

CC31xx & STM32F4 Bringup Guide

Introduction

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This guide provides a walk-through for using the add-on package for TI's Simplelink Wi-Fi CC3100 with STMicroelectronics' STM32F4-Discovery Board. The package contains example codes and IAR project environments for:

- Getting Started with WLAN Station
- Getting Started with WLAN AP

Prerequisites

Hardware

- 1x CC3100 Booster Pack
- 1x STM32F4-Discovery Board
- 1x CC3100 STM32F4-Discovery Adapter Board ^[1]
- 1x CC31XXEMUBOOST
- 1x Mini-USB cable
- 1x Micro-USB cable
- 3x jumper wire

Software

- IAR version 7.50.2.10505 or above
- CC3100 SDK ^[2]
- STM32F4 Add On Package for CC3100SDK ^[1]
- STM32F4 Cube ^[3] v1.11.0 or above

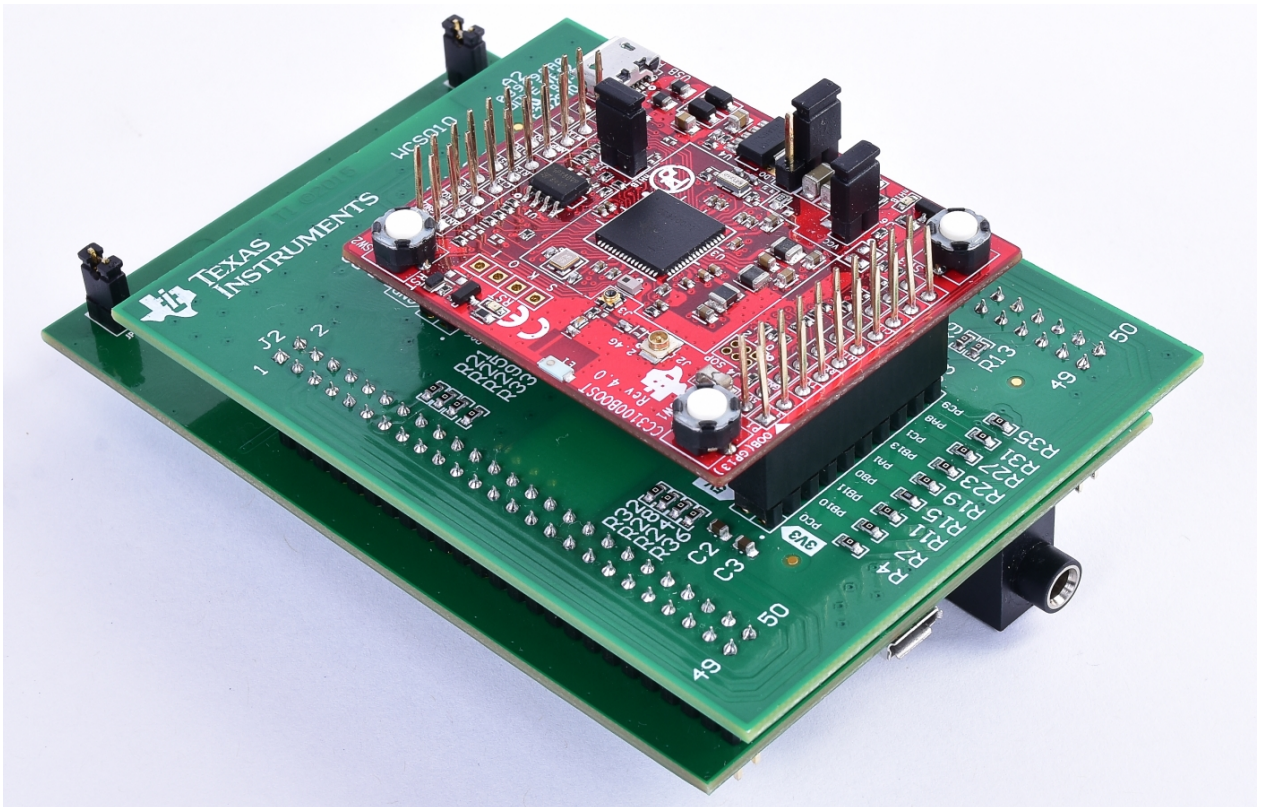
Source Files

- board.c/board.h - STM32F4 platform configuration file containing the functions to initialize the platform and perform necessary configuration to run the example.
- spi.c/spi.h - Contains the function to initialize and read/write over CC3100-STM32F4 interface.
- cli_uart.c/cli_uart.h - Contains the functions to initialize the UART interface for console prints.
- stm32f4xx*.c/.g - STM32F4 system and peripheral initialization files.

Demo Bring up

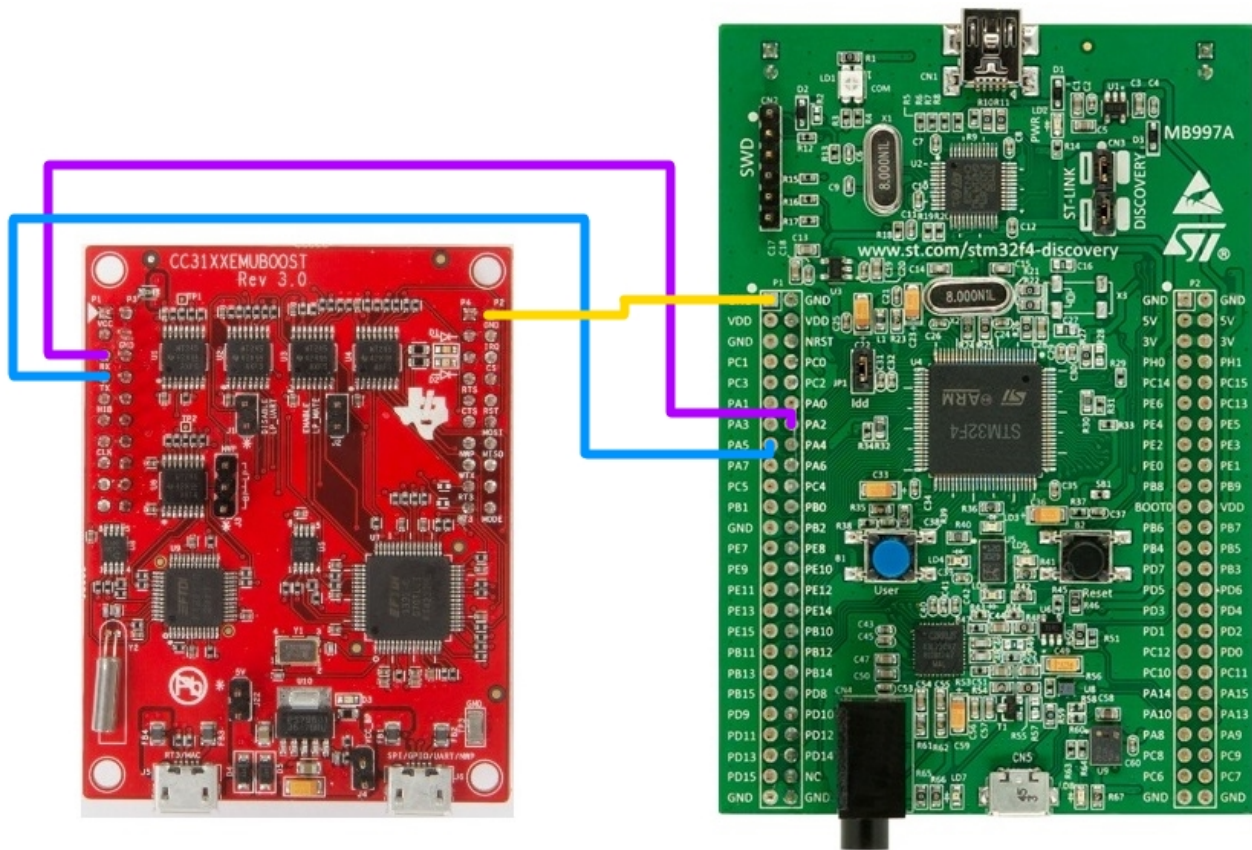
Hardware Setup

1. Mount the adapter board on the back of the STM32F4-Discovery. Match J1 connectors with P1 connectors, and J2 connectors with P2 connectors.
2. Mount the CC3100 Boosterpack on top of the adapter board. Be careful of orientation. Use the triangles on P1.1 of both boards to help you.



3. Connect pins on STM32F4-Discovery and CC31XXEMUBOOST with 3 jumper wires as per the following table and diagram. This enables console printouts.

CC31XXEMUBOOST	STM32F4-Discovery
P1.3	PA2
P1.4	PA3
P2.1	GND



4. Connect the USB cables from the PC to both boards. Mini-USB for STM32F4-Discovery and micro-USB for CC31XXEMUBOOST.

Application Bring up

1. Download the CC3100_STM32F4_Add_On package and extract the package at your CC3100 SDK location. Replace all existing files in the SDK if conflict occurs.
2. Download **STM32F4 Cube** and copy "`<stm32 cube>/Drivers`" folder at "`<cc3100-sdk>/platform/stm32discovery`"
3. Connect Mini-USB cable from STM32F4-Discovery board to the computer.
4. Connect Micro-USB cable from J6 on CC31XXEMUBOOST to computer and configure the terminal-program for seeing the logs - CC31xx & CC32xx Terminal Setting has detailed instructions for configuring the terminal-program.
5. Open **getting_started_with_wlan_station** or **getting_started_with_wlan_ap** project provided at "`<cc3100-sdk>/platform/stm32discovery/example_project_iar`" using IAR.
6. Open `sl_common.h` and change **SSID_NAME**, **SEC_TYPE** and **PASSKEY** as per your access-point properties - SimpleLink device will connect to this AP when the application is executed.
7. Build and run the application.
8. Follow the links to see application details:
 - CC31xx Getting Started with WLAN Station
 - CC31xx Getting Started with WLAN AP

Limitations/Known Issues

- None

References

- [1] <http://www.ti.com/tool/discovery-adapt>
 - [2] <http://www.ti.com/tool/cc3100sdk>
 - [3] <http://www.st.com/web/en/catalog/tools/PF259243>
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