

Audio & BLE/SPP Pass-through Module - Bluetooth 5.0

This Bluetooth module features Bluetooth/U-disk/TF-card playback, and Bluetooth call function, supporting simple and clear serial port control function, BLE pass-through, and SPP pass-through functions. The highlight of this product is the dual-mode Bluetooth, which also means that it can run the Bluetooth audio playback and data transmission at the same time, greatly reducing the development difficulty of embedded Bluetooth in other products.

Feature

No.	Function
1	16-bit Stereo DAC with headphone amplifier, SNR \geq 95dB
2	Support MP3, WAV, WMA, FLAC, AAC, APE format decoding
3	Support 128G U-disk and TF card, breakpoint memory and track memory functions
4	Support bluetooth audio transmission, connect with mobile for music transmission, support play, pause, up and down switch
5	Support bluetooth call function (users can cancel it): answer, hang up, dial back, refuse to answer and other functions
6	Bluetooth 5.0, support HFP/A2 DP/AVRCP/HSP/ GAVDP/loP/SPP/BLE with a distance of around 10M
7	Support BLE/SPP pass-through function

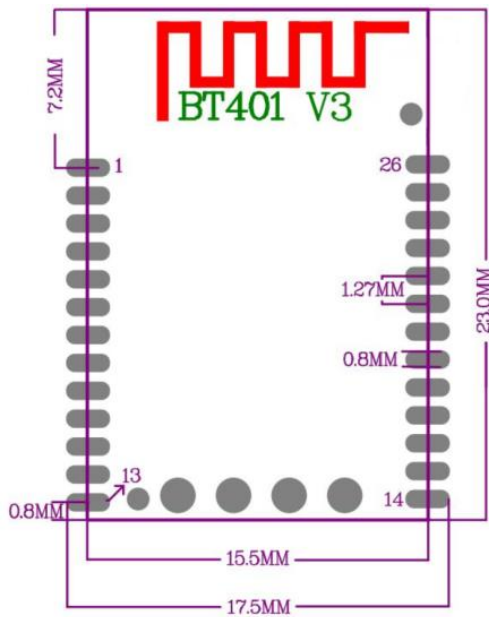
Application

- Bluetooth Speaker with calling function
- Bluetooth Music Lamp
- MP3 Player

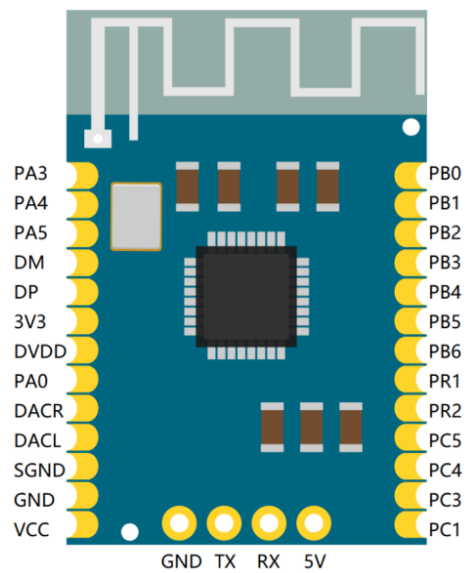
Specification

- Power Supply: 3.3V~5V
- Operating Current: 20mA
- Communication: UART
- Bluetooth: 5.0
- Operating Temperature Range: -40°C~80°C
- Operating Humidity Range: 5%RH~95%RH
- Dimension: 23*15.5mm/0.91*0.61"

Dimension Diagram



Board Overview



No.	Define	IO function	Description
1	PA3	AUX1L	External Audio input channel--left channel
2	PA4	AUX1R	External Audio input Channel--right channel
3	PA5	ADKEY	ADkey, pull-up resistor of 22k, left floating when not in use
4	USBDM	USB D-	
5	USBDP	USB D+	
6	3V3	Power Output	LDO output of the internal chip. The external load shall not exceed 80mA. Try not to use it.
7	DVDD	POWER	Bias voltage of the chip DAC, connect a 105 resistor
8	PA0	MIC	MIC IO for calling
9	DACR	Right Channel Output	
10	DACL	Left Channel Output	
11	SGND	Analog Ground	Connect to the ground of power supply separately, do not mix with digital ground, single point grounding is best
12	GND	Digital Ground	

No.	Define	IO function	Description
13	VCC	Power Input	3.3V -5V, suitable for 3.7 lithium battery power supply
14	PC1	GPIO / PWM1	
15	PC3	SDDAT	Connect to data pin of external TF card
16	PC4	SDCMD	Connect to command pin of external TF card
17	PC5	SDCLK	Connect to clock pin of external TF card
18	PR2	GPIO/RESET	Can work as normal IO or reset pin, floated at present
19	PR1	LED	Connect to external LED, high level to turn it on
20	PB6	GPIO	Common GPIO
21	PB5	GPIO	Common GPIO
22	PB4	GPIO	Common GPIO
23	PB3	GPIO /MUTE	Mute pin. Auto-detect when the module powered on, and output the corresponding level. Detecting method: pull up 10K, high level to mute; pull down 10K, low level to mute.
24	PB2	GPIO	Common GPIO
25	PB1/RX	UART-RX0	Connect to the TX of MCU, 3.3V level, please connect 1K resistor in series for 5V
26	PB0/TX	UART-TX0	Connect to the RX of MCU, 3.3V level, compatible with 5V level

Tutorial

Note: it is recommended to use hardware serial to drive this module, since it may be unstable when using software serial, which may result in unknown errors. It is suggested to reduce the module's baud rate to 9600 when using software serial driver.

- Hardware

DFRduino UNO R3 (or similar) x 1

BT401 x 1

Speaker with Amplifier

Dupont wires

Control by Arduino

