
Application Note :

User Guide for Telink

TLSR8267 Debugging

Dongle

AN-BLE-16090500-E2

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Brief:

This document is the user guide for Telink TLSR8267 debugging dongle board.



TELINK SEMICONDUCTOR



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Revision History

Version	Major Changes	Date	Author
1.0.0	Initial release	2016/9	W.W.X., L.X., Cynthia
1.1.0	Updated silkscreen, pin description table and pin chart for GPIO test: PIN4 and PIN6 of J18; Added 8267 dongle schematic.	2016/10	W.W.X., Cynthia

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1 Function Brief

This document presents guide on how to use Telink TLSR8267 debugging dongle board.

The debugging dongle which is included in the TLSR8267 development kit can be used for SDK development along with the TLSR8267 debugging EVK board. The debugging dongle also supports independent development.

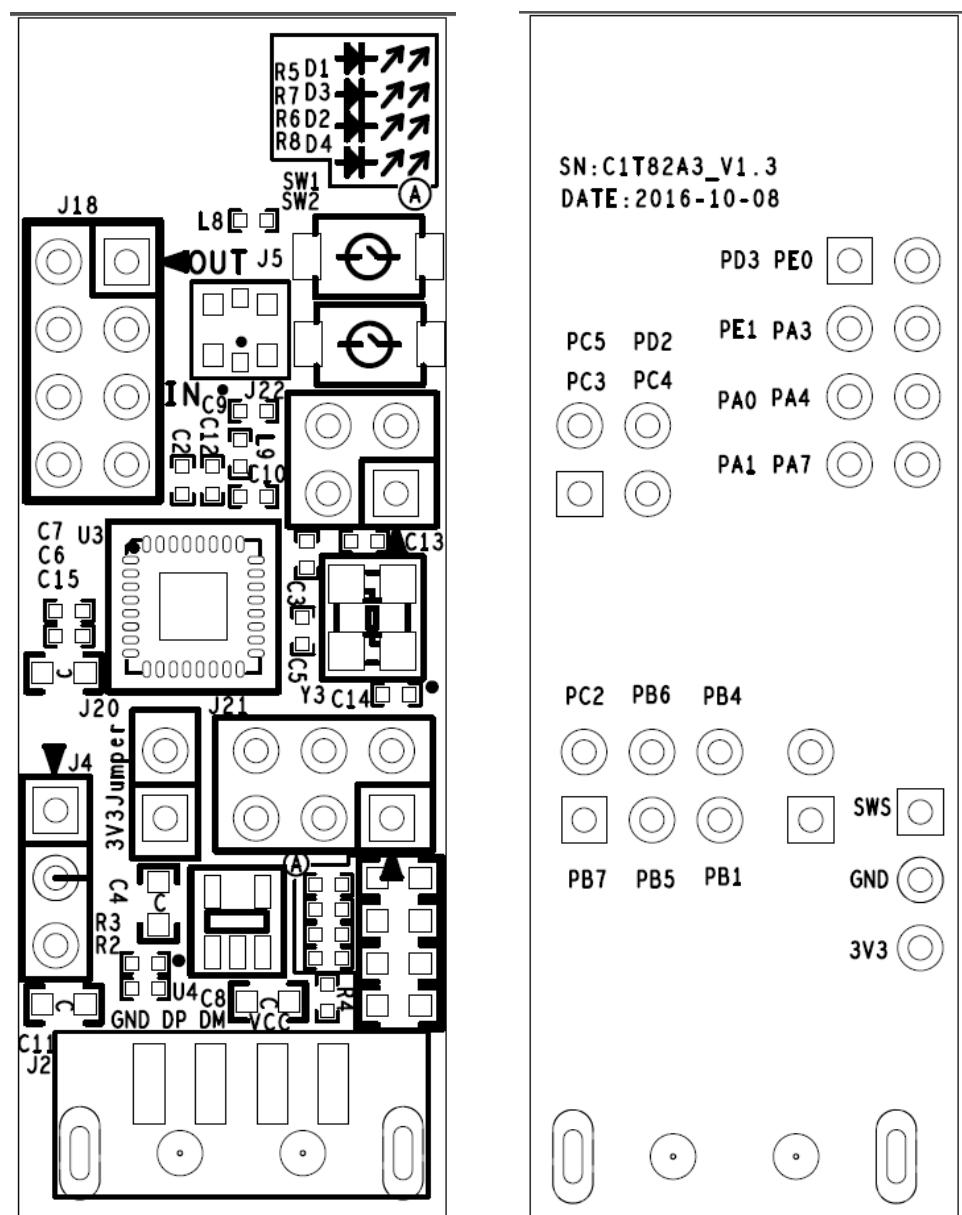
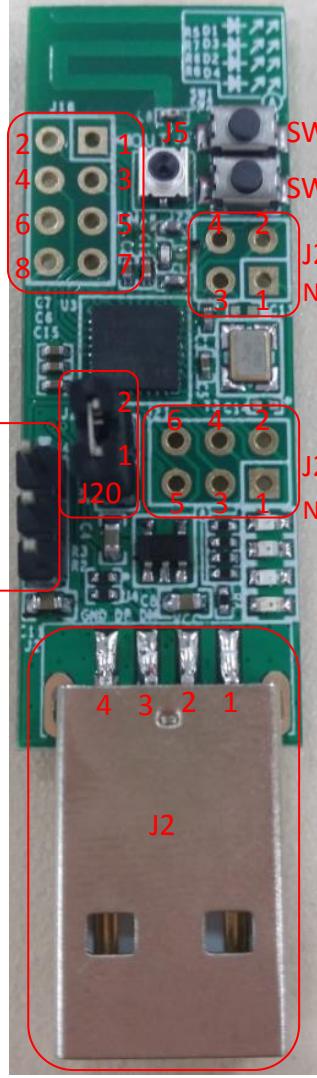


Figure 1 Dongle silkscreen (Left: Top view, Right: Bottom view)



Not soldered by default.

J18 2 1 3 5 7 4 6 8 J5 SW1
J22 4 2 3 1 Not soldered by default.

J4 1 2 3 J20 2 1 6 4 2 J21 5 3 1 Not soldered by default.

J2 4 3 2 1

Figure 2 Dongle photo

For schematic (C1T82A3_V1.3) of TLSR8267 debugging dongle board, please refer to **Appendix**.

2 Pin Description

Table 1 Pin description

J2	
1	VBUS
2	DM (PE2)
3	DP (PE3)
4	GND
S1	GND
S2	GND
J4	
1	TL_SWS (PB0)
2	GND
3	3V3
J18	
1	TL_PD3
2	TL_PE0
3	TL_PE1
4	TL_PA3
5	TL_PA0
6	TL_PA4
7	TL_PA1
8	TL_PA7
J20	
1	VDDO3
2	3V3
J21	
1	TL_PB7
2	TL_PWM2 (PC2)
3	TL_PB5
4	TL_PWM5 (PB6)
5	TL_PB1
6	TL_PWM4 (PB4)
J22	
1	TL_PWM3 (PC3)
2	TL_PC5
3	TL_PC4
4	TL_PD2
SW1	
	TL_PD2
SW2	
	TL_PC5

3 Pin Connection Guide

3.1 Supply power for 8267 Dongle

There are two connection methods to supply power for Telink TLSR8267 debugging dongle board.

1. Method 1:

Make sure a jumper cap is connected on J20 of 8267 Dongle.

Then connect J2 (USB interface) with PC USB.

2. Method 2:

Connect PIN2 and PIN3 of J4 with GND and 3.3V, respectively.

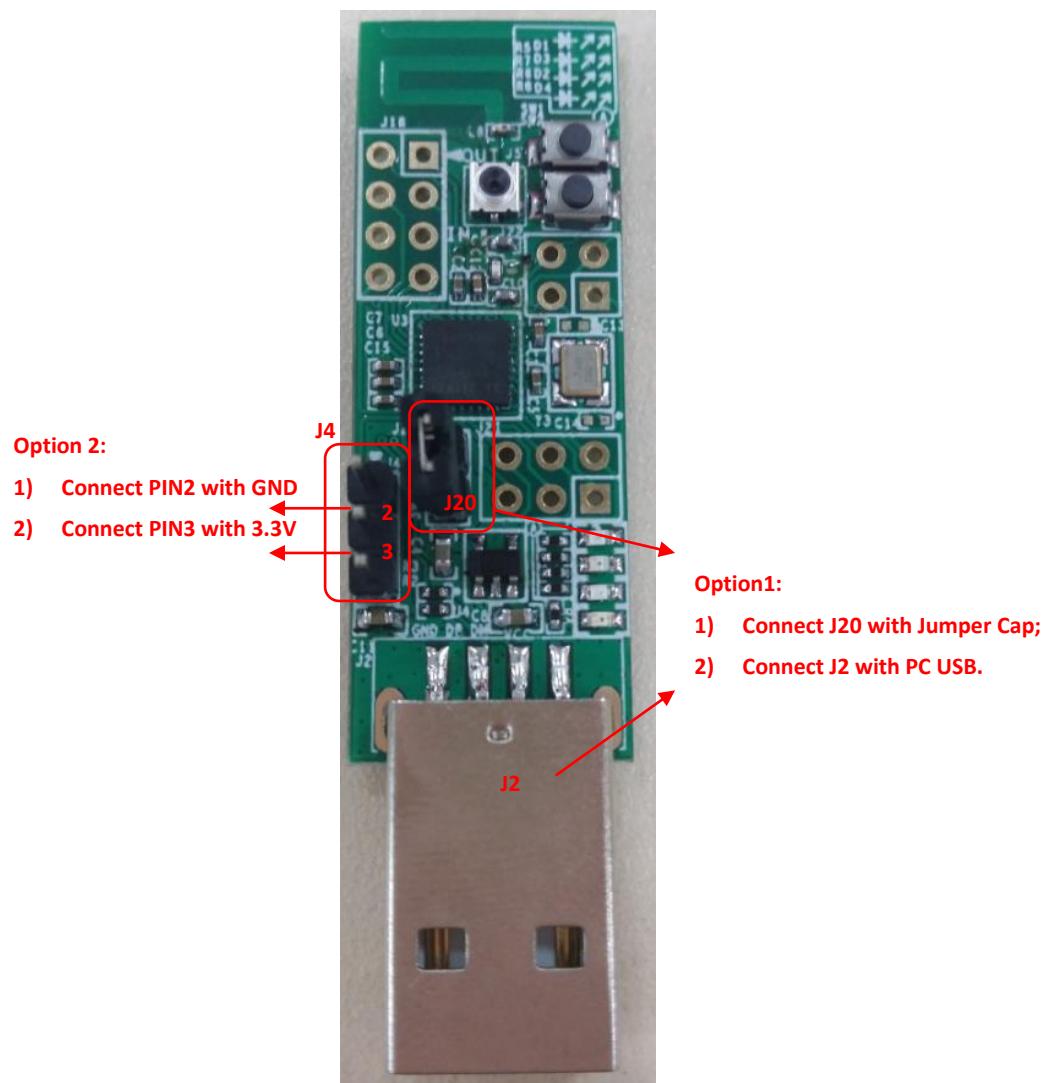


Figure 3 Connection chart to supply power

3.2 Download Firmware into 8267 Dongle

There are two connection methods to download firmware into Telink TLSR8267 debugging dongle board.

1. Method 1: Connect via USB

Make sure a jumper cap is connected on J20 of 8267 Dongle.

Connect J2 (USB interface) with the USB interface of a burning EVK board. The miniUSB interface of the burning EVK is connected with PC USB via an USB cable.

2. Method 2: Connect via Swire

Connect PIN1, PIN2 and PIN3 of J4 with SWM, GND and 3.3V of a burning EVK, respectively.

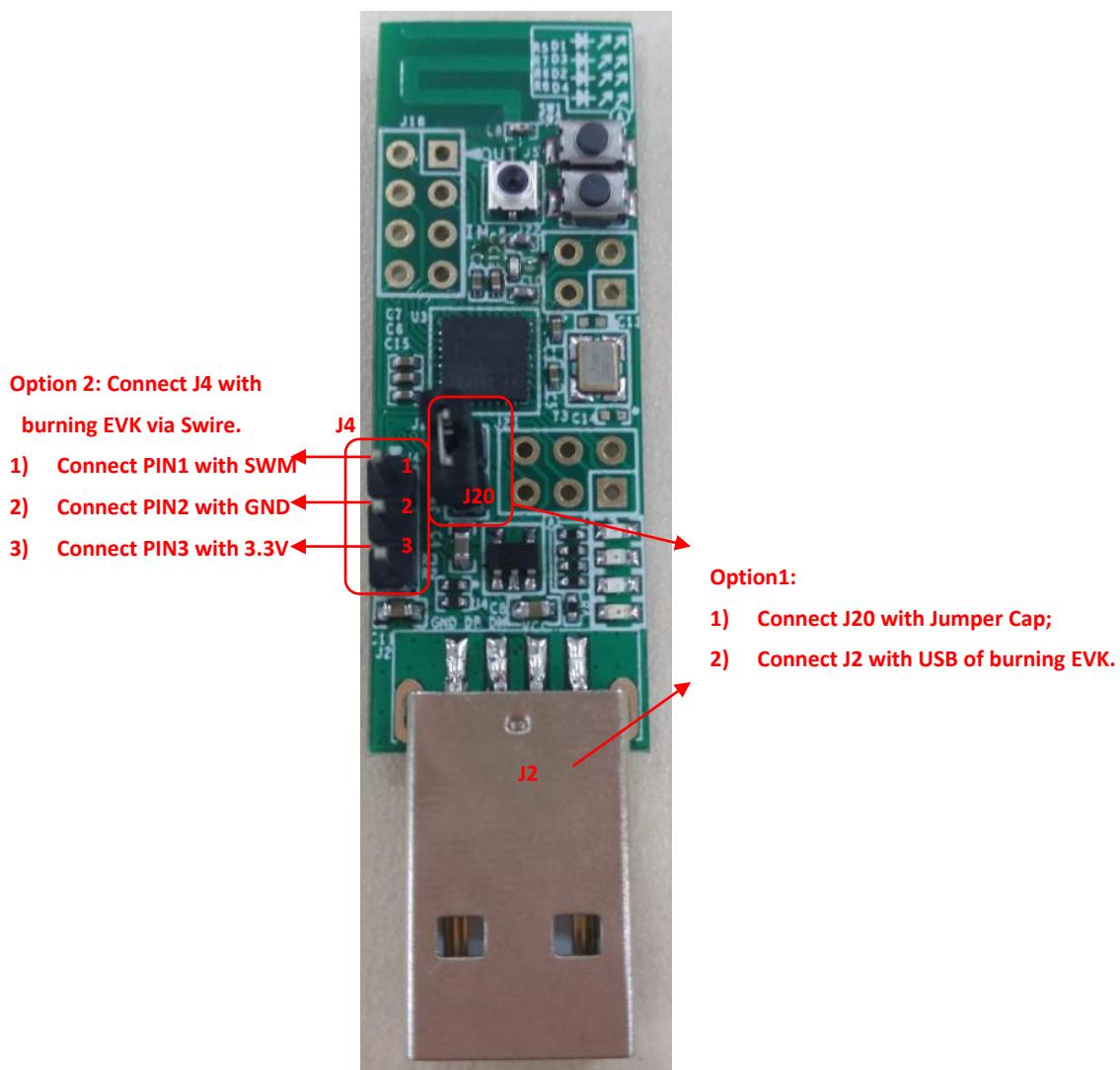


Figure 4 Connection chart to download FW

3.3 Measure power-saving mode current for 8267 Dongle

To measure current consumption of Telink TLSR8267 debugging dongle board in deep sleep or suspend mode, please follow the connection steps below:

- 1) Remove jumper cap from J20 of 8267 dongle, as shown in Figure 5.
- 2) Connect anode (+) and cathode (-) of an amperemeter with anode (+) of 3.3V power supply and PIN3 of J4, respectively.
- 3) Connect cathode (-) of the 3.3V power supply with PIN2 of J4.

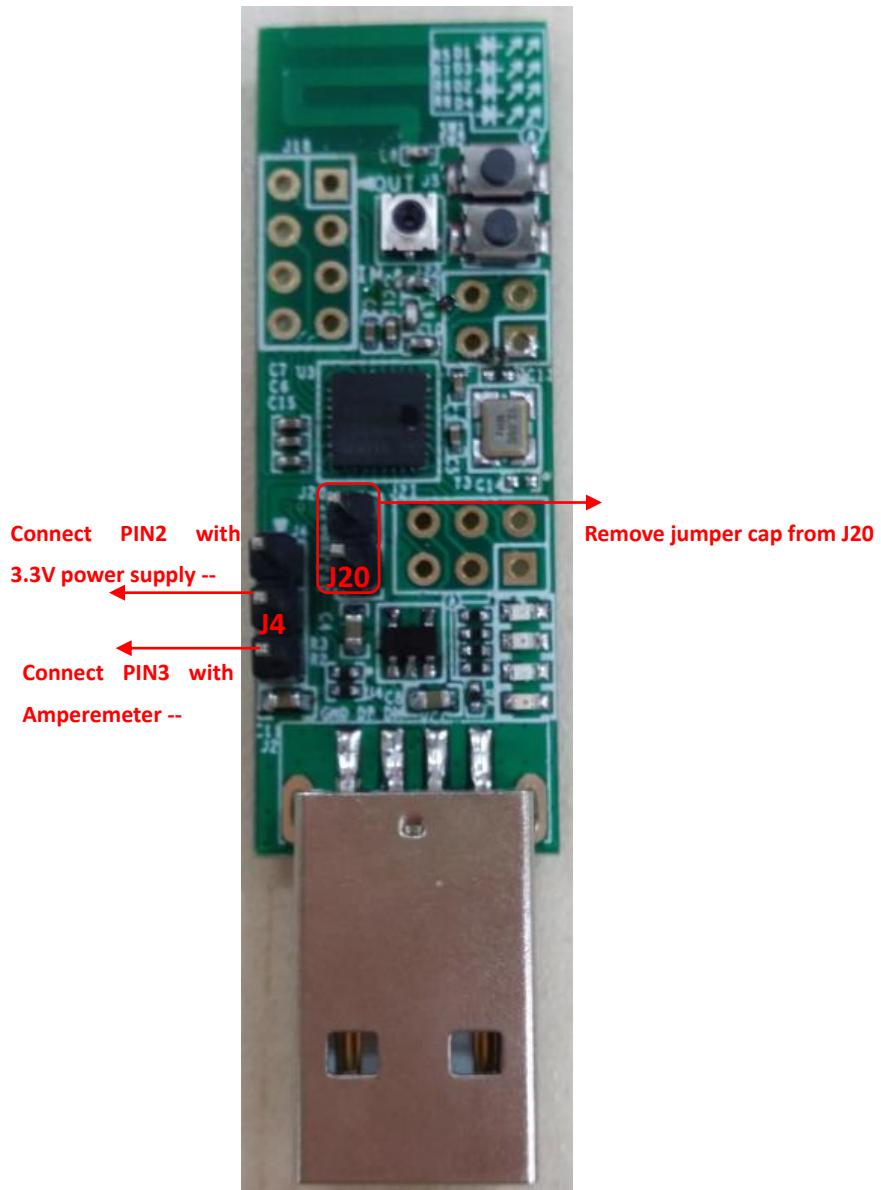


Figure 5 Connection chart to test sleep current

3.4 Test RF signal for 8267 Dongle

To test RF signal for Telink TLSR8267 debugging dongle board, the J5 should be connected with a spectrum analyzer via a RF cable (supplied by Telink).

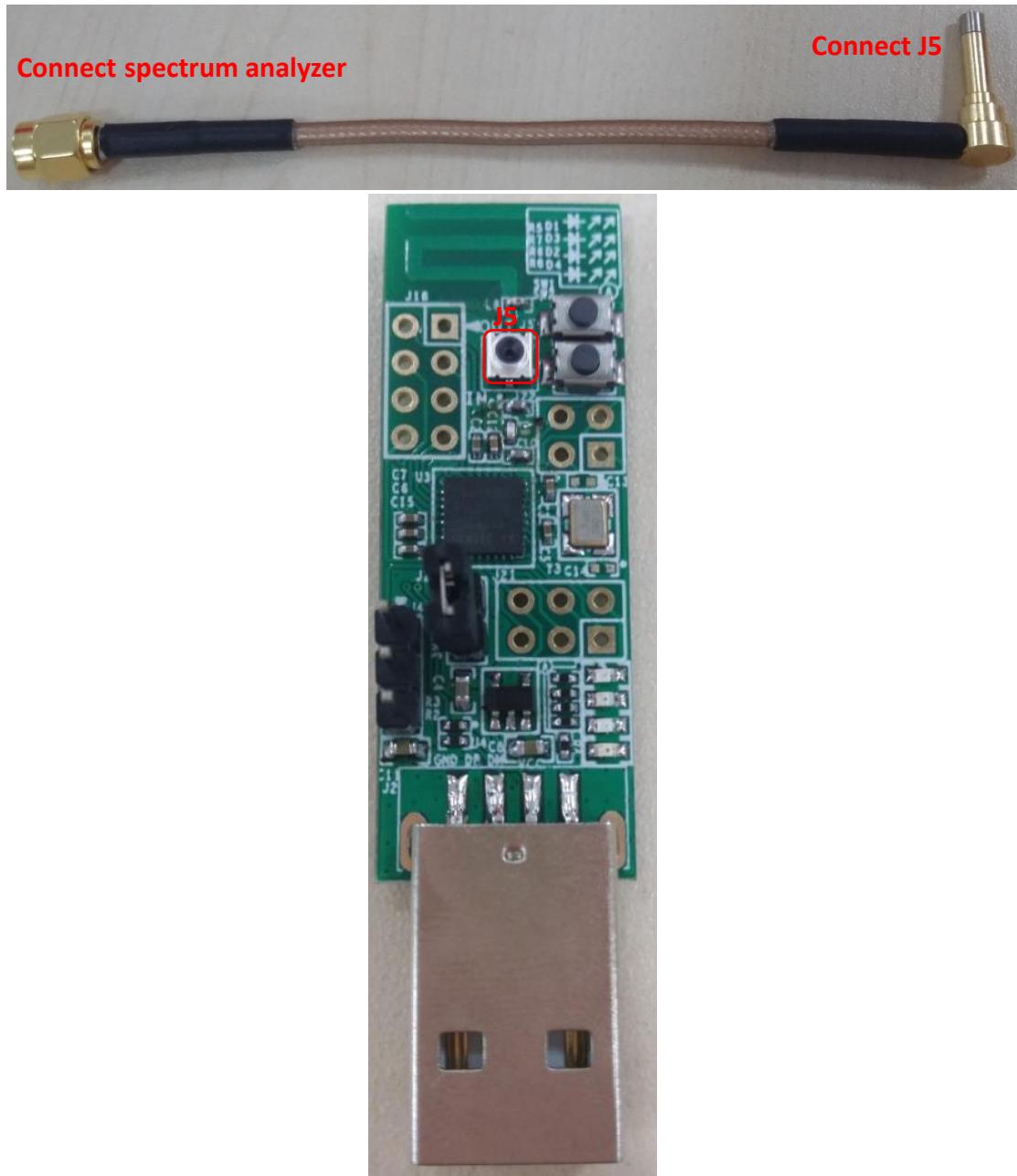


Figure 6 Connection chart to test RF signal

3.5 Test GPIOs for 8267 Dongle

Since all GPIOs of Telink TLSR8267 debugging dongle board are already connected to corresponding pins of headers including J4, J18, J21 and J22, user can directly test GPIO signals on header pins.

Note:

Only J4 and J20 are soldered on 8267 debugging dongle demo board supplied by Telink. User needs to solder J18, J21 and J22 for development purpose.

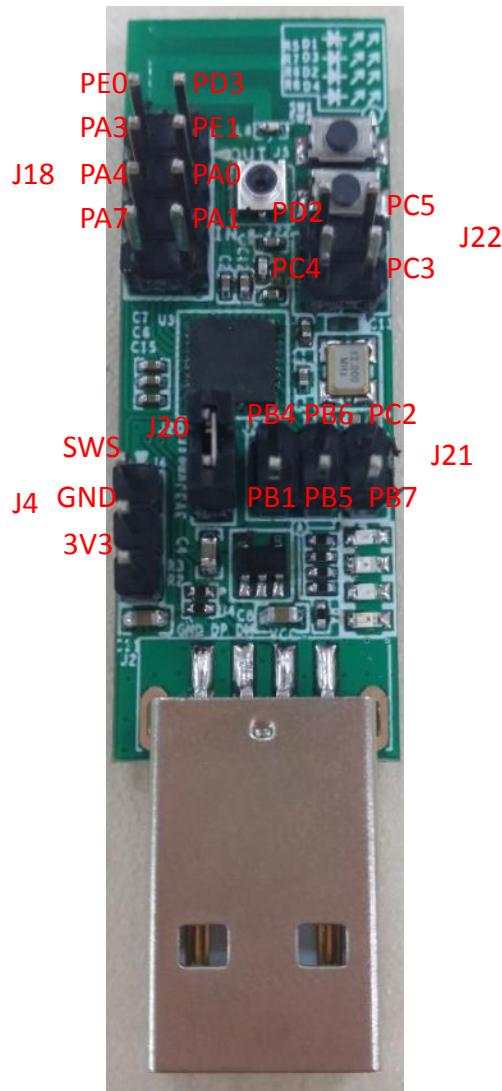


Figure 7 Test GPIO signals on header pins

FCC COMPLIANCE STATEMENT:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.