Bluetooth module CSR8645 manual

HYT

| Prepared by / date | Project Manager / Date | Senior managers / Date |

Round-electronic

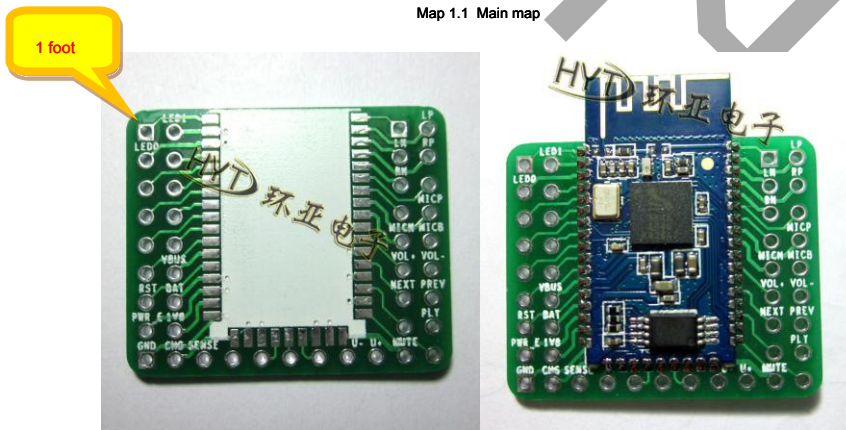http://shop110280715.taobao.com
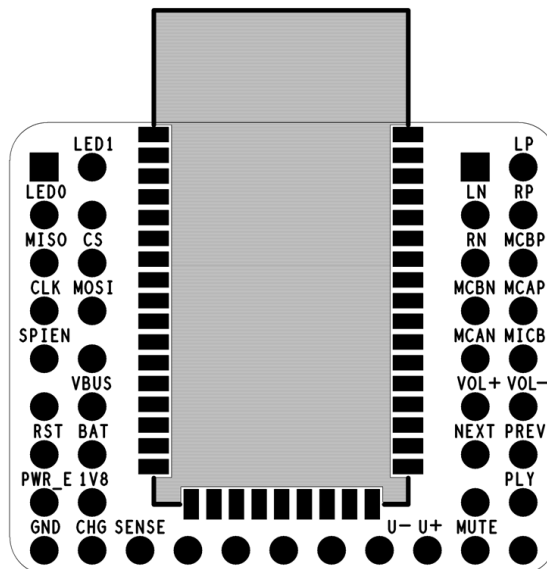
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Map 1.1 Main map

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Map 1.3 Adapter plate IO definition

1.1 Module Description

This module uses the master CSR of BC8645 Chip module provides a high sound quality and compatibility, superior overall performance. Bluetooth module uses driver-free way, customers just need to block access to applications, you can quickly achieve wireless transmission of music, enjoy wireless music. Support high-quality sound AAC , APT-X . After the module is powered boot, automatic back even to the last Paired phones .

1.2 Applications

The module is mainly used for short distance transmission of music, you can easily and notebook computers, mobile phones, PDA And other digital products connected to Bluetooth devices, wireless transmission of music.

1) Bluetooth stereo speakers;

2) Stereo Bluetooth headset;

3) Bluetooth hands-free calling;

4) Bluetooth control and multimedia equipment;

1.3 Basic characteristics

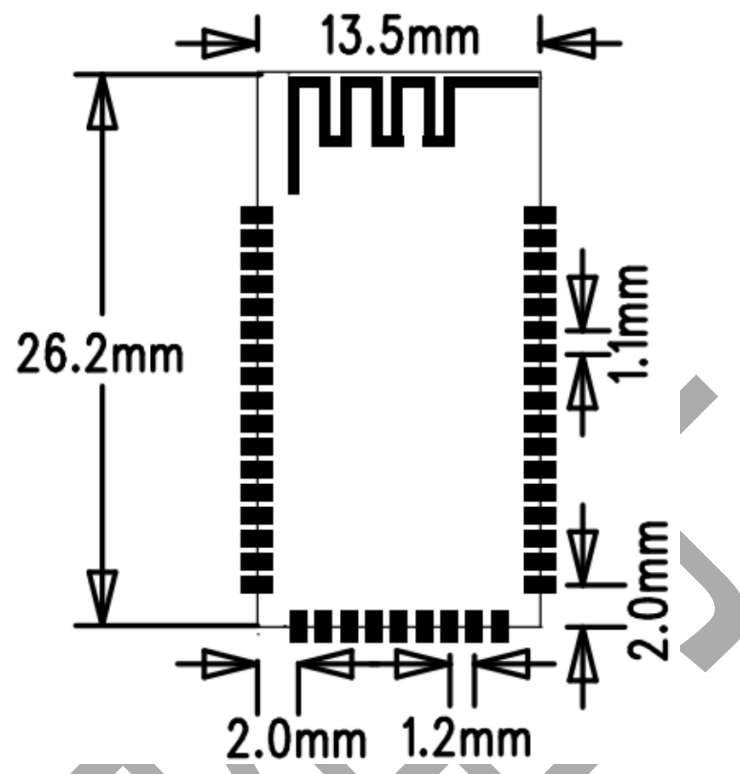1) Bluetooth v4.1 ;

2) A2DP v1.2 ;

3) AVRCP v1.4 ;

4) HFP v1.6 ;

5) GAVDP1.2 ;

6) HSP1.2 ;

7) double MIC Input.

1.4 Performance parameters

model	CSR8645
Bluetooth Specification	Bluetooth V4.1
Modulation	GFSK , Π / 4 DQPSK , 8DPSK
Supply voltage	DC3.3-4.2V , ≤ 3.0V Automatic shutdown, ≤ 3.2V Call the police
Bluetooth protocol support	HFPV1.6, A2DPV1.2, AVRCPV1.4 , HSPV1.2
Working current	≤ 30mA
stand-by current	<50uA
temperature range	-40ºC ~ + 85ºC
Wireless transmission range	≤ 10 Meter
Power transmission	stand by Class1 / Class2 / Class3 Adjustable maximum 9dbm
Sensitivity	-80dBm <0.1% BER
Frequency Range	2.4GHz ~ 2.480GHz
External Interface	USB (USB Sound card)
Audio Performance	stand by ACC , MP3 , SBC , APT-X decoding
Audio SNR	≥ 75dB
Distortion	≤ 0.1%
Module size	26.2x13.5x0.8mm
Size adapter plate	29x23mm

1.5 **Module size**

Pad size: 1.6x0.8mm

Map 1.4 Module size

1.6 IO definition
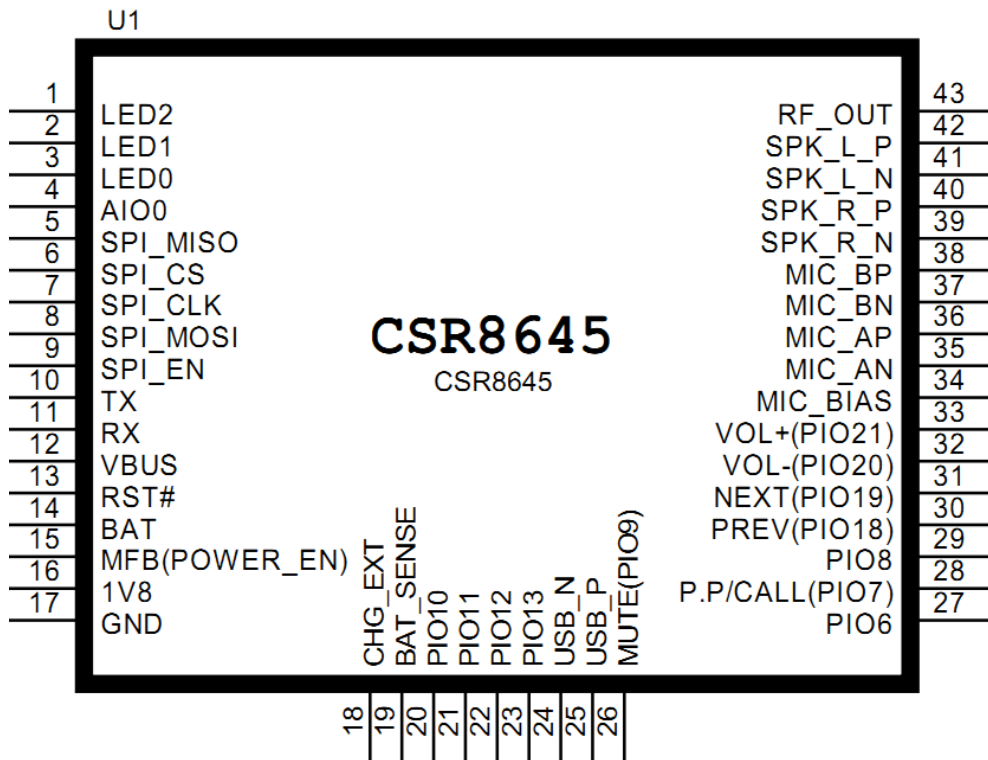
Map 1.5 Module IO definition

IO Numbering	IO name	IO description
Bluetooth module CSR8645 manual		
1	LED2	Not enabled
2	LED1	Status Indicator
3	LED0	Status Indicator
4	AIO0	Not enabled
5	MISO	Burned into the program port
6	CSB	Burned into the program port
7	CLK	Burned into the program port
8	MOSI	Burned into the program port
9	SPI_EN	Burned into the program enable pin port (high enable)
10	TX	Serial ports TX (Not enabled)
11	RX	Serial ports RX (Not enabled)
12	VBUS	charging port 5V Input (not enabled) USB Sound power and sensing port
13	RST #	Low reset
14	BAT	power input(3.3 ~ 4.2V)
15	POWER_EN / MFB	Module Enable, active high (starting circuit must reference)
16	1.8V	1.8V Output (usually as a key common)
17	GND	Power Ground
18	CHG_EXT	External Battery Charge Management (not enabled)
19	BAT_SENSE	External Battery Charge Management (not enabled)
20	PIO10	Not enabled
twenty one	PIO11	Not enabled
twenty two	PIO12	Not enabled
twenty three	PIO13	Not enabled
twenty four	USB_N	USB Negative differential signal
25	USB_P	USB Positive differential signal
26	MUTE (PIO9)	External amplifier mute control pin (High sound output 1.8V No sound is output low)
27	PIO6	Not enabled
28	PP / CALL (PIO7) Play / Pause / Take hang / releases / re-pair / Clear pairing list	
29	PIO8	Not enabled
30	PREV (PIO18)	previous piece
31	NEXT (PIO19)	next track
32	VOL- (PIO20)	Volume down, volume continued to grow by minus
33	VOL + (PIO21)	Volume up, volume continued to grow by adding
34	MIC_BIAS	Microphone bias voltage
35	MIC_AN	Mike 1 Negative terminal
36	MIC_AP	Mike 1 The positive terminal
37	MIC_BN	Mike 2 A negative terminal (not enabled)
38	MIC_BP	Mike 2 A positive terminal (not enabled)
39	SPK_R_N	Audio right differential output negative end
40	SPK_R_P	Audio right differential output positive terminal
41	SPK_L_N	Audio left differential output negative end
42	SPK_L_P	Audio left positive differential output terminal
43	RFOUT	An antenna (default built-in antenna, an external antenna port is disconnected)

1.7 Precautions

1. If the next antenna module batteries, metal objects, LCD screen, speakers, a distance from the antenna requires at least 3cm ,

   It is recommended to use an external antenna.

2. Layout When the supply line is recommended to use a star wiring, and make sure that the Bluetooth module power supply line performance metric is better. and also

   BT Of the op amp, amplifier, MCU Etc. separated, and BT Under other side can not have interference, it is recommended Bluetooth module on

   the bottom corner.

3. The antenna module is recommended in the outer floor portion of the float, can not go around the antenna control lines, power lines, audio lines, MIC

   Other interference line, if the module to be placed in the middle, to be at around the slot antenna, it is recommended to use an external antenna.

4. If there row seat near the antenna module, the metallic iron shell with a net influence on the signal, it is recommended to use an external antenna

   Solve the distance problem.

5. When an external amplifier module to be connected to the input of the differential amplifier, power amplifier if you do not take a differential input, you must be connected

   A balance of the two differential op amp level, or there will be "flap" sound of impact.