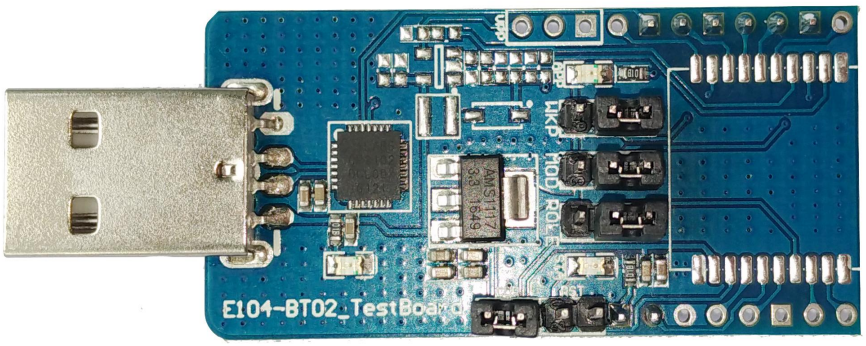
1. Introduction

1.1 Feature introduction



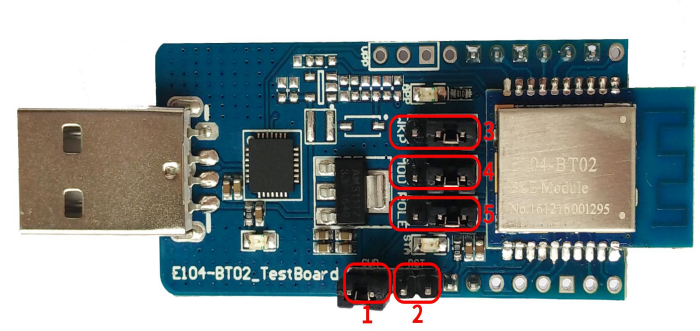
E104-BT02-TB test board adapts USB interface, which can quickly sets the Bluetooth related features and functions

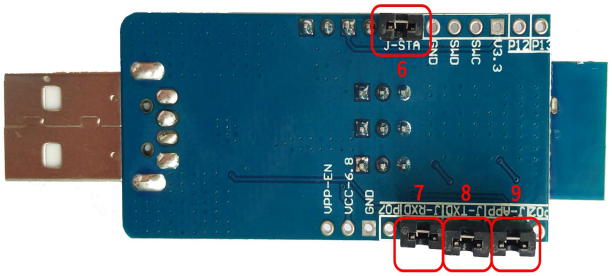
1.2 Electrical parameters

No.	Parameter name	Parameter value	Comment
1	Support module	E104-BT02	Low-power consumption Bluetooth to serial port module
2	Module size	52 * 24 mm	With USB connector
3	Production process	Lead-free process,SMT	Batch consistency and reliability are ensured via SMT
4	Power supply interface	USB	-
5	Communication Interface	USB	-
6	Operating temperature	-40 ~ +85℃	Industrial grade
7	Operating humidity	10% ~ 90%	Relative humidity, non-condensing
8	Storage temperature	-40 ~ +125℃	Industrial grade

2. Function description

2.1 Pin definition





Pin No.	Pin name	Pin direction	Use
1	CUR	-	Current detection, test the current characteristics of the module in low power consumption mode
2	RST	Input	Reset pin
3	WKP	Input	The module wakes up in low power consumption mode, short circuit the wake-up module on the right two pins, short circuit the module on the left two pins, and enters into low power consumption mode.
4	MOD	Input	Working mode configuration: short circuit to the right two pins, enter configuration mode, short circuit to the left two pins, enter transparent transmission mode.
5	ROLE	Input	Bluetooth role configuration, short circuit to the right two pins, Bluetooth host mode, short circuit to the left two pins, Bluetooth slave mode.
6	J-STA	Output	Bluetooth status output pin. In the short circuit status, the indicator STA indicates the current Bluetooth connection status, the indicator light is always on, indicating that the Bluetooth connection is successful, and the

			indicator light is off, indicating that the Bluetooth connection is disconnected.
7	J-RXD	Input	Short circuit jumper, Bluetooth module RX (receiving pin) is connected with serial chip sending pin of test board.
8	J-TXD	Output	Short circuit jumper, Bluetooth module TX (sending pin) is connected with receiving pin of serial port chip of test board.
9	J-APP	Output	Bluetooth data output pin. In the short circuit state, the indicator light app indicates the current serial port data output, and the indicator light is on to indicate that the data is being sent.

2.2 Functional testing

Test function	Description
Test Bluetooth slave current in low power mode	Disconnect all jumpers, the ammeter is directly connected to cur, the test board is inserted into the USB interface of the computer, the power light is on, and the module is powered on normally. In the default configuration, the module works in the slave sleep mode and broadcasts at 1-sedond intervals. The low-power current of the module can be read through the ammeter.
Test for transparent transmission	Two test boards, one works in the master mode and the other works in the slave mode, can Establishing a Bluetooth master-slave connection can achieve data transmission. 1.The host works in the wake-up transmission mode, short connect the jumper CUR/J-STA/J-APP/J-TXD/J-RXD，WKP ground (The short-circuit cap is inserted near the module end), MOD floating, and ROLE ground(The short-circuit jumper is inserted near the module end) 2.The slave works in the wake-up transparent transmission mode: short connect the jumper CUR/JSTA/J-APP/J-TXD/J-RXD, WKP ground(the short-circuit jumper is inserted near the module end), MOD floating, ROLE Connect to VCC(Short-circuit jumper is inserted away from the module end) 3. The master and slave modules are respectively plugged into the USB interface of the computer, the power indicator is always on, and the module is powered on normally. The slave module automatically starts broadcasting data, and the master module starts canning synchronously until the slave is successfully connected, and the"STA corresponding to the master and slave modules is always on, indicating that the Bluetooth connection is successful; 4. Open the serial port debugging assistant, open the corresponding COM port of the master module, send the ASCLL data"12345678980",the data indicator "APP"of the slave module blinks, and the corresponding COM port of the slave outputs"1234567890 synchronously.

Parameter modification	1.In wake-up configuration mode, short connect the jumper CUR/J-STA/J-APP/J-TX-D/J-RXD, WKP ground(short-circuit jumper is inserted near the module end), MOD ground(short-circuit jumper is inserted near the module end), ROLE is arbitrary(Bluetooth role) 2.Insert the test board into the computer USB and use the serial debugging tool to open the corresponding COM port(the factory baud rate is 9200bps, no parity, 1 stop bit) 3.Send the configuration instruction to complete the configuration(for specific instructions, please refer to the E104-BT02 manual)

2.3 CP2102 Driver installation

If it is the first time to use the CP2102 interface conversion module, the PC will prompt to install the new device driver - CP2102 USB to UART bridge controller. This driver can be obtained from our company, for details, please contact customer service, or download through Internet search (download link of drive Sky Network: (http://www.drvsky.com/driver/CP2102.htm)

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