



TELINK SEMICONDUCTOR

Telink Dongle TLSR8278DG48D User Manual

Keyword:

Features; Pin connection; User manual

Brief:

This is a user manual for Telink 8278 Dongle.

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Table of contents

1	Product Introduction	3
1.1	General description.....	3
1.2	Key features	3
2	Pin Connection Guide	4
2.1	Supply power	4
2.2	Download firmware	5
2.3	Test RF signal.....	6

1 Product Introduction

This is a user manual for Telink Dongle TLSR8278DG48D.

1.1 General description

The TLSR8278DG48D, which is based on Telink TLSR8278F1KET48 chip, provides a Bluetooth LE .

The TLSR8278DG48D integrates a power-balanced 32-bit MCU, BLE , 64kB SRAM, 512kB internal Flash, 14bit ADC , 6-channel PWM, flexible GPIO interfaces, and nearly all the peripherals needed for IoT (Internet of Things) and HID (Human Interface Devices) application development (e.g. Bluetooth Low Energy).

The TLSR8278DG48D supports standards and industrial alliance specifications including Bluetooth Low Energy (up to Bluetooth 5), BLE Mesh, 6LoWPAN, Thread, HomeKit .

1.2 Key features

- ✧ Bluetooth 5 Compliant, 1Mbps, 2Mbps, Long Range 125kbps and 500kbps
- ✧ 64kB on-chip SRAM with up to up to 32kB retention
- ✧ A rich set of I/Os: SPI, I2C, Single wire, up to 32 GPIOs, UART with hardware flow control and 7816 protocol support, DMIC (Digital Mic), AMIC (Analog Mic), I2S, Stereo Audio output
- ✧ 6-channel PWM (Pulse Width Modulation) output
- ✧ 6-channel (only GPIO input), 14-bit SAR ADC with 10.5-bit ENOB
- ✧ 4-channel PGA, differential input
- ✧ RSSI monitoring with +/-1dB resolution
- ✧ Power supply: DC3.3V

2 Pin Connection Guide

2.1 Supply power

The TLSR8278DG48D supports supply power via battery or other 3.3V power.

The power connection is shown below, connect the power to the 3V3 of J6, and connect the GND to the GND of J6.

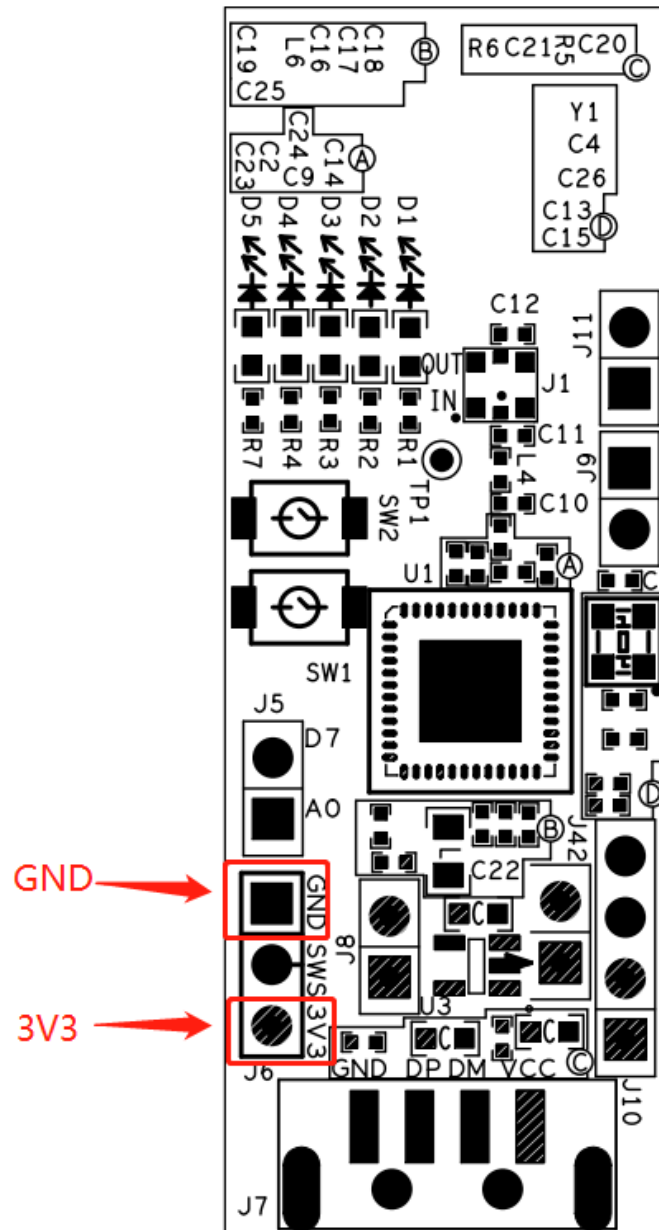


Figure 1 Connection chart to supply power

2.2 Download firmware

To download firmware into TLSR8278DG48D, first make sure the TLSR8278DG48D is supplied with power normally. That is, connect the power to the 3V3 of J6, and connect the GND to the GND of J6.

Then connect J6(SWS) of the TLSR8278DG48D with SWM of a burning EVK. Meanwhile, connect the miniUSB interface of the burning EVK with PC USB.

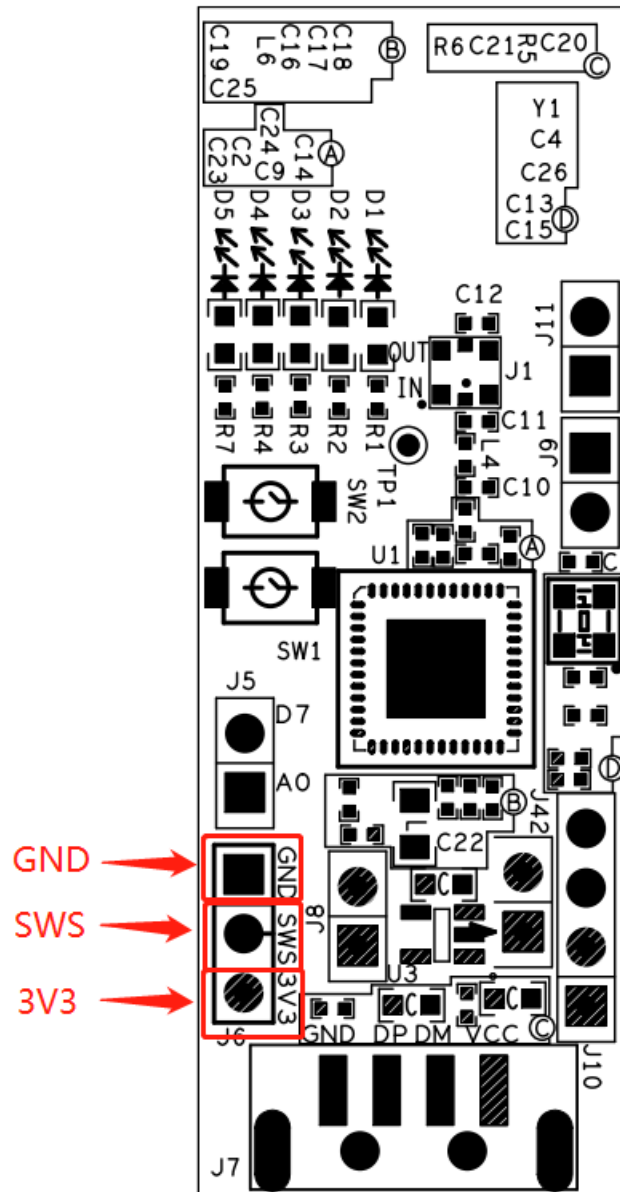


Figure 2 Connection chart to download firmware

2.3 Test RF signal

To test RF signal of TLSR8278DG48D, first make sure the TLSR8278DG48D is supplied with power normally. That is, connect the power to the 3V3 of J6, and connect the GND to the GND of J6.

Attach the semi-rigid cable welding steel to the PCBA GND. Then solder wire core to feed point.

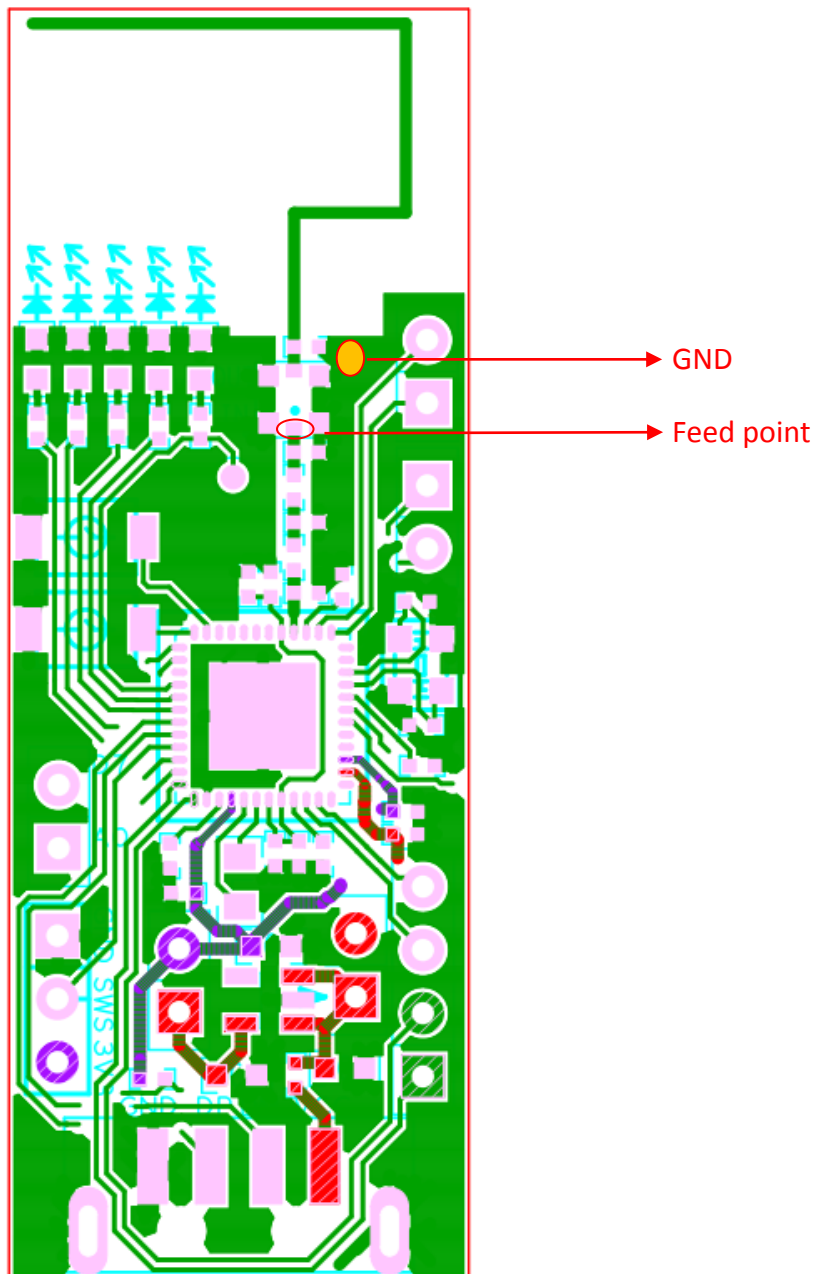


Figure 3 Connection chart to test RF signal

FCC 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into and outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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