Dual-mode Bluetooth module

Bluetooth Module (Dual Mode) V2.0_a

1. Overview

This module is a fully integrated Bluetooth module that complies with Bluetooth 4.2 dual mode protocols(BR/EDR/BLE). It provides several interfaces such as UART, etc., which can customized different applications. It supports SPP, BLE profiles. It integrates MCU, Baseband controller, RF, etc. in a small package, so the designers can have better flexibilities for the product shapes. It can be controlled by UART port or other interfaces. Please refer to software design guide for the interfacing protocol.

2. Feature

1. Fully qualified Bluetooth 4.2/4.1/4.0/3.0/2.1/2.0/1.2/1.1
2. Low power
3. Class 2 support(high output power)
4. support classic Bluetooth (BR) and low- power Bluetooth LE
5. The default UART Baud rate is 115200bps and can support 9600、19200、38400、57600、115200bps,.
6. UART, data connection interfaces
7. Embedded Bluetooth stack profiles support(requires no host stack): SPP, HFP/HSP, A2DP, AVRCP, MAP, and all BLE protocols.

8. Data Throughput
   1Mbps(BR)
   24Kbps(LE)

9. Operating Characteristics：
   Voltage power supply（3.5V~5.5V）;
   Operating temperature （ -10 ℃ ~70℃）;

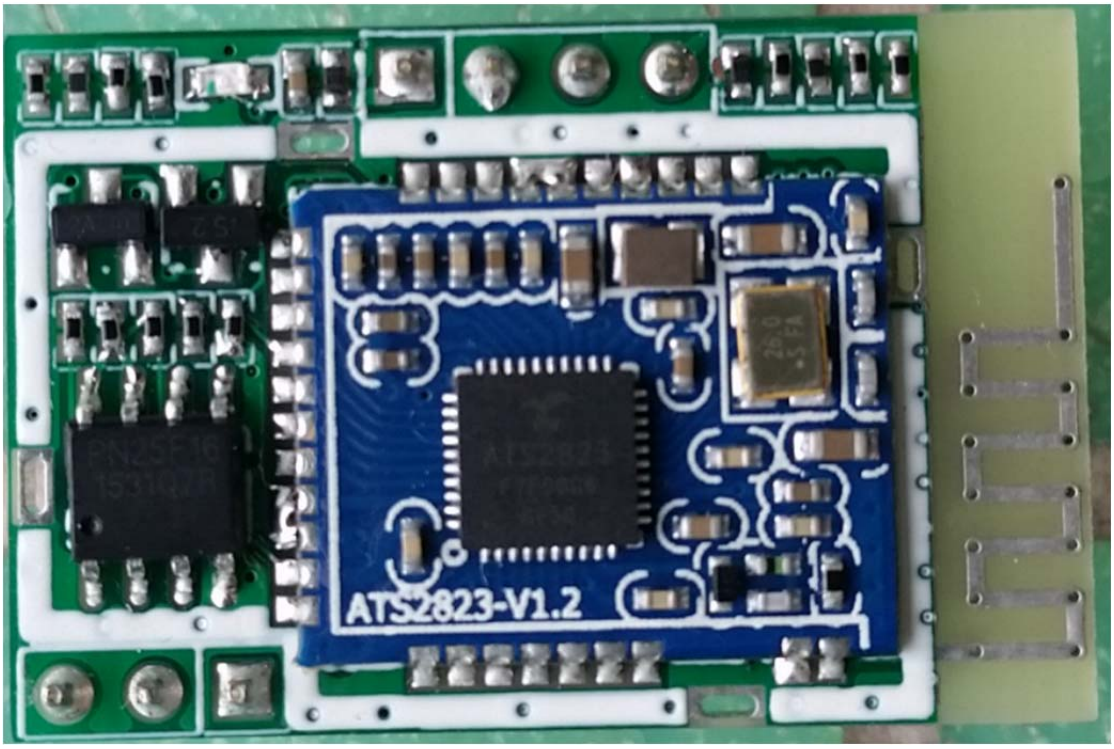
10. RF characteristics
Frequency: 2.402 to 2.480GHz
Receiving sensitivity : -90dBm (BR), -89dBm (LE)
Output Power : 2dBm (BR), 2dBm (LE)

11. Package size
12. 15.9mm * 13.7mm * 0.8mm

3.Application Fields

- Smart Watch and Bluetooth Bracelet
- Health & Medical devices
- Measurement and monitoring systems
- Industrial sensors and controls
- robot
- Asset tacking

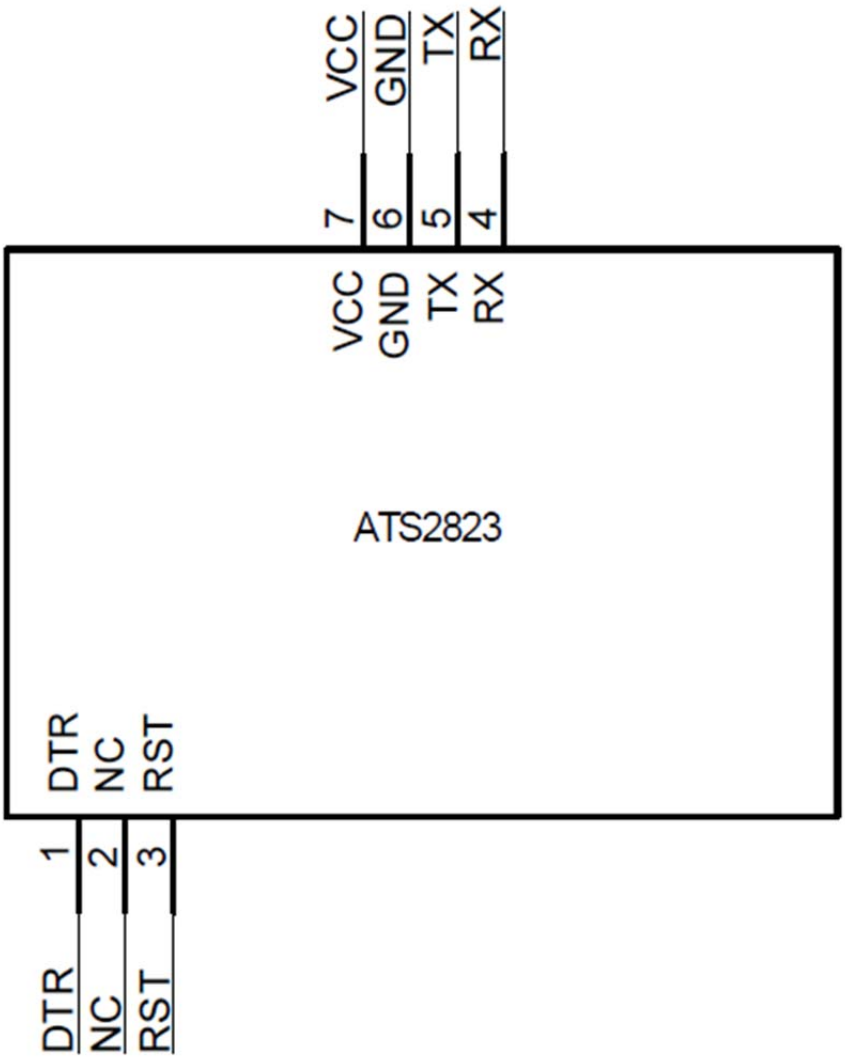
4. Photo of module



5. specifications

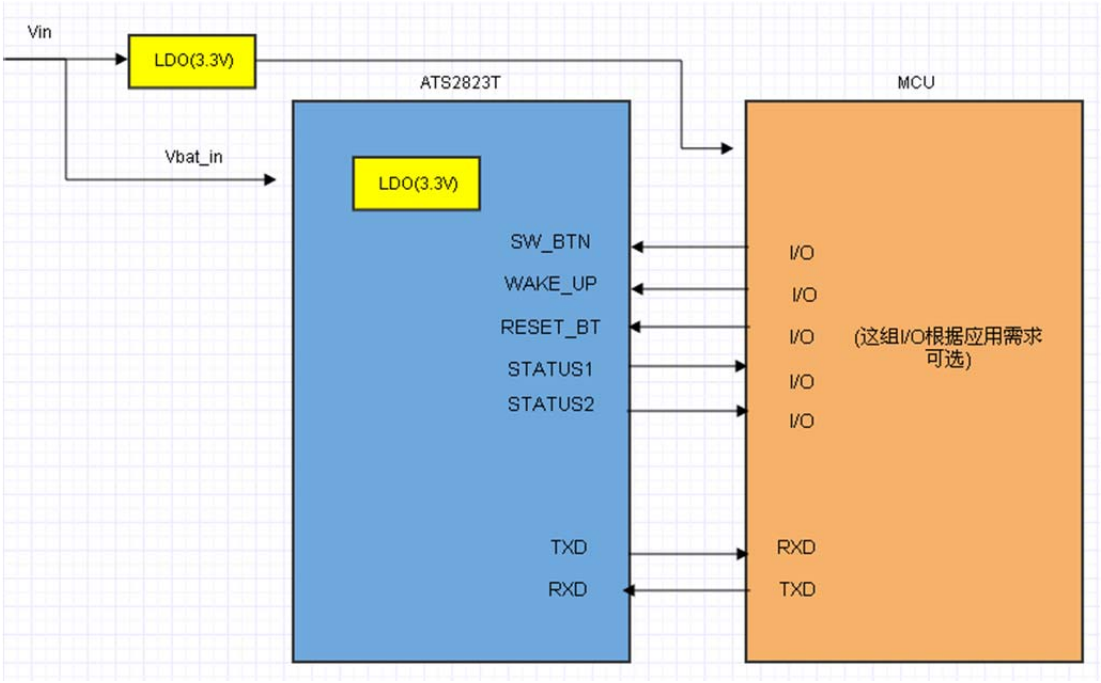
Operating Frequency Band	2.4GHz ~ 2.48GHz unlicensed ISM band
Bluetooth Specification	V2.1+EDR/V3.0/V4.0/ V4.1(BLE)
Bluetooth Protocol	A2DP,AVRCP,HFP,SPP BAS,DIS,FMP,HRP,HRS,HTP,HTS,IAS,LLS
Output Power Class	Class 2
Operating Voltage	Core :1.2V, IO:3.3V, BAT:3.4V~4.2V
Operating temperate range	-10 ℃ ~ +70 ℃
External Interface	UART,SPI,IR, DMIC, SPDIF TX

6. Pin definitions



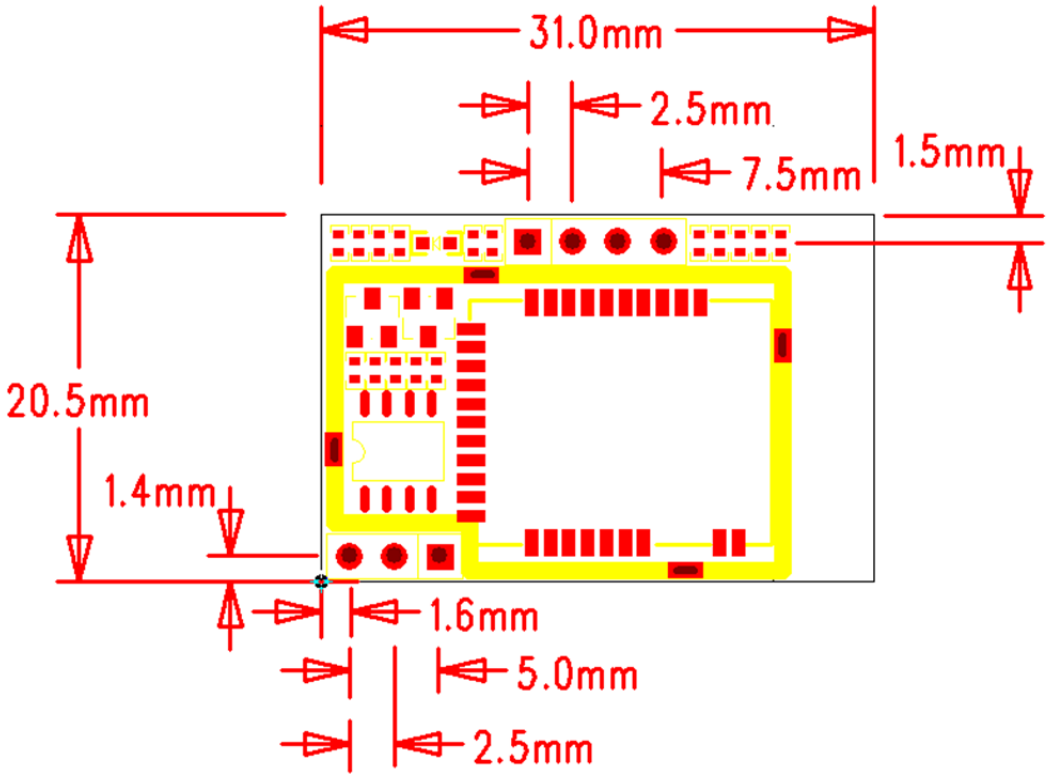
PIN NO.	NAME	TYPE	FUNCTION
1	DTR	IO	IO
2	NC	NC	NC
3	RST	IO	RESET PIN LOW ACTIVE
4	RX	IO	UART RX
5	TX	IO	UART TX
6	GND	Power ground	GND
7	VCC	Power	VCC

7. UART Interface



Operation of UART Uncontrol flow

8. Module Size



Top VIEW

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

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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

This product should not collocate with other radio.
If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2AH9Q-BLUETOOTH01" or "Contains FCC ID: 2AH9Q-BLUETOOTH01".
The module's antenna is internal antenna, and the antenna can't be replaced.
(a)The module should not collocate with other wireless radio
(b) PCB antenna of antenna OEM should be use. Antenna Gain is 0dBi to connect with the antenna seat.