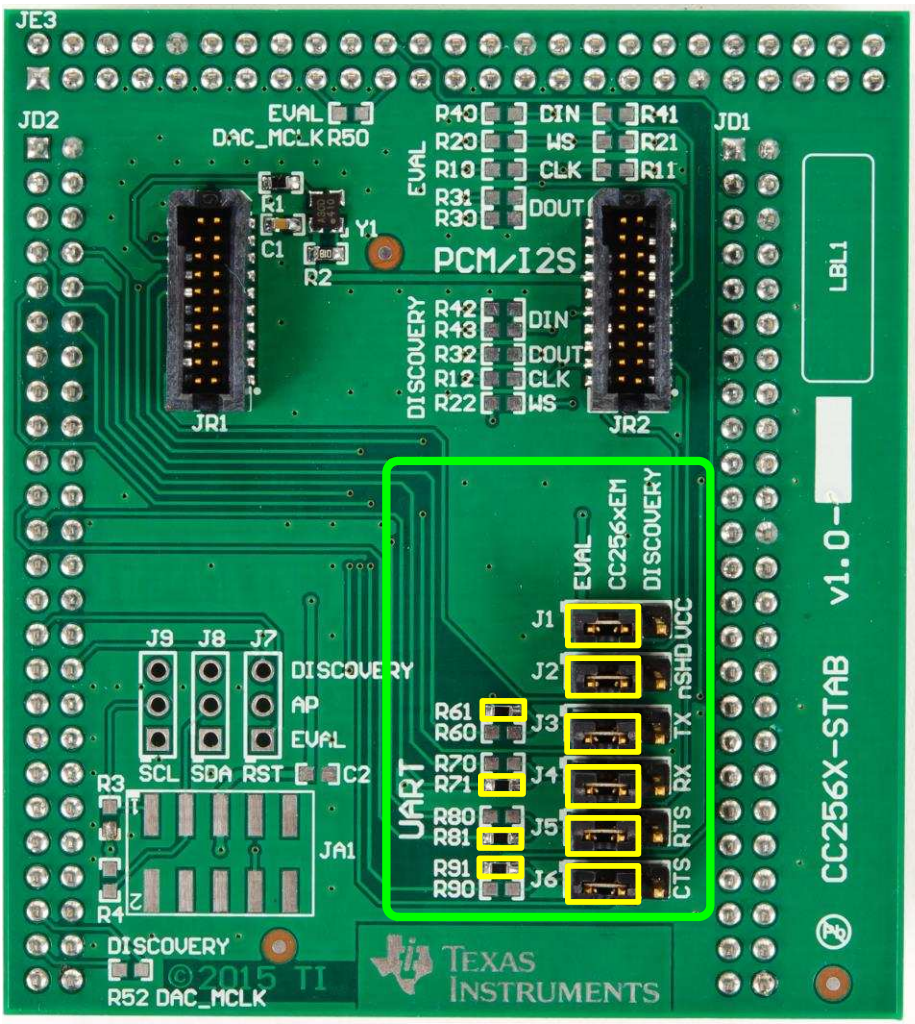


Figure 4. EVAL USART6 Setting

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5.2 DISCOVERY USART3

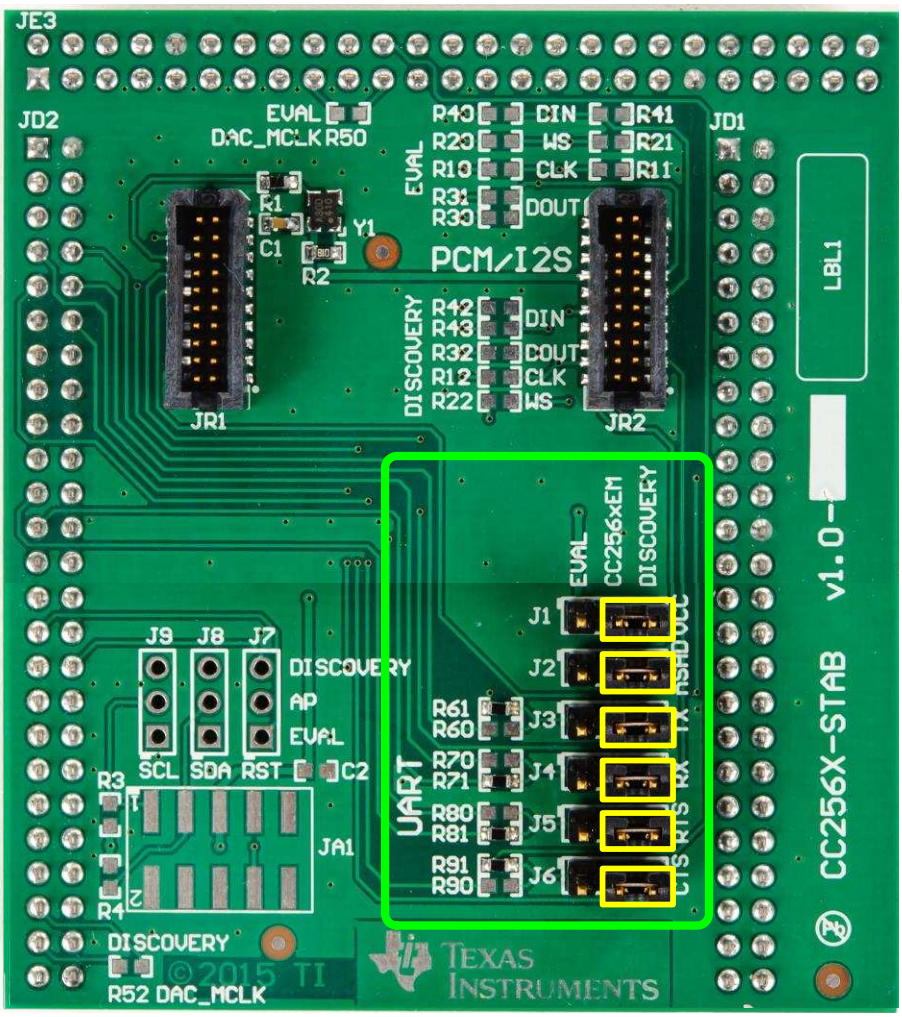


Figure 5. DISCOVERY USART3 Setting

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5.3 EVAL USART6_I2S2

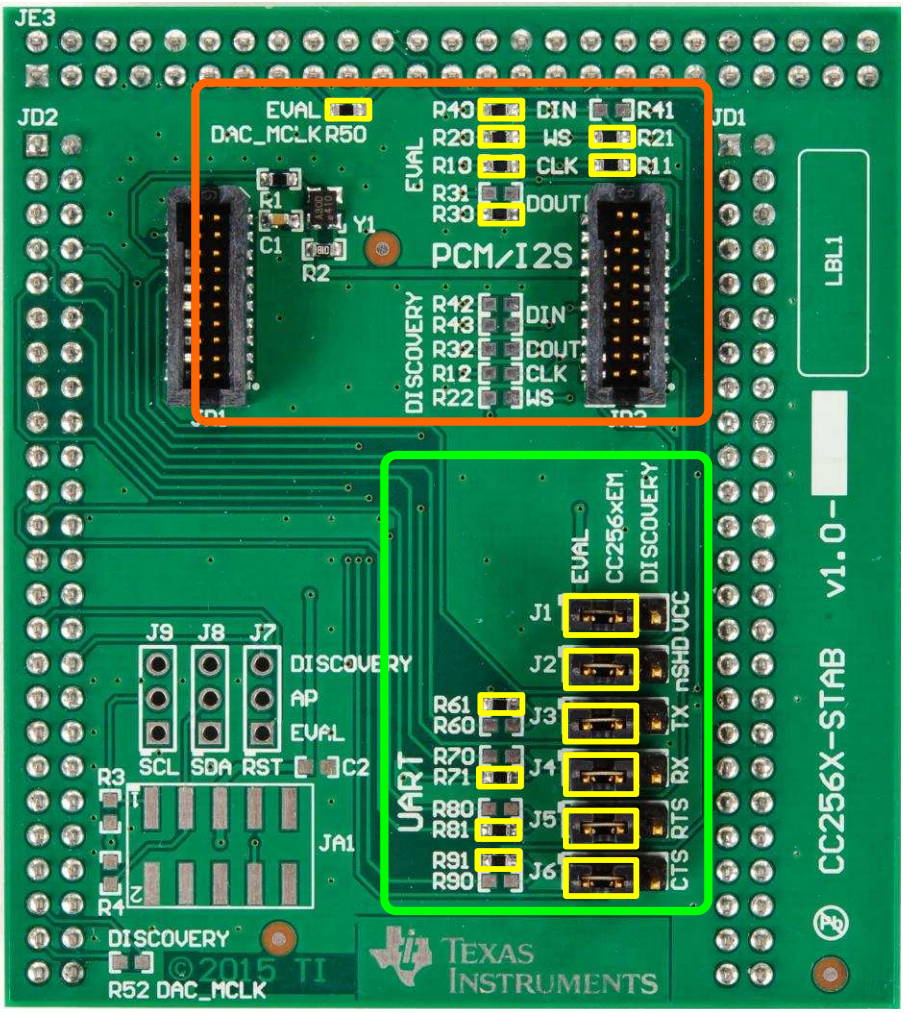


Figure 6. EVAL USART6_I2S2 Setting

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5.4 DISCOVERY USART3_I2S3

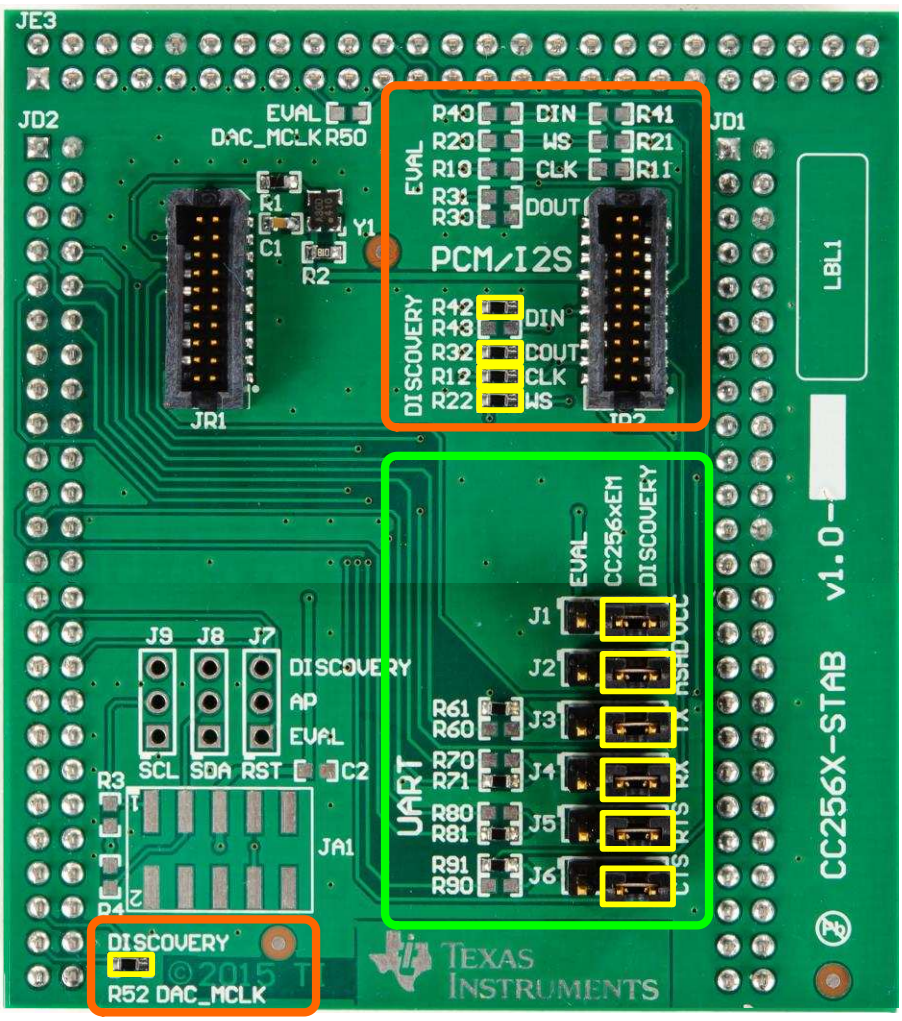


Figure 7. DISCOVERY USART3_I2S3 Setting

6 Reference

- *CC256xEM Bluetooth Adapter Kit User Guide* (SWRU417)

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