Telink EVB TLSR9517CDK56D User Manual

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Keyword

Feature;2.4GHz; User manual

Brief

This is a user manual for Telink TLSR9517C EVB

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Revision History

Version	Change Description
V0.1.0	Initial release.

Table of Contents

1. Product Introduction

This is a user manual for Telink Audio EVB TLSR9517CDK56D.

1.1 General description

The Telink dongle TLSR9517CDK56D, which is based on Telink TLSR9517C chip.
The TLSR9517C supports standards and industrial alliance specifications including Bluetooth 5.2,LE, The TLSR9517C combines he features and features needed for high quality wireless audio equipment into a single SoC.

1.2 Key features

1.2.1 RF Features

1. Bluetooth

2. Bluetooth Compliant, BLE 1 Mbps and 2 Mbps

3. Tx output power: up to +10 dBm @ BR/BLE mode

4. RSSI monitoring with +/-1 dB resolution

1.2.2 Power Management Features

1. Low power controller by Near-Threshold level power consumption

2. Standalone Linear Li-Ion battery charger with Thermal Regulation

3. Brownout detection/shutoff and Power-On-Reset

4. Multiple-power-state to optimize power consumption

1.2.3 Audio Mode Features

1. Differential Input DirectDrive Line Drivers/Headphone Amplifiers

2. Support Audio input/output of 8-pin Audio Jack and support input for instrument testing of 8-pin Audio Jack

3. Two onboard A-MIC, support audio input

4. Mode switch, which can support three different modes

2. User manual

2.1 Supply power

The TLSR9517CDK56D supports supply power via USB or other 3.3V power.

As shown in figure 2-1, the marker is the USB port. Power can be supplied when USB is plugged in.

Figure 2-1 USB power supply

As shown in figure 2-2, the marker is the 3.3V and GND port. 3.3V power can be supplied through the two ports.

VBUS	GND
GND	GND
GND	GND
SWS	URX
VBAT	UTX

Figure 2-2 3.3V power supply

As shown in figure 2-3, the marker is the battery port. 3.3V-4.2V power can be supplied through the port.

Figure 2-3 Battery power supply

2.2 Download firmware

There are also two ways to download firmware, USB burning or SWS burning. But need another burning tool Telink Burning EVK. Telink Burning EVK have USB port and 3.3V/SWS/GND port. When using USB download firmware, just plug dongle USB in Burning EVK. When using SWS download firmware, connect 3.3V/SWS/GND of dongle to 3.3V/SWM/GND of Burning EVK.

2.3 Functions of each module

As shown in figure 2-4, The functions of each module on the board have been marked.

There are LED, key, ANT, I2S port and debug port on board. The LED lights can indicate what status the TLSR9517CDK56D is in. The key allow us to control TLSR9517CDK56D. We can use debug port to debug TLSR9517CDK56D. We can input/output I2S data through the I2S part.

The TLSR9517CDK56D support audio line-in/out and mic-in functions. Realize this functions according to different software configurations.

As show in Figure 2-5, we can use the Audio Mode switch shown in Figure 1-4 to switch between different audio mode.
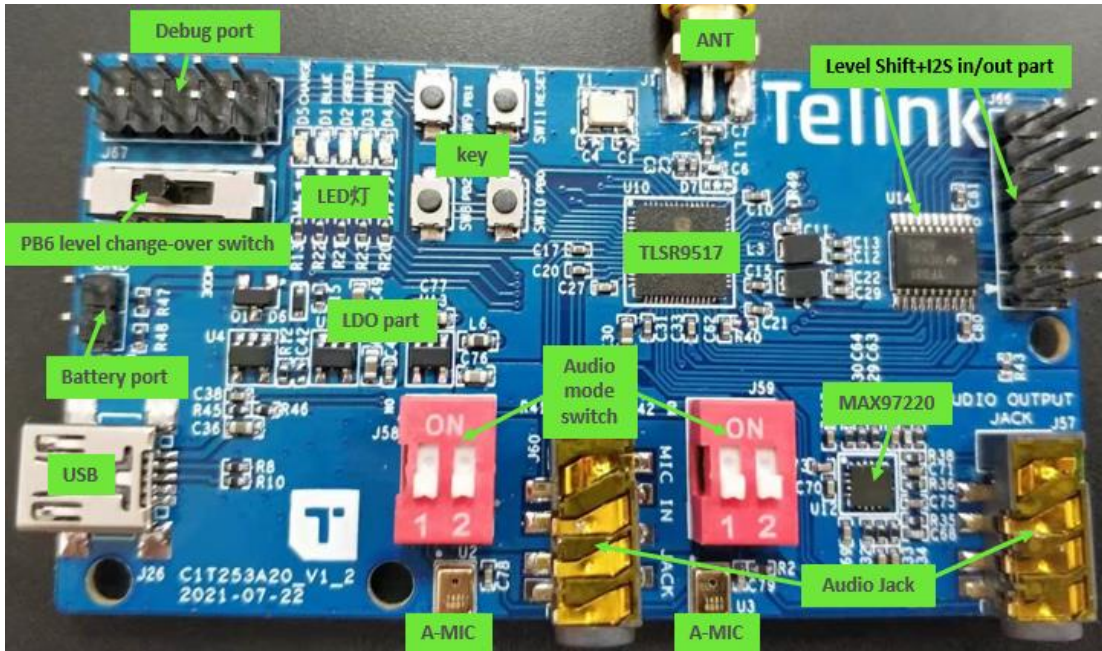
Figure 2-4 Function modules on the board

Mode 1
Only support line-out

Mode 2
Support line-in and board MIC input, support line-out
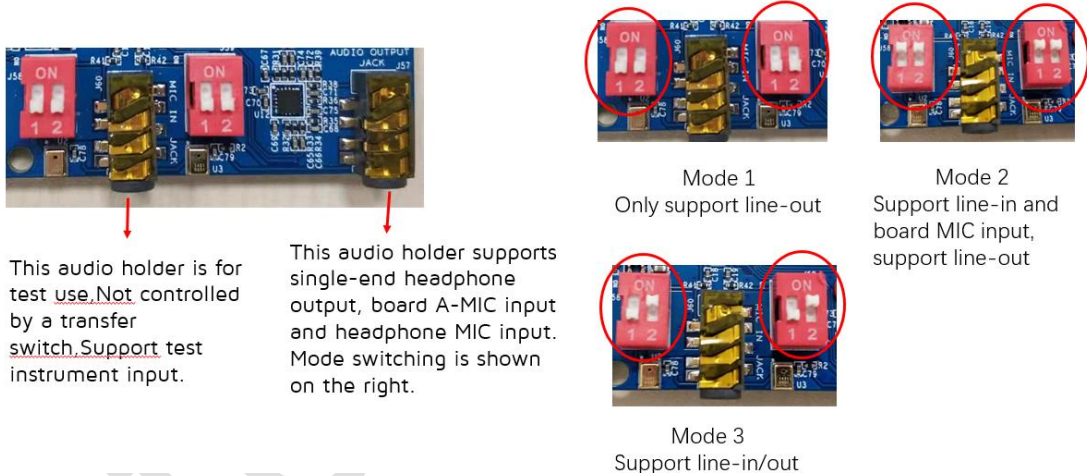
This audio holder is for test use,Not controlled by a transfer switch,Support test instrument input.

This audio holder supports single-end headphone output, board A-MIC input and headphone MIC input. Mode switching is shown on the right.

Mode 3
Support line-in/out

Figure 2-5 Audio mode

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.