



Telink

Telink B91 Audio RCU User Manual

AN-22112900-E1

Ver.0.1.0

2022/11/29

Keyword

Features; Pin connection; User manual

Brief

This is a user manual for Telink B91 Audio RCU.

Published by
Telink Semiconductor

Bldg 3, 1500 Zuchongzhi Rd,
Zhangjiang Hi-Tech Park, Shanghai, China

© Telink Semiconductor
All Right Reserved

Legal Disclaimer

This document is provided as-is. Telink Semiconductor reserves the right to make improvements without further notice to this document or any products herein. This document may contain technical inaccuracies or typographical errors. Telink Semiconductor disclaims any and all liability for any errors, inaccuracies or incompleteness contained herein.

Copyright © 2020 Telink Semiconductor (Shanghai) Co., Ltd.

Information

For further information on the technology, product and business term, please contact Telink Semiconductor Company (www.telink-semi.com).

For sales or technical support, please send email to the address of:

telinksales@telink-semi.com

telinksupport@telink-semi.com



Revision History

Version	Change Description
V0.1.0	Initial release.
	1.
	1.

Table of Contents

Revision History	2
Table of Contents	3
1. Product Introduction	4
1.1 GENERAL DESCRIPTION	4
1.2 KEY FEATURES	4
2. Pin Connection Guide	5
2.1 SUPPLY POWER	5
2.2 DOWNLOAD FIRMWARE	8
2.3 TEST RF SIGNAL	10

1. Product Introduction

This is a user manual for Telink B91 Audio RCU.

1.1 General description

The TLSR9218ARCU48D, which is based on Telink TLSR9218A chip, provides a Bluetooth LE + IEEE802.15.4 multi-standard wireless system.

The TLSR9218ARCU48D is the latest addition to Telink's family of high-performance, ultra-low-power, cost-optimized, multi-protocol wireless connectivity SoCs. It integrates a powerful 32-bit RISC-V MCU with a variety of powerful core features and peripheral blocks to provide a foundation for advanced IoT devices. It includes multi-stage power management design allowing ultra-low power operation and making it the ideal candidate for power-sensitive applications. The level of integration enables customers to optimise total system cost.

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
- ✧ TX output power: Typ. 7dBm
- ✧ RSSI monitoring with +/-1dB resolution
- ✧ Power supply: DC3.0V

2. Pin Connection Guide

2.1 Supply power

The TLSR9218ARCU48D supports supply power via battery or other 3.0V power.

The power connection is shown below, connect the power to the 3V of TP3, and connect the GND of TP4.

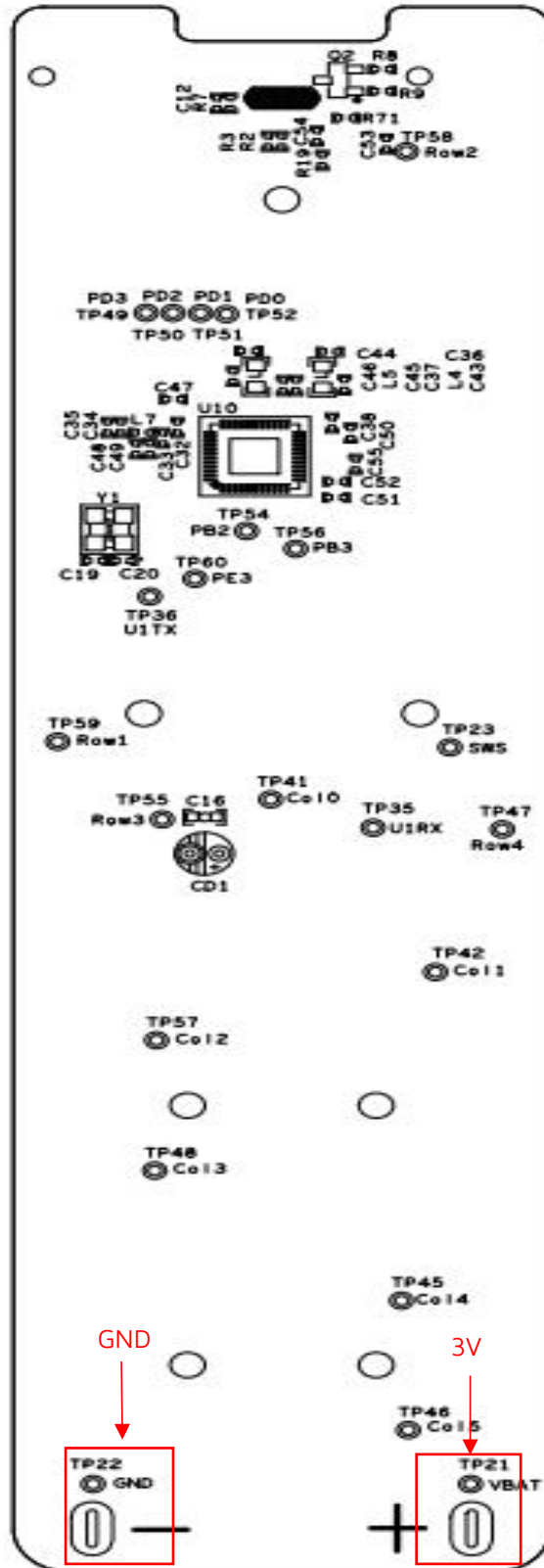


Figure 1 Connection chart to supply power

When the remote control is used with a shell, it is directly powered by two dry batteries. As shown below.



2.2 Download firmware

To download firmware into TLSR9218ARCU48D, first make sure the TLSR9218ARCU48D is supplied with power normally. That is, connect the power to the VDD of TP3, and connect the GND to TP4. See the next page picture shows.

Then connect TP1 (SWS) of the TLSR9218ARCU48D with SWM of a burning EVK. Meanwhile, connect the miniUSB interface of the burning EVK with PC USB.

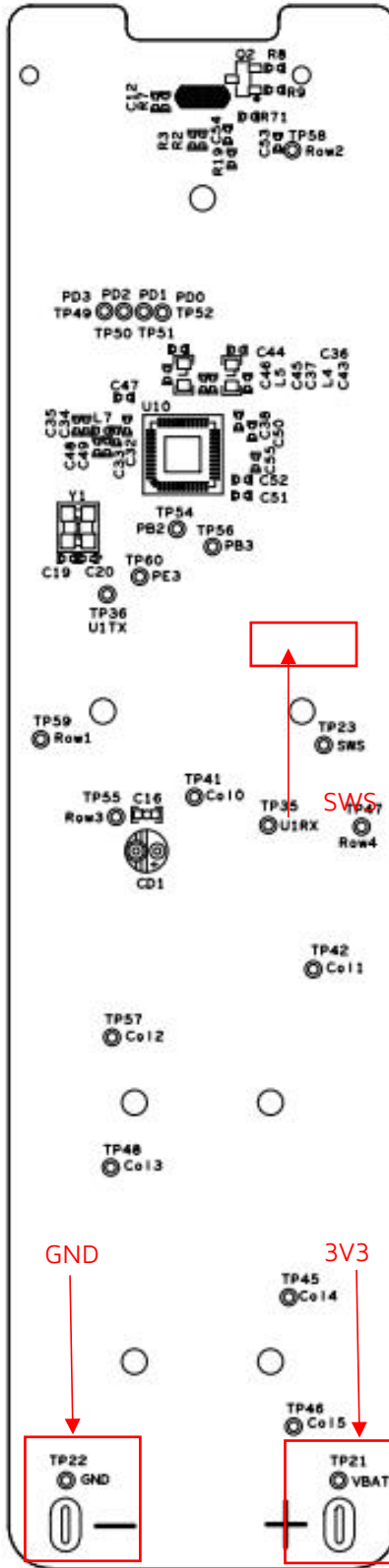


Figure 2 Connection chart to download firmware

2.3 Test RF signal

To test RF signal of TLSR9218ARCU48D, first make sure the TLSR9218ARCU48D is supplied with power normally. That is, connect the power to the VDD of TP3, and connect the GND to TP4.

Attach the semi-rigid cable welding steel to the PCBA GND. Then solder wire core to feed point. See the next page picture shows.

FCC

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 to correct the interference by one or more of the following measures:

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

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

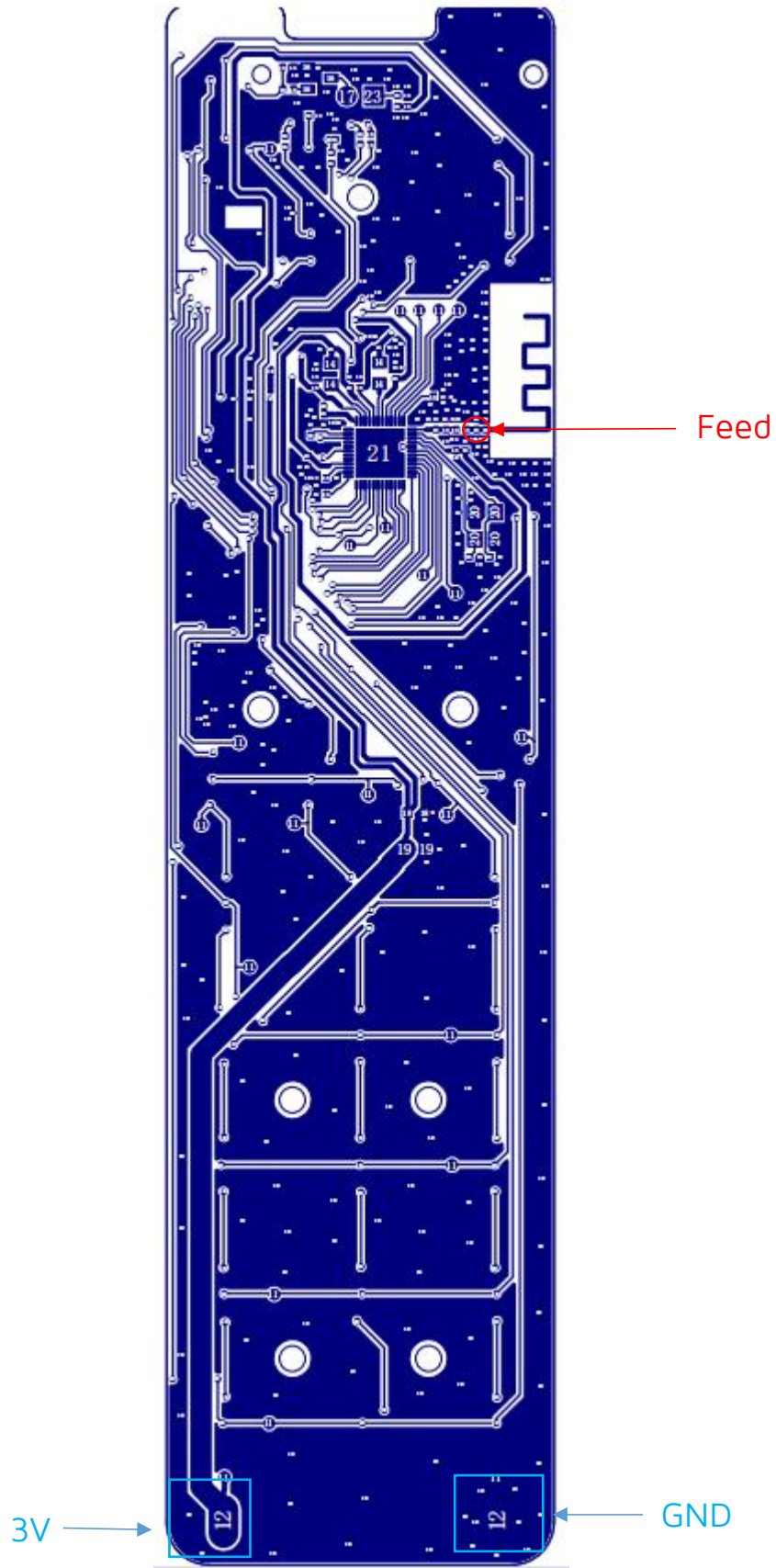


Figure 3 Connection chart to test RF signal

