



## **Bluetooth USB Module / BTU2050-D113**

### **User's manual**

#### **How to use this module:**

BTU2050-D113 was design to embedded for speaker PCBA transfer audio signal use, while user turn on the power of the Host device. (For example, speaker), they can pair Bluetooth device to access BTU2050-D113 and transfer audio signal by the radiated signal.

#### **Feature:**

- The module is a Bluetooth Class 2 module.
- 80MHz RISC MCU and 80MIPS Kalimaba DSP
- Wideband speech support by HFP v1.6 profile and mSBC codec.
- CSR's latest CVC technology for narrowband and wideband voice connection including wind noise reduction.
- Headset(A2DP) connection to 2 A2DP source device for music playback.
- SBC, MP3 and AAC decoder support.
- HSP v1.2/HFP v1.6/A2DP v1.2/AVRCP v1.4

### Pin assignment

No.	Terminal name	Input/Output	Description
1	GND		Ground
2	AIO0	Input/Output	Analogue programmable
3	PIO16	Input/Output	Programmable
4	PIO17	Input/Output	Programmable
5	RST#	Input	Reset if low
6	LED0	Output	LED Driver
7	LED1	Output	LED Driver
8	PIO4	Input/Output	Programmable BT_SCK
9	PIO2	Input/Output	Programmable
10	PIO5	Input/Output	Programmable BT_LRCK
11	PIO3	Input/Output	Programmable BT_D0
12	PIO_POWER	Input	3.3V
13	VREG_ENABLE	Input	Regulator enable
14	SPI/PCM#	Input	0=PCM/PIO interface, 1=SPI
15	GND		Ground
16	VCHG	Input	Lithium ion/polymer battery charger input
17	VBAT	Input	3.3V
18	1V8_SMPS	Output	1.8V
19	PIO6	Input/Output	Programmable
20	PIO7	Input/Output	Programmable BT_MFB
21	PIO18	Input/Output	Programmable BT_FWB
22	PIO19	Input/Output	Programmable BT_REW
23	PIO21	Input/Output	Programmable BT_VOL+
24	PIO20	Input/Output	Programmable BT_VOL-
25	PIO9	Input/Output	Programmable USART3_RX
26	PIO0	Input/Output	Programmable
27	GND		Ground
28	PIO1	Input/Output	Programmable USART3_TX
29	PIO8	Input/Output	Programmable
30	USB_DN	Input/Output	USB_DN
31	USB_DP	Input/Output	USB_DP
32	LED_2	Output	LED Driver
33	MIC_BIAS	Input	Microphone bias
34	MIC_BN	Input	Microphone Negative right
35	MIC_BP	Input	Microphone Positive right
36	MIC_AN	Input	Microphone Negative left
37	MIC_AP	Input	Microphone Positive left
38	SPKR_RN	Output	Speaker Negative right
39	SPKR_RP	Output	Speaker Positive right
40	SPKR_LN	Output	Speaker Negative left
41	SPKR_LP	Output	Speaker Positive left
42	GND		Ground



## Federal Communication Commission Interference 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 device 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 radiated 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.

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

### ▶ RF Exposure Information

This Modular Approval is limited to OEM installation for mobile and fixed applications only. The antenna installation and operating configurations of this transmitter, including any applicable source-based time-averaging duty factor, antenna gain and cable loss must satisfy MPE categorical Exclusion Requirements of §2.1091.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons, must not be collocated or operating in conjunction with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

The end user has no manual instructions to remove or install the device and a separate approval is required for all other operating configurations, including portable configurations with respect to 2.1093 and different antenna configurations.

Maximum antenna gain allowed for use with this device is 0.6 dBi.

When the module is installed in the host device, the FCC ID label must be visible through a window on the final device or it must be visible when an access panel, door or cover is easily re-moved. If not, a second label must be placed on the outside of the final device that contains the following text:

“Contains FCC ID: MDZ-BTU2050”.