

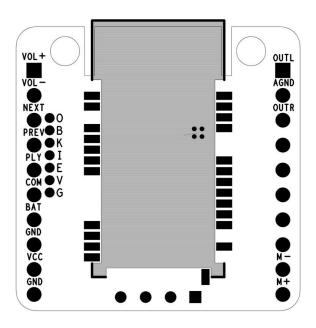
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1. **CSR8645 AMP**



1.1 CSR8645 AMP



1.2 CSR8645 AMP IO

1.1 **Product Description**

This module master uses CSR's BC8645 chip to provide high quality sound quality and compatibility for the module, and overall performance is superior. Bluetooth module using the drive-free way, customers only need to access the application module, you can quickly achieve the music wireless transmission, enjoy the fun of wireless music. Support high-quality audio APT-X digital transmission, and can connect two main devices Bluetooth. After the module is switched on automatically connected to the last pairing phone, the penultimate paired phone needs to be manually connected. If the 6 pairing devices are turned on at the same time, the last pairing phone is automatically connected.

1.2 **Application areas**

The module is mainly used for short distance music transmission, and can easily and notebook computers, mobile phones, PDA and other digital products connected to the Bluetooth device to achieve the wireless transmission of music $_{\circ}$

- 1) Stereo Bluetooth speakers;
- 2) Stereo Bluetooth Headset;
- 3) Bluetooth handsfree calls;
- 4) Bluetooth control and multimedia devices;

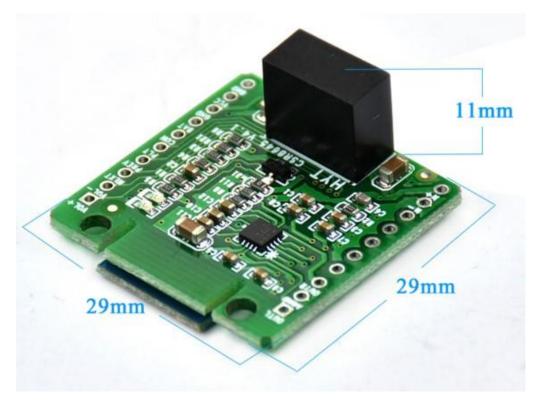
1.3 **Basic features**

- 1) Bluetooth v4.0:
- 2) A2DP v1.2;
- 3) AVRCP v1.4;
- 4) HFP v1.6;
- 5) GAVDP1.2;
- 6) HSP1.2°

1.4 **Property**

Model	BT8645V411
Bluetooth specifications	Bluetooth V4.0
Modulation mode	GFSK, π/4 DQPSK, 8DPSK
Supply voltage	BAT: 3.3-4.2V;
	VCC: The power supply depends on the isolation module with 5V
	or 12V power supply
Support for Bluetooth	HFPV1.6, A2DPV1.2,AVRCPV1.4, HSPV1.2
protocol	
Working current	≤30mA
Standby current	<50uA
temperature range	-40 °C ~ +85 °C
Wireless transmission range	≤10M
Transmission power	Class1/Class2/Class3 9dbm
Sensitivity	-80dBm<0.1%BER
Frequency Range	2.4GHz~2.480GHz
Audio performance	支持 ACC,MP3,SBC,APT-X
Audio signal to noise ratio	≥75dB
Distortion	≤0.1%

1.5 **Module Size**

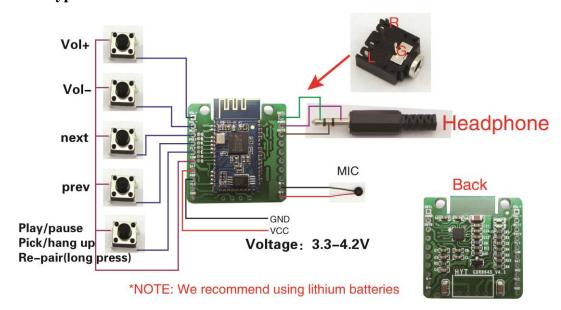


1.3 CSR8645 AMP Size

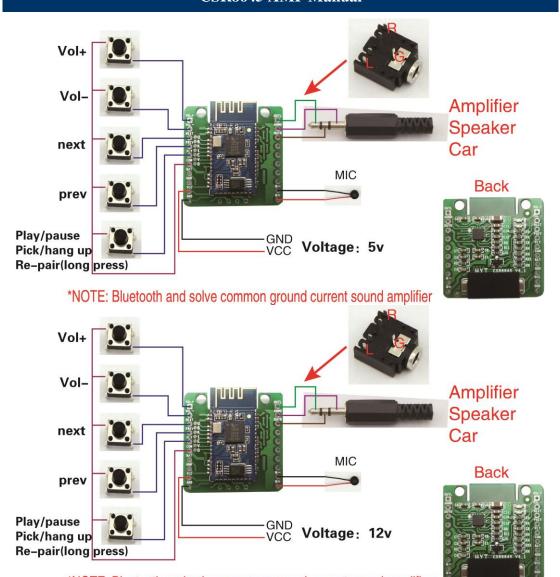
1.6 **IO Definition**

IO Number	IO Name	IO Description
1	VOL+	Volume increases
2	VOL-	Volume down
3	NEXT	Next track
4	PREV	Previous piece
5	PLY	Play/Pause/Pickup/Call Back/Reconciliation Pair
6	COM	Button public
7	BAT	Power input (3.3 ~ 4.2V)
8	GND	BAT power ground
9	VCC	The voltage depends on the isolation module with both 5V
		or 12V
10	GND	VCC power ground
11	M+	Mic positive pole
12	M-	Mike negative
13	NC	Empty
14	NC	Empty
15	NC	Empty
16	NC	Empty
17	NC	Empty
18	OUTR	Single-ended output R
19	AGND	Single-ended output G
20	OUTL	Single-ended output L

1.7 **Typical Circuit**



1.4 No DC isolated BAT power supply



*NOTE: Bluetooth and solve common ground current sound amplifier

1.5 DC isolated VCC powered

NOTE:

• MIC is a polarity, do not weld anti.