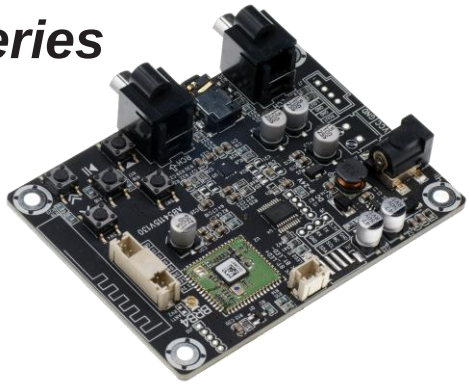
Bluetooth Receiver Board (BRB) Series

Bluetooth Audio Receiver Board V4.0 with Control Button - BRB4

(AA-AB41155)



Key Features:

- 3.6 x 2.7 Inches PCB Size
- Qualcomm CSR8670 Chipset
- Bluetooth V4.0+EDR, A2DP, AAC
- 2.54 mm 4Pin Joint Wire Output
- Control Buttons on Board(External Buttons Port)
- External Bluetooth Antenna Port (I-PEX Micro RF Coax Connector)
- External LED Indicator Port
- Bluetooth Pairing Name Customizable
- Net Weight: 30g/00662lb (±10%)

Electrical Specifications

Specifications typical @ +25℃, Powered by 12V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
Power Supply	-	9	12	24	VDC
Distortion	Vo=700mVrms, f=1kHz		0.12		%
Quiescent Current	Vin=12V	-	10	-	mA
Maximum Current	-	-	0.5	-	A
BT Wireless Range	Class 2	10	-	-	m
Operating Temperature	-	0	20	70	℃
Storage Temperature	-	-40	20	105	℃

Audio Performance

Specifications typical @ +25℃, Powered by 12V DC, unless otherwise noted. Specifications subject to change without notice.

Parameter	Conditions	Min.	Typ.	Max.	Units
THD	Vo=700mVrms, f=1kHz	-	0.12	-	%
Output Noise Level	Vin=12V	-	8.5	-	μV
SNR	Vo=700mVrms, f=1kHz	-	92	-	dB
VOM	THD=1%	-	-	1	Vrms

Distributors:

PARTS EXPRESS YOUR ELECTRONICS CONNECTION

MCM

XIOMEDIA

HOBBYHIFILADEN

AUDIOPHONICS

Yokohama Bayside Net

All these boards are per-tested with our power supply solution to comply with FCC and CE. For all customers who need those information, please contact our distributor or Sure Electronics. RoHS compliant will need an MOQ of 1000pcs per order.

Model Selection Guide——Bluetooth Audio Receiver Board Series*

SKU	Model	Bluetooth version	Power Supply Range	Bluetooth Name Customization	APT-X	Bluetooth Antenna	PCB Size
AA-AB41132	BRB2	V4.0	DC 8-14V	•	-	-	3'' x 2''#1
AA-AB41136	BRB3	V4.0	DC 8-14V	•	•	-	3'' x 2''
AA-AB41155	BRB4	V4.0	DC 9-24V	•	•	•	3.6'' x 2.7''#2
AA-AB41157	BRB6	V4.0	DC 9-24V	•	•	•	3.6'' x 2.7''
AA-AB41158	BRB6P	V4.0	DC 12-24V	•	•	•	5'' x 2.3''#3

Notes: • means this function is available. - means this function is not available.
The size of AA-AB41158 in this sheet refers to the size of control panel. The PCB size is 4.6'' x 1.6''.

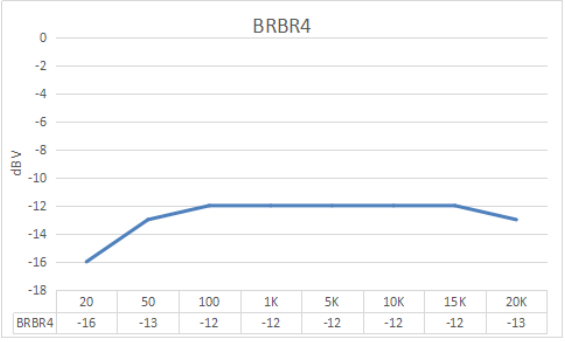
Ready for:

FC CE

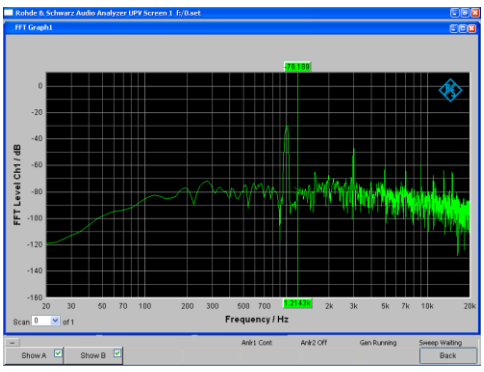
RoHS

Typical Performance Graphs

Frequency Response



Noise Floor



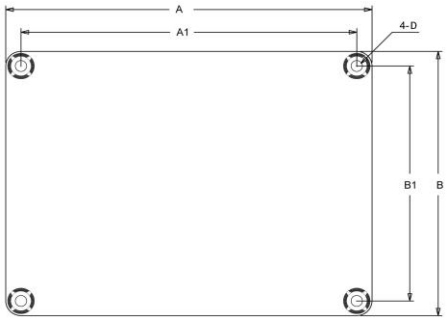
All parameters were tested with Rohde & Schwarz UPV audio analyzer (AES17 filter enabled) and Audio Precision AUX0025 filter. For authorized distributors and OEM customers who need more detailed performance graphs and parameter settings, please send an inquiry e-mail to us. (Not available for retail customers)

Contact info

- **Email:** info@sure-electronics.com

WONDOM™ WONDOM Audio Technology

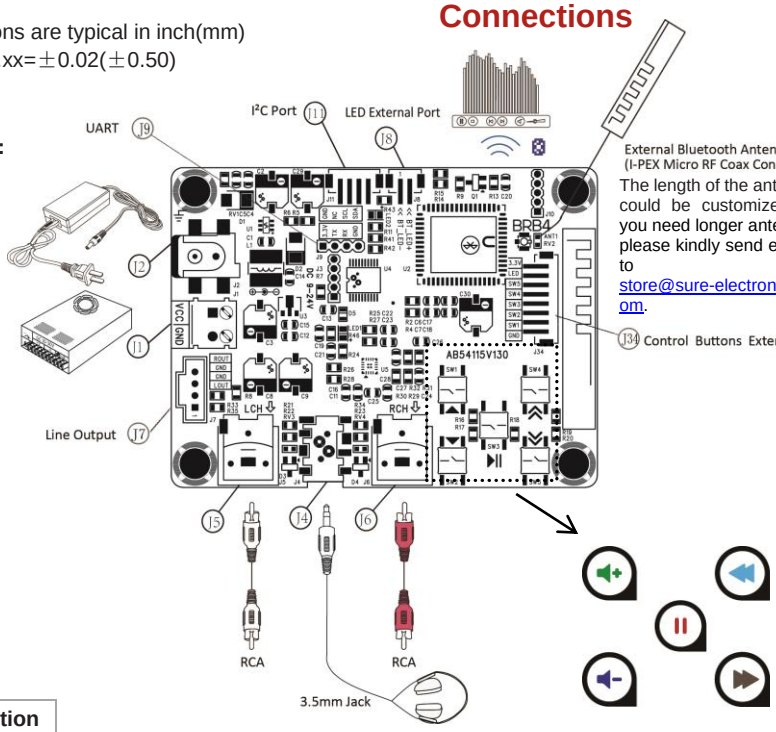
Mechanical Dimensions



Dimension	A (inch/mm)	A1 (inch/mm)	B (inch/mm)	B1 (inch/mm)	R (inch/mm)
#1	3.00/76.2	2.70/68.6	2.00/50.8	1.70/43.2	0.14/3.6
#2	3.60/91.4	3.30/83.8	2.70/68.6	2.40/61.0	0.14/3.6
#3	5.00/127	4.74/120.4	2.30/57.15	2.04/51.8	0.13/3.2

Notes:
- All dimensions are typical in inch(mm)
- Tolerance x.xx=±0.02(±0.50)

Connections



Control Buttons on Board:

Pin	Definition
SW1	Volume Up
SW2	Volume
SW3	Pause/ Play
SW4	Prev
SW5	Next

Control Buttons External Port:
- J34

Pin	Definition	Pin	Definition
1	3.3V	5	SW3
2	LED	6	SW2
3	SW5	7	SW1
4	SW4	8	GND

Bluetooth LED Indicator Port:
- J8 Bluetooth LED

Pin	Definition
1	LED-
2	LED+

Switching Power Supply Connector:
- J1

Pin	Definition
1	VCC
2	GND

Power Adapter Connector:
- J2 DC Jack ID 2.1mm x OD 5.5mm

Inner ⊕—●—⊖ Outer

Audio Output Connector:
- J5, J6 RCA Jack
  J5 LCH(White); J6 RCH(Red)
- J4 3.5mm Headphone Jack
- J7 Line Out

Pin	Definition
•	ROUT
•	GND
•	GND
■	LOUT

I²C Port:
- J11

Pin	Definition	Pin	Definition
1	GND	3	SCL
2	NC	4	SDA

UART Port:
- J9

Pin	Definition
■	3.3V
•	TX
•	RX
•	GND

Customized Service

1) Bluetooth Paring Name
Customers could pay US$0.99 EA and send the paring name by e-mail to store@sure-electronics.com for confirmation. All models could be pre-programmed for Bluetooth Paring Name. Customers could also rename the Bluetooth with following two methods.(Please kindly be noticed the following two methods do not apply to BRB1 and BRB2.)
2) PIN Code
Customer could pay US$0.99 EA and send the PIN code by e-mail to store@sure-electronics.com for confirmation before purchasing. Customized PIN code only applies to BRB5.
3) Antenna
The standard antenna is I-PEX. If you want to customize the length of antenna, please send e-mails to store@sure-electronics.com for confirmation. In addition, the socket could be customized but please kindly be noticed that MOQ would be required.

Method 1

1.Choosing a PIC KIT 3 for Bluetooth paring name programming.
2.Installing the software (for more detailed information, please refer to PIC KIT 3 user manual.
3.Connecting the Bluetooth receiver board
3.1. Plug in the USB/ power cable
3.2. Attach the communication cable(s) between programmer and Bluetooth receiver board if using RJ11 plug or connect directly to a 6-pin inline header.
4. Settings
4.1. Under Device Family -> Midrange -> Standard.
4.2. From Device drop down select "PICF16F690".
4.3. From Tools drop down select "Check Communication"
Uncheck the "Hex only" under Program Memory.
Under EEPROM Data.
Enable the Byte ASCII.
Change the first data to 00 on "00" line.
Bluetooth pairing name: "08" and "10" lines
PIN Code: "18" and "20" lines
Translate your pairing name and PIN code into ASCII, for example, "87 79 78 68 79 77" refer to "WONDOM".

Method 2

1.Choosing a USB to Serial adapter for Bluetooth pairing name programming.
2.Connecting the Bluetooth receiver board
2.1. Plug in the USB/ power cable
2.2. Attach the communication cable(s) between programmer and Bluetooth receiver board if using RJ11 plug or connect directly to a 6-pin inline header.
3. Settings
3.1. Double click "Hyper terminal" application and create a new connection, for ex. "BT_COM".
3.2. Open device manager and check for a new assigned COM port.
3.3. From Connect using drop down select the new assigned COM port.
3.4. From Bits per second drop down select 115200.
3.5. Under File -> Properies -> Setting -> ASCII Setup
Enable "Echo typed character locally". Click "OK" to finish the setting.
3.6. Enter "BPN: xxxxx" to program your unique pairing name.

→ **See more details in Bluetooth Audio Receiver Board Brochure.pdf**

WONDOM Audio Technology
Wonder Melody
By
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