

PSoC6-LWB5+ DVK Setup

SterlingTM LWB5+

Application Note

v1.0

1 INTRODUCTION

Infineon's PSoC6 Development Kit, part number CY8CEVAL-062S2, includes Laird Connectivity's Sterling LWB5+ M.2 module for development and evaluation. This guide establishes how to set up a Wi-Fi connection on the CY8CEVAL-062S2 board via the Sterling LWB5+ module and Infineon's ModusToolbox platform.

The product listing for the CY8CEVAL-062S2 can be found at:

<https://www.infineon.com/cms/en/product/evaluation-boards/cy8ceval-062s2/>

2 REQUIREMENTS

To set up the CY8CEVAL-062S2 for Wi-Fi connection, you'll need the following:

- [CY8CEVAL-062S2 Evaluation Kit](#)
- FlexPIFA antenna (included with evaluation kit)
- Development PC
- Terminal software, such as [Tera Term](#)
- Infineon ModusToolbox software, [available as part of the Infineon Developer Center Launcher](#)

3 BOARD SETUP

To set up a Wi-Fi connection, first complete the following hardware setup:

1. Attach the included FlexPIFA antenna to the antenna connector on the Sterling LWB5+ on board the CY8CEVAL-062S2 as shown in [Figure 1](#).

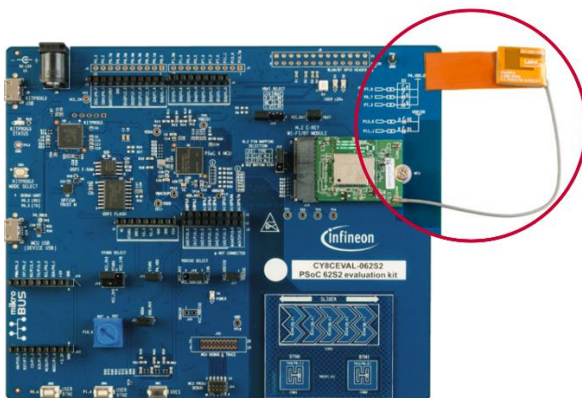


Figure 1: Attach FlexPIFA to antenna connector on Sterling LWB5+

2. Attach jumper J18 at position 3-5 to select 3.3V operation.

3. Connect the CY8CEVAL-062S2 to your development PC using the included USB cable as shown in [Figure 2](#).

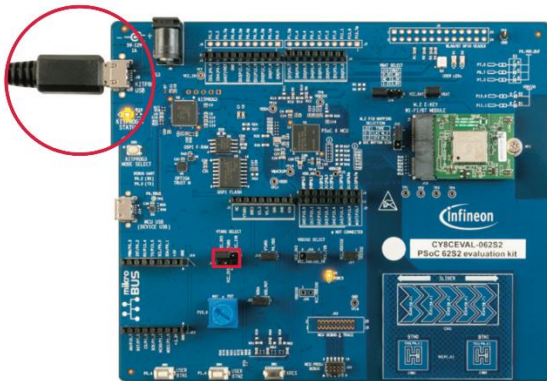


Figure 2: Connect CY8CEVAL-062S2 to development PC via USB

4. On your development PC, launch your terminal software (such as Tera Term). Configure the connection settings as follows:
 - Baud: 115200
 - Data: 8 bit
 - Parity: none
 - Stop bit: 1 bit
 - Flow control: none
5. Connect to the DVK board with these settings. The pre-loaded image on the DVK will echo “Hello World!!!” in the terminal when connected, in addition to the following as shown in [Figure 3](#).

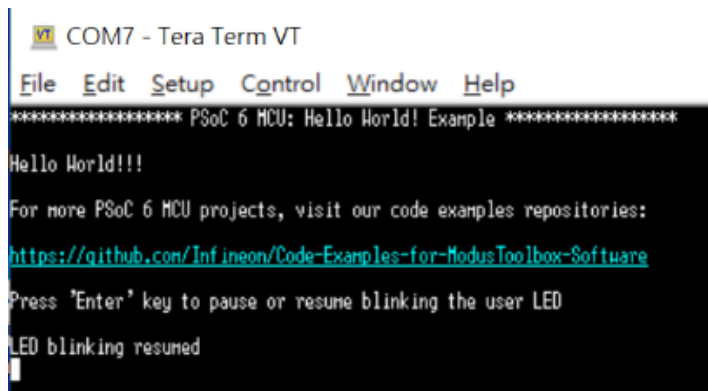


Figure 3: Terminal message echoed from development board

4 MODUSTOOLBOX SETUP

To configure the Sterling LWB5+ on the development board, you must install Infineon’s ModusToolbox software on your development PC. You may install ModusToolbox individually, but we recommend installing the Infineon Develop Center Launcher, since it allows you to install other packages that may be required in addition to ModusToolbox.

The Infineon Developer Center Launcher is available here:

<https://www.infineon.com/cms/en/design-support/tools/utilities/infineon-developer-center-idc-launcher/?redirId=102702>

For this example, once the Infineon Developer Center Launcher is installed, you'll need to install the ModusToolbox Tool Package 2.4.0 as displayed in [Figure 4](#). We recommend you install to the default path specified by the installer to avoid path issues later with the compiler tool.

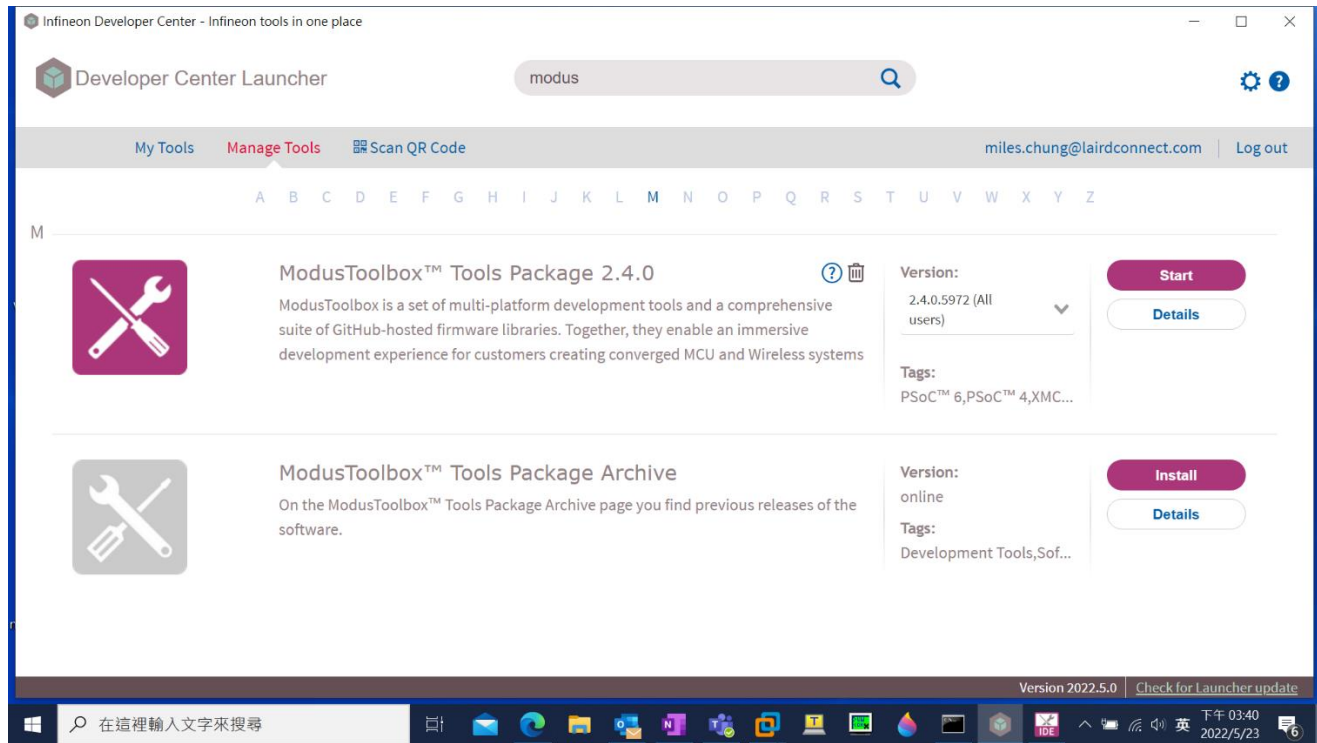


Figure 4: Install ModusToolbox from the Infineon Developer Center Launcher

After ModusToolbox is installed, complete the following:

- Click **New Application**. Choose the board support package under: **PSoC6™ BSPs > CY8CEVAL-062S2-LAI-4373M2**. Click **Next**.

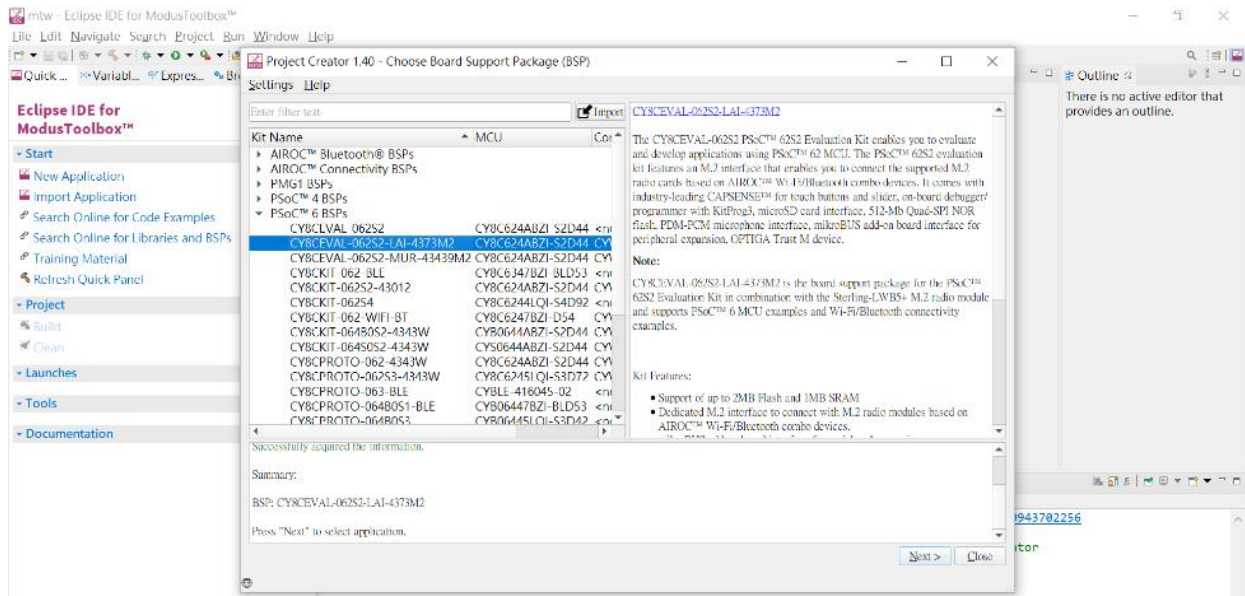


Figure 5: Select the board support package for CY8CEVAL-062S2-LAI-4373M2

- In the window labeled *Select Application*, choose **WLAN Low Power** and click **Create**. The Project Creator will generate the codes and related packages for the application.

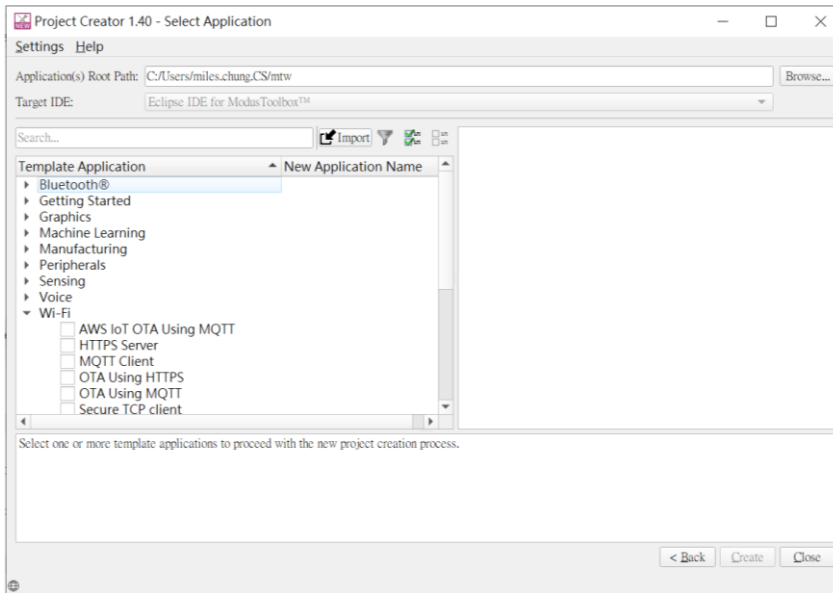


Figure 6: Select WLAN Low Power application

- The project will open in ModusToolbox with all the default files and settings. Change the SSID and password settings defined in *lowpower_task.h* (located in the *source* folder in the left-hand panel as shown in Figure 7. Change the values for WIFI_SSID and WIFI_PASSWORD to your access point's SSID and password.

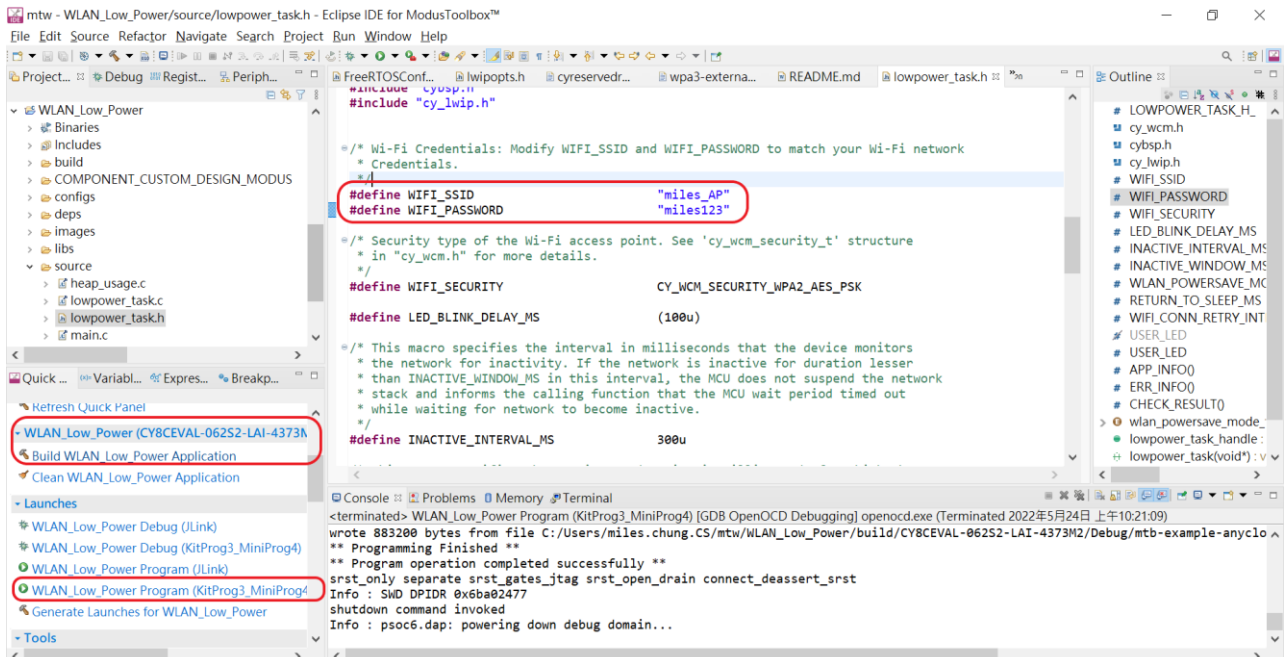


Figure 7: Configure Lowpower_task.h file in ModusToolbox

- Click **Build WLAN_Low_Power Application** in the left-hand panel to build the application. When the build is complete, click **WLAN_Low_Power Program (KitProg3_MiniProg4)** to program the image onto the DVK board.

10. After programming is complete, the following is echoed in your terminal program, and if SSID and password are configured correctly, the Sterling LWB5+ will connect to the AP as shown in the terminal messages in [Figure 8](#).

```
COM7 - Tera Term VT
File Edit Setup Control Window Help
=====
CE230106 - WLAN Loupouer
=====
WLAN MAC Address : C0:EE:40:80:68:26
WLAN Firmware : w10: Dec 15 2021 22:33:01 version 13.10.246.264 (462e387 CV)
FHID 01-39072604
WLAN CLM : API: 18.1 Data: Laird.LWB5+Diversity1.35.0 Compiler: 1.35.0 C
InInput: 1.39.1 Customization: v2 21/10/01 Creation: 2021-10-01 01:42:15
WHD VERSION : v2.3.0 : v2.3.0 : GCC 10.3 : 2022-04-13 14:02:24 +0800
Offloads not configured
Info: Connecting to AP
Info: Successfully connected to Wi-Fi network 'miles_AP'.
Info: Assigned IP address = 192.168.66.53
Info: Beacon period = 100, DTIM period = 1

Network Stack Suspended, MCU will enter DeepSleep power mode
Resuming Network Stack, Network stack was suspended for 6747ms

=====
WHD Stats..
tx_total:62, rx_total:65, tx_no_mem:0, rx_no_mem:0
tx_fail:0, no_credit:0, flow_control:0
Bus Stats..
cmd52:3138, cmd53_read:332, cmd53_write:716
cmd52_fail:0, cmd53_read_fail:0, cmd53_write_fail:0
bob_intrs:64, sdio_intrs:132, error_intrs:0, read_aborts:0
=====
Network is active. Resuming network stack

Network Stack Suspended, MCU will enter DeepSleep power mode
Resuming Network Stack, Network stack was suspended for 71ms

=====
WHD Stats..
tx_total:68, rx_total:72, tx_no_mem:0, rx_no_mem:0
```

Figure 8: Successful connection shown in terminal

5 REVISION HISTORY

Version	Date	Notes	Contributor(s)	Approver
1.0	3 June 2022	Initial release	Miles Chung	Andy Ross