Description

The SimpleLink™ CC3301 Wi-Fi 6 and Bluetooth® Low Energy devices enable affordable, reliable and secure connectivity in embedded applications with a processor host running Linux® or an MCU host running RTOS. The CC3301 BoosterPack™ plug-in module (BP-CC3301) is a test and development board that can be easily connected to TI LaunchPad™ development kits or processor boards; thus enabling rapid software development.

Features

- CC3301 Wi-Fi 6 and Bluetooth Low Energy companion IC in QFN package
- 2x20 pin stackable connectors (BoosterPack plug-in module headers) to connect to TI LaunchPad development kits and other BoosterPack plug-in modules
- Onboard chip antenna with option for SMA/U.FL based testing
- SWD interface for standalone operation and RF testing

Figure 1-1. BP-CC3301 Front Side
Table of Contents

Description.............................................................................................................................................................................. 1
Features................................................................................................................................................................................... 1
1 Evaluation Module Overview.................................................................................................................................................... 4
  1.1 Introduction.................................................................................................................................................................. 4
  1.2 Kit Contents............................................................................................................................................................... 4
  1.3 Specification............................................................................................................................................................... 4
  1.4 Device Information...................................................................................................................................................... 4
2 Hardware............................................................................................................................................................................... 4
  2.1 Hardware Features....................................................................................................................................................... 5
  2.2 Connector and Jumper Descriptions............................................................................................................................ 6
  2.3 Power........................................................................................................................................................................... 12
  2.4 Clocking.................................................................................................................................................................... 14
  2.5 Performing Conducted Testing....................................................................................................................................... 15
3 Evaluation Setups.................................................................................................................................................................. 17
  3.1 MCU and RTOS.......................................................................................................................................................... 17
  3.2 Processor and Linux.................................................................................................................................................... 18
  3.3 Standalone RF Testing................................................................................................................................................ 20
4 Radio Tool BP-CC3301 Hardware Setup............................................................................................................................ 21
  4.1 Option 1: LP-XDS110.................................................................................................................................................. 22
  4.2 Option 2: XDS110 JTAG Debug Probe...................................................................................................................... 23
  4.3 Option 3: SimpleLink Launchpad and 10 pin Cable.................................................................................................... 26
5 Hardware Design Files........................................................................................................................................................... 26
  5.1 Schematics.................................................................................................................................................................... 26
  5.2 PCB Layouts............................................................................................................................................................... 26
  5.3 Bill of Materials (BOM)............................................................................................................................................... 27
6 Compliance and Certifications.............................................................................................................................................. 27
7 Trademarks........................................................................................................................................................................... 27

List of Figures

Figure 1-1. BP-CC3301 Front Side........................................................................................................................................... 1
Figure 1-1. BP-CC3301 Block Diagram.................................................................................................................................. 4
Figure 2-1. BP-CC3301 Overview........................................................................................................................................ 5
Figure 2-2. LEDs D4 & D5..................................................................................................................................................... 6
Figure 2-3. Reset Push-Button................................................................................................................................................ 6
Figure 2-4. BP-CC3301 BoosterPack Header Pinout........................................................................................................... 7
Figure 2-5. ARM 10 pin JTAG Connector (J10).................................................................................................................... 10
Figure 2-6. 20 pin LP-XDS110 Connector (J11).................................................................................................................... 11
Figure 2-7. Low Current Measurement............................................................................................................................... 12
Figure 2-8. Active Current Measurement............................................................................................................................ 13
Figure 2-9. 40 MHz XTL (Y1).............................................................................................................................................. 14
Figure 2-10. Rework for External Slow Clock Use............................................................................................................... 14
Figure 2-11. RF Path on BP-CC3301.................................................................................................................................. 15
Figure 2-12. U.FL Connector................................................................................................................................................ 16
Figure 2-13. SMA/U.FL option........................................................................................................................................... 16
Figure 3-1. BP-CC3301 with LP-AM243.............................................................................................................................. 17
Figure 3-2. BeagleBone Black Board.................................................................................................................................. 18
Figure 3-3. Top View of BP-CC3301 + BBB with Adapter Board......................................................................................... 18
Figure 3-4. Side View of BP-CC3301 and BBB with Adapter Board In Between................................................................. 18
Figure 3-5. Adapter Board for the BBB................................................................................................................................ 19
Figure 3-6. Top View of Modified BBB................................................................................................................................ 19
Figure 3-7. Bottom View of Modified BBB.......................................................................................................................... 20
Figure 4-1. BP-CC3301 Connected to LP-XDS110................................................................................................................ 22
Figure 4-2. XDS110 Debug probe kit................................................................................................................................... 23
Figure 4-3. XDS110 20 pin debug cable with ARM 10 pin Adapter...................................................................................... 23
Figure 4-4. BP-CC3301 ARM 10 pin JTAG connector (J10)................................................................................................. 24
Figure 4-5. BP-CC3301 Connected to XDS110.................................................................................................................... 25
Figure 4-6. BP-CC3301 Connected to LAUNCHXL-CC3235SF........................................................................................... 26

List of Tables

Table 2-1. LEDs.......................................................................................................................................................................... 6
1 Evaluation Module Overview

1.1 Introduction

The CC3301 BoosterPack™ plug-in module (BP-CC3301) is a test and development board that can easily be connected to TI LaunchPad™ or processor boards; thus enabling rapid software development.

This user's guide is intended to explain the various hardware configurations and features of the BP-CC3301. For more information about the CC3301 device, please refer to ti.com CC3301 product folder.

1.2 Kit Contents

- One BP-CC3301 Board
- EVM disclaimer Read Me

1.3 Specification

The BP-CC3301 is a board designed to enable rapid and easy software and hardware development for the CC3301 device. The block diagram for the BP-CC3301 is shown below.

![BP-CC3301 Block Diagram](image)

**Figure 1-1. BP-CC3301 Block Diagram**

This kit can be used in three configurations:

1. MCU and RTOS evaluation: BP-CC3301 + LaunchPad with the MCU running TCP/IP like the LP-AM243.
2. Processor and Linux evaluation: BP-CC3301 + BP-CC33-BBB-ADAPT + BEAGL-BONE-BLACK.
3. RF-testing with PC tools: BP-CC3301 + LP-XDS110.

In addition, the BP-CC3301 can also be wired to any other Linux or RTOS host board running TCP/IP stack. Refer to Section 3 for more information.

1.4 Device Information

The purpose of the BP-CC3301 is to showcase the hardware and software capabilities of the CC3301 device. The other components on the board are populated for testing and support of this main device.

2 Hardware

**Figure 2-1** shows the overview of the BP-CC3301.
2.1 Hardware Features

- CC3301 Wi-Fi 6 and Bluetooth® Low Energy combo device which can interface with MPU or MCU systems; adding connectivity
- Two 20-pin stackable connectors (BoosterPack Standard)
- On-board chip dual-band antenna with on-board SMA/U.FL connector for conducted RF testing
- Power from on board dual rail (3.3 V and 1.8 V) LDO using USB or LaunchPad
- 3 level shifters for voltage translation (3.3 V to 1.8 V)
- JTAG header pins for SWD interface with XDS110 or LP-XDS110
- One push-button for reset
- Jumper for current measurement on both power supplies (3.3 V and 1.8 V) with provision to mount 0.1 ohm (0603) resistors for measurement with voltmeter
- 32 kHz oscillator for lower power evaluation
2.2 Connector and Jumper Descriptions

2.2.1 LEDs and Push-Buttons

Table 2-1 lists the LED descriptions.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Color</th>
<th>Usage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>D4</td>
<td>Green</td>
<td>3.3V power indication</td>
<td>On: 3.3V power rail is up Off: no 3.3V power supplied</td>
</tr>
<tr>
<td>D6</td>
<td>Red</td>
<td>1.8V power indication</td>
<td>On: 1.8V power rail is up Off: no 1.8V power supplied</td>
</tr>
<tr>
<td>D5</td>
<td>Yellow</td>
<td>nRESET</td>
<td>The LED indicates the state of the nReset pin. If that LED is on, the device is functional which means the nReset is high.</td>
</tr>
</tbody>
</table>

Figure 2-2 shows the mentioned LEDs on the board.

Push-button SW1 can reset the device, as seen in Figure 2-3. Press SW1 to pull the nReset line low and put the device into a shutdown state. Releasing the button brings the nReset back high and allows the device to start up as long as power is provided to the board. This button is primarily designed for use without a hosted setup using Radio tool, when the user wants to reset the device state for initial connection. Refer to Section 3.3 for details concerning Radio Tool.
2.2.2 Jumper Settings

Table 2-2 lists the jumper settings. To reference the default jumper configurations, see Figure 2-1.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Usage</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1, J2</td>
<td>RF Test</td>
<td>SMA connector (J1) or U.FL connector (J2) for conducted testing in the lab. See Section 2.5.</td>
</tr>
<tr>
<td>J6, J8</td>
<td>Power to board</td>
<td>Used to enable power to board for both supplies. See Section 2.3.</td>
</tr>
<tr>
<td>J15, J16</td>
<td>Current measurement</td>
<td>Used to measure power to device only. See Section 2.3.1.</td>
</tr>
<tr>
<td>J7</td>
<td>USB connector</td>
<td>For powering the BoosterPack standalone (not connected to LaunchPad)</td>
</tr>
<tr>
<td>J10, J11</td>
<td>JTAG connectors</td>
<td>Headers to interface with XDS110 debug probe. See Section 2.2.4.</td>
</tr>
<tr>
<td>J9</td>
<td>J11 JTAG header power</td>
<td>Enables 5 V power supply to come from LP-XDS110.</td>
</tr>
<tr>
<td>J12, J13, J14</td>
<td>Level shifter host voltage</td>
<td>Set to 3.3 V or 1.8 V to enable relevant level shifters to translate to correct host voltage level.</td>
</tr>
<tr>
<td>P1, P2</td>
<td>BoosterPack header</td>
<td>2 X 20 pins each connected to LaunchPad. See Section 2.2.3.</td>
</tr>
</tbody>
</table>

2.2.3 BoosterPack Header Assignment

The CC3301 BoosterPack has 2 x 20 pin connectors that provide access to many of the CC3301 pins and features. The signal assignment on these 2x20 pin connectors is shown in the figure below and described in Table 2-3 and Table 2-4.
<table>
<thead>
<tr>
<th>Pin</th>
<th>Name (in schematic)</th>
<th>Type/ Direction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1.1</td>
<td>VCC_MCU_3V3</td>
<td>Input</td>
<td>No functional purpose</td>
</tr>
<tr>
<td>P1.2</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P1.3</td>
<td>UART_TX_3V3 (from CC3301)</td>
<td>Output</td>
<td>The CC3301 UART TX to host for BLE host controller interface</td>
</tr>
<tr>
<td>P1.4</td>
<td>UART_RX_3V3 (to CC3301)</td>
<td>Input</td>
<td>The CC3301 UART RX from host for BLE host controller interface</td>
</tr>
<tr>
<td>P1.5</td>
<td>LP_RESET</td>
<td>Input</td>
<td>Reset line for CC3301 used to enable/ disable (active low). Driven by host through LaunchPad pins.</td>
</tr>
<tr>
<td>P1.6</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P1.7</td>
<td>SDIO_CLK_3V3</td>
<td>Input</td>
<td>SDIO clock or SPI clock. Must be driven by host</td>
</tr>
<tr>
<td>P1.8</td>
<td>IRQ_WL_3V3</td>
<td>Output</td>
<td>Interrupt request from CC3301 to host for Wi-Fi activity</td>
</tr>
<tr>
<td>P1.9</td>
<td>COEX_GRANT_3V3</td>
<td>Output</td>
<td>External coexistence interface - grant (reserved for future use)</td>
</tr>
<tr>
<td>P1.10</td>
<td>ANT_SEL_3V3</td>
<td>Output</td>
<td>Antenna select control</td>
</tr>
<tr>
<td>P1.21</td>
<td>VCC_MCU_5V</td>
<td>Power</td>
<td>5 V supply to board</td>
</tr>
<tr>
<td>P1.22</td>
<td>GND</td>
<td>GND</td>
<td>Board ground</td>
</tr>
<tr>
<td>P1.23</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P1.24</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P1.25</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P1.26</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P1.27</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P1.28</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P1.29</td>
<td>COEX_REQ_3V3</td>
<td>Input</td>
<td>External coexistence interface - request (reserved for future use)</td>
</tr>
<tr>
<td>P1.30</td>
<td>COEX_PRIORITY_3V3</td>
<td>Input</td>
<td>External coexistence interface - priority (reserved for future use)</td>
</tr>
<tr>
<td>Pin</td>
<td>Name (in schematic)</td>
<td>Type/Direction</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>P2.11</td>
<td>IRQ_BLE_3V3</td>
<td>Output</td>
<td>Interrupt request from CC3301 to host for BLE activity</td>
</tr>
<tr>
<td>P2.12</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P2.13</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P2.14</td>
<td>SDIO_D0_3V3 (POCI)</td>
<td>Input/Output</td>
<td>SDIO data D0 or SPI POCI</td>
</tr>
<tr>
<td>P2.15</td>
<td>SDIO_CMD_3V3 (PICO)</td>
<td>Input/Output</td>
<td>SDIO command or SPI PICO</td>
</tr>
<tr>
<td>P2.16</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P2.17</td>
<td>FAST_CLK_REQ_3V3</td>
<td>Output</td>
<td>Fast clock request from CC3301 to host</td>
</tr>
<tr>
<td>P2.18</td>
<td>SDIO_D3_3V3 (CS)</td>
<td>Input/Output</td>
<td>SDIO data D3 or SPI CS</td>
</tr>
<tr>
<td>P2.19</td>
<td>SLOW_CLK_IN_3V3</td>
<td>Input</td>
<td>Input for external RTC clock 32.768 kHz</td>
</tr>
<tr>
<td>P2.20</td>
<td>GND</td>
<td>GND</td>
<td>Board ground</td>
</tr>
<tr>
<td>P2.31</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P2.32</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P2.33</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P2.34</td>
<td>LOGGER_3V3</td>
<td>Output</td>
<td>Tracer from CC3301 (UART TX debug logger)</td>
</tr>
<tr>
<td>P2.35</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>P2.36</td>
<td>UART_RTS_3V3 (from CC3301)</td>
<td>Output</td>
<td>UART RTS from CC3301 to host for BLE HCI flow control</td>
</tr>
<tr>
<td>P2.37</td>
<td>UART_CTS_3V3 (to CC3301)</td>
<td>Input</td>
<td>UART CTS to CC3301 from host for BLE HCI flow control</td>
</tr>
<tr>
<td>P2.38</td>
<td>SDIO_D1_3V3</td>
<td>Input/Output</td>
<td>SDIO data D1</td>
</tr>
<tr>
<td>P2.39</td>
<td>SDIO_D2_3V3</td>
<td>Input/Output</td>
<td>SDIO data D2</td>
</tr>
<tr>
<td>P2.40</td>
<td>Reserved</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
2.2.4 JTAG Headers

The BP-CC3301 has 2 JTAG headers (J10, J11) for SWD interface with the XDS110 debug probe. The signal assignment for these headers are described in the figures and tables below.

![Figure 2-5. ARM 10 pin JTAG Connector (J10)](image)

**Table 2-5. ARM 10 pin JTAG Connector (J10) Assignment**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J10.1</td>
<td>VCC_BRD_1V8</td>
<td>1.8V supply for reference voltage to connector</td>
</tr>
<tr>
<td>J10.2</td>
<td>SWDIO</td>
<td>Serial wire data in/out</td>
</tr>
<tr>
<td>J10.4</td>
<td>SWCLK</td>
<td>Serial wire clock</td>
</tr>
<tr>
<td>J10.10</td>
<td>RESET_1V8</td>
<td>nReset (Enable line for CC3301)</td>
</tr>
<tr>
<td>J10.3, J10.5, J10.7, J10.9</td>
<td>GND</td>
<td>Board ground</td>
</tr>
</tbody>
</table>
Figure 2-6. 20 pin LP-XDS110 Connector (J11)

Table 2-6. 20 Pin LP-XDS110 Connector (J11) Assignment

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J11.6</td>
<td>SWCLK</td>
<td>Serial wire clock</td>
</tr>
<tr>
<td>J11.8</td>
<td>SWDIO</td>
<td>Serial wire data in/out</td>
</tr>
<tr>
<td>J11.10</td>
<td>RESET_1V8</td>
<td>nReset (Enable line for the CC3301)</td>
</tr>
<tr>
<td>J11.12</td>
<td>UART_TX_1V8</td>
<td>The CC3301 UART TX to host for BLE host controller interface</td>
</tr>
<tr>
<td>J11.14</td>
<td>UART_RX_1V8</td>
<td>The CC3301 UART RX from host for BLE host controller interface</td>
</tr>
<tr>
<td>J11.16</td>
<td>VCC_BRD_1V8</td>
<td>1.8V supply for reference voltage to connector</td>
</tr>
<tr>
<td>J11.18</td>
<td>VCC_BRD_5V</td>
<td>5 V supply to BP-CC3301 from LP-XDS110</td>
</tr>
<tr>
<td>J11.1, J11.7, J11.13, J11.19, J11.20</td>
<td>GND</td>
<td>Board ground</td>
</tr>
</tbody>
</table>
2.3 Power

The board is designed to accept power from a connected LaunchPad kit. Some LaunchPad kits cannot source the peak current requirements of Wi-Fi, which can be as high as 500 mA. In such cases, the USB connector on the BP-CC3301 can be used to aid the peak current. The use of Schottky diodes verifies that load sharing occurs between the USB connectors on the LaunchPad kit and the BoosterPack module without any board modifications. If J6 or J8 shunts are removed, then the shunts can be used to measure total current consumption of the entire board for both power rails from the on-board LDO.

2.3.1 Measure the CC3301 Current Draw

2.3.1.1 Low Current Measurement (LPDS)

To measure the current draw of the CC3301 device for both power supplies (3.3 V or 1.8 V), a jumper labeled J16 (for 3.3 V supply) and a jumper labeled J15 (for 1.8 V supply) is provided on the board. By removing J16, users can place an ammeter into this path to observe the current on the 3.3 V supply. The same process can be used for observing the current on the 1.8 V supply with J15. TI recommends this method for measuring the LPDS.

Jumper J15 is removed, and an ammeter is added in series to measure the LPDS currents (see Figure 2-7). Similar operation with J16 and 3.3V supply.

Figure 2-7. Low Current Measurement
2.3.1.2 **Active Current Measurement**

To measure active current in a profile form, TI recommends using a 0.1-Ω 1% 0603 resistor on the board, and measuring the differential voltage across the resistor. This measurement can be done using a voltmeter or an oscilloscope for measuring the current profile for both power supplies (3.3 V or 1.8 V).

Jumper J15 shunt is removed and a 0.01 resistor is populated in parallel to measure the active currents on the 1.8V supply (see Figure 2-8). Similar operation with J16 and 3.3V supply.

![Figure 2-8. Active Current Measurement](image)
2.4 Clocking

The BP-CC3301 provides two clock inputs to the CC3301 device:

- Y1 is a 40 MHz crystal for fast clock input.
- Y2 is a 32.768 kHz oscillator for slow clock input.

If the user desires to provide their own external slow clock through the Slow Clock Input pin (P2.19), then some re-work must be performed. The Y2 oscillator needs to be removed, and populate a 0201 sized, 0 ohm resistor on R29 pad. See Figure 2-10. The slow clock can also be generated internally to save on BOM.

![Figure 2-9. 40 MHz XTAL (Y1)](image)

![Figure 2-10. Rework for External Slow Clock Use](image)
2.5 Performing Conducted Testing

As seen in Figure 2-11, the BP-CC3301 has an on-board SMA connector and component antenna. The SMA connector (J1) provides a way for testing conducted measurements. Alternately, a track pad for a UF.L connector (J2) is provided on-board to replace the SMA connector and provide a way to test in the lab using a compatible cable (see Figure 2-12).
A rework can be needed before using the connector on J1/J2. This involves swapping the position of the existing 3.9 pF capacitor to lead the transmission line to the desired connection (see Figure 2-13).
3 Evaluation Setups

The CC3301 BoosterPack can be used in the following configurations:

- MCU and RTOS evaluation: BP-CC3301 + LaunchPad with the MCU running TCP/IP like the LP-AM243
- Processor and Linux evaluation: BP-CC3301 + BP-CC33-BBB-ADAPT + BEAGL-BONE-BLACK
- RF testing with PC tools: BP-CC3301 + LP-XDS110

In addition, the BP-CC3301 can also be wired to any other Linux or RTOS host board running TCP/IP stack.

3.1 MCU and RTOS

The BP-CC3301 can be used with a MCU running TCP/IP, like the LP-AM243 and can easily integrate with the LaunchPad by stacking the 40 pin headers, as shown in the figure below.

Figure 3-1. BP-CC3301 with LP-AM243
3.2 Processor and Linux

The BP-CC3301 can integrate with a host platform running Linux OS, like the BeagleBone Black (BBB). The BeagleBone Black is a low-cost, community-supported development platform as shown below.

Figure 3-2. BeagleBone Black Board

To interface with the BP-CC3301 with the BeagleBone Black, the user also needs the BP-CC33xx to BBB Adapter Board.

Figure 3-3. Top View of BP-CC3301 + BBB with Adapter Board

Figure 3-4. Side View of BP-CC3301 and BBB with Adapter Board In Between
To make sure the BeagleBone Black boots up from the SD card, TI recommends to add a 100k Ohm resistor for R93 on the top of the BBB, and remove the R68 resistor seen on the bottom of the BBB. Alternatively, you can press and hold the S2 button on the BeagleBone board during power up if the hardware modifications were not made. (see Figure 3-6 and Figure 3-7).

Lastly, adding a right angle header on the bottom of the BBB to easily connect the FTDI cable is optional. When the adapter board is attached to the BBB, the FTDI cable can get pinched between the BBB and adapter board, which can cause communication problems. (see Figure 3-7).
3.3 Standalone RF Testing

The BP-CC3301 can be used standalone (without a host) to test RF capabilities, using Radio Tool. For more information on Radio Tool and where to download, refer to Wi-Fi Toolbox BP-CC3301 Hardware Setup.

The BP-CC3301 has an on-board SMA connector and component antenna, and a U.FL can be populated on the board, for conducted RF testing using compatible cables (a rework can be needed). For more information, see Section 2.5.
Radio Tool BP-CC3301 Hardware Setup

Radio Tool is a tool for RF evaluation and testing of CC33xx designs during development and certification. The tool enables low-level radio testing capabilities by manually setting the radio into transmit or receive modes. Usage of the tool requires familiarity and knowledge of radio circuit theory and radio test methods. To perform conducted RF testing on the BP-CC3301, refer to Section 2.5. Note that a rework can be needed.

The user can access this tool by submitting a request on the ti.com CC3301 tool folder under Request more information section. Request Now.

HW Prerequisites

• Windows 10 64bit/ Ubuntu 18 (or higher) 64bit operation system
• Latest Chrome web browser
• Installation of Simplelink Wi-Fi Toolbox (Request Now)
• BP-CC3301
• XDS110 debugger for SWD communication XDS110

The XDS110 enables direct communication to the CC3301 device via the SWD interface. This allows external tools, such as the Radio Tool, to send commands directly to the device without the use of an embedded host. Three different options currently exist for enabling the XDS110 connection:

Option 1: LP-XDS110

Option 2: XDS110 JTAG debug probe

Option 3: Simplelink LaunchPad with on-board XDS110 (for example, LAUNCHXL-CC3235SF) and JTAG SWD 10 pin IDC cable
4.1 Option 1: LP-XDS110

To use the LP-XDS110 with the BP-CC3301, connect the 20-pin LP-XDS110 connector (J11) on the BP-CC3301 to the corresponding connector on the LP-XDS110 (see Figure 4-1). Make sure that the jumper on the LP-XDS110 (labeled TGT VDD) is in the EXT. configuration, as shown in the figure below. This verifies that the target voltage for the JTAG signals are sourced from the BP-CC3301 (which is 1.8V) instead of the default LP-XDS110 target voltage (3.3V).

Power supply for the BP-CC3301 comes from the LP-XDS110 in this case, so there is no need to connect to external power with the USB cable. A jumper wire is needed to drive the nReset pin high (BoosterPack Header pin P1.5), and must be connected to pin 1 on the jumper J4, as shown in the figure below.

![Figure 4-1. BP-CC3301 Connected to LP-XDS110](image-url)
4.2 Option 2: XDS110 JTAG Debug Probe

For this hardware connection, grab the XDS110 JTAG Debug Pod, 20-pin debug cable, and the TI 20-pin to ARM Cortex 10-pin converter adapter (can be labeled as “CTI20MALE to ARM20-ETM FEMALE 516980-0001”) from the kit.

Note: If the user is having problems with the computer recognizing the XDS110 DebugProbe, then you can download and install the XDS110 Support Utilities package currently on release 7.0.100.1 from XDS110 Support Utilities Package.

Figure 4-2. XDS110 Debug probe kit

Figure 4-2 above shows contents included when buying the XDS110 kit, and highlights the accessories used for this hardware configuration. Grab the 20-pin debug cable then attach to the Debug port of the Debug Pod, on the other side of the cable connect the 10-pin adapter. The end of the cable with the 10-pin adapter must be connected to the ARM 10pin JTAG Connector (J10), see Figure 4-3 below.

Figure 4-3. XDS110 20 pin debug cable with ARM 10 pin Adapter
The TI 20-pin to ARM Cortex 10-pin converter adapter is not keyed, as such be careful not to attach incorrectly. To attach correctly, Pin1 from the 10-pin adapter and Pin J10.1 of the BP-CC3301 ARM 10pin JTAG Connector (J10) must be aligned.

A jumper wire is needed to drive the nReset pin high (BoosterPack Header pin P1.5), and is connected to pin 1 on the jumper J4, as shown in the figure below. Lastly the debug cable does not provide power to the BP-CC3301, as such connect the BP-CC3301 to power supply using the USB connector (J7), as shown in the figure below.
Figure 4-5. BP-CC3301 Connected to XDS110
4.3 Option 3: SimpleLink Launchpad and 10 pin Cable

Most SimpleLink Launchpads have an on-board XDS110 Debugger. The boards often include an XDS110 OUT connection, which allows the debugger to be connected to other target devices or boards. This connection can be used to connect to the BP-CC3301 for use with Radio Tool.

To make use of the on-board XDS110 Debugger, remove all jumpers to disconnect the on-board emulator from the on-board device (in this example the CC3235SF on the LAUNCHXL-CC3235SF). Attach the JTAG SWD 10 pin IDC Cable to the BP-CC3301 ARM 10pin JTAG Connector (J10) and the "XDS110 OUT" connector on the SimpleLink LaunchPad (do not use the "JTAG IN"). Then connect the BP-CC3301 to power supply using a USB cable.

![Figure 4-6. BP-CC3301 Connected to LAUNCHXL-CC3235SF](image)

5 Hardware Design Files

5.1 Schematics

To access the schematics for the BP-CC3301, the user can submit a request on the ti.com CC3301 tool folder under Request more information section. Request Now.

5.2 PCB Layouts

To access the Gerber files for the BP-CC3301, the user can submit a request on the ti.com CC3301 tool folder under Request more information section. Request Now.
5.3 Bill of Materials (BOM)

To access the BOM list for the BP-CC3301, the user can submit a request on the ti.com CC3301 tool folder under Request more information section. Request Now.

6 Compliance and Certifications

The BP-CC3301 is found to be in RoHS compliant in accordance to EU Directives. The full text of the EU declaration of conformity is available at this link.

7 Trademarks

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