EWT104-BT41SP User Manual

Low-cost dual-mode Bluetooth slave module test kit



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Chengdu Ebyte Electronic Technology Co.,Ltd.

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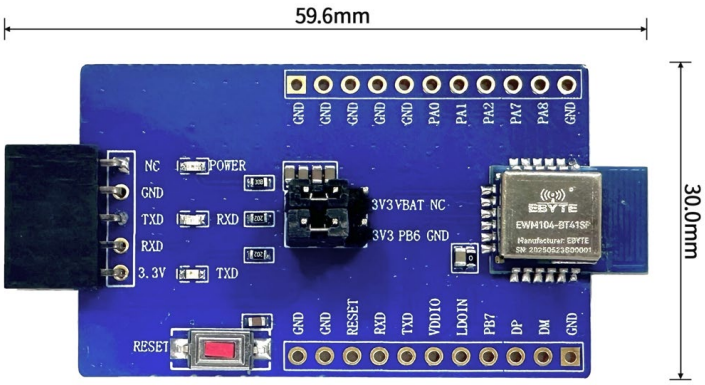
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Chapter1 Overview

1.1 Product Introduction

The EWT104-BT41SP is a Bluetooth test suite based on the EWM104-BT41SP module, which can significantly reduce the user's development cycle. For detailed information about the EWM104-BT41SP, please visit the official website to download relevant information about this model.



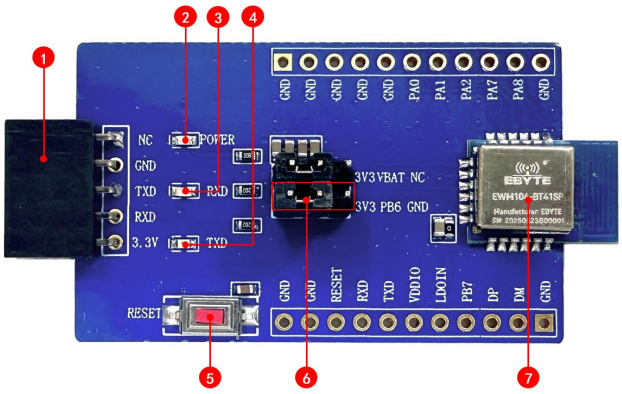
- Support BLE5.4;
- Only supports slave role;
- Supports switching between SPP and BLE broadcasts, and only one type of broadcast is allowed to be connected at the same time;
- Pre-soldered EWM104-BT41SP
- Supports transmission power modification, the maximum transmission power is 8dBm;
- All module pins have been brought out
- Stable work and easy to develop

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Chapter2 Hardware Description

Pin Definition



Serial number	definition	illustrate	Remark
1	NC	NC	2.54mm pitch female header
	GND	Power ground	
	TXD	Serial port output pin	
	RXD	Serial port input pin	
	3.3V	DC 3.3V input pin	
2	POWER	Power indicator	-
3	RXD	Serial port receiving indicator	-
4	TXD	Serial port sending indicator	-
5	RESET	Reset button	-
6	PB6(WKP)	When the level is high, the broadcast is turned on; when the level is low, the broadcast is turned off and the system enters low-power sleep mode.	-
7	EWM104-BT41SP	Pre-welded modules	-

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Chapter 3 Quick Use

3.1 Serial Port Tool Configuration

- When the module's Bluetooth broadcast is not connected, it is in AT command mode. Configuration query and other operations can be performed through AT commands. When any BLE/SPP Bluetooth broadcast is connected, the module enters transparent transmission mode and AT commands are unavailable.
- Set the serial port tool related configuration (default configuration: 115200, 8, 1, none, none), as shown below;

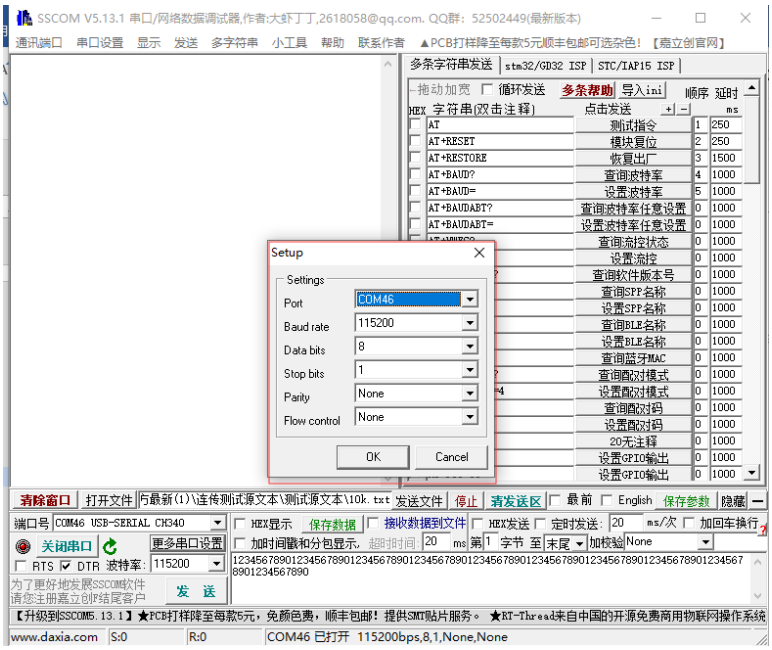


Figure 4-1-1 SSCOM parameter configuration

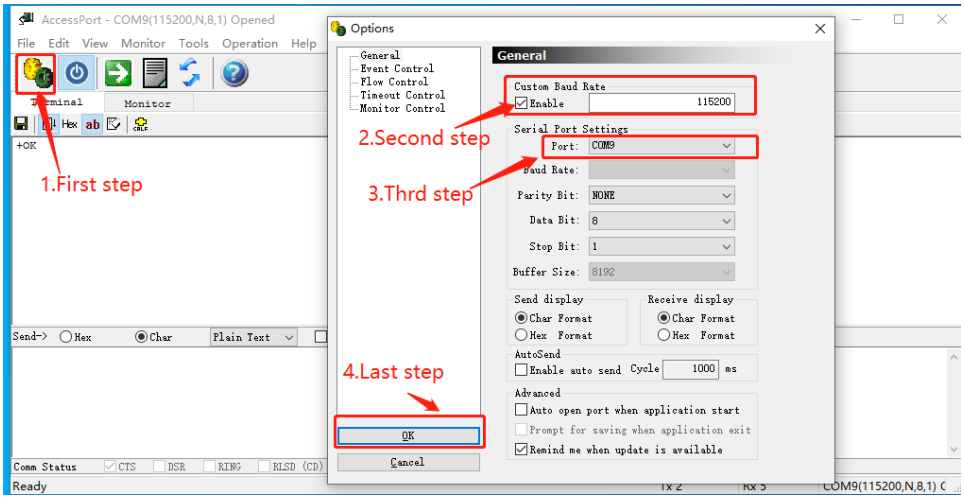


Chart 4-1-2 AccessPort parameter configuration, other parameters are default

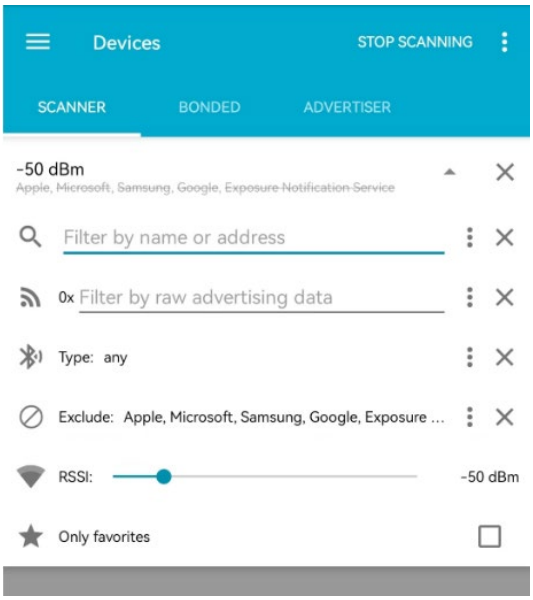
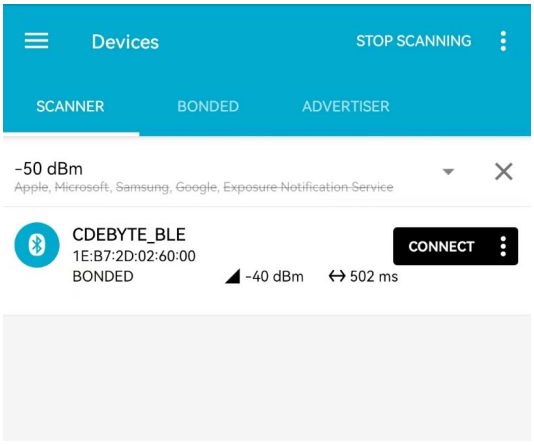
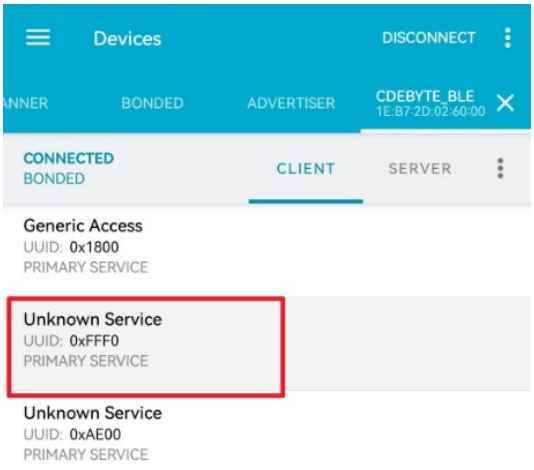
- Follow the instructions shown in the instruction table in 6.4 and the instruction instructions in section 6.2 to send AT commands to configure the module.

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3.2 BLE data transparent transmission and air configuration

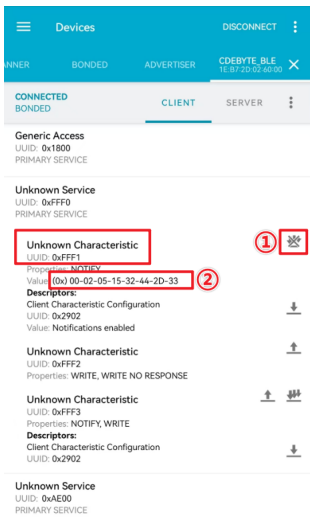
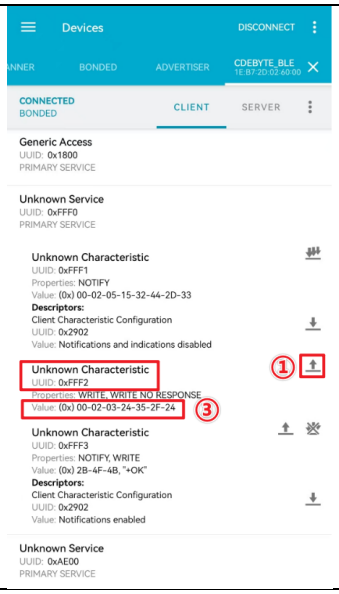
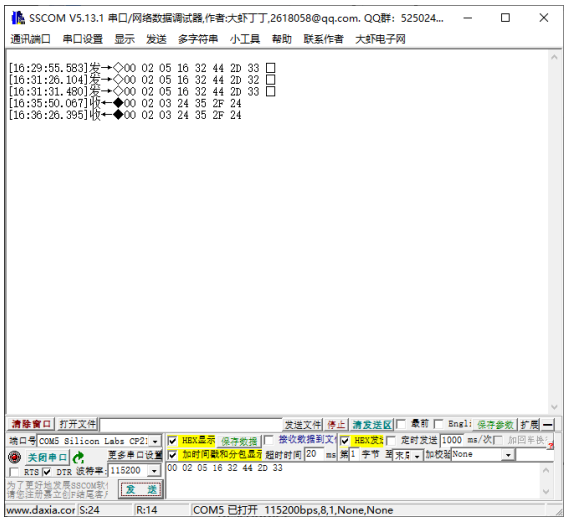
- When only BLE roles are connected, over-the-air configuration can be used
- Open the AppnRF connect", start scanning devices, find the device "CDEBYTE_BLE", and connect to it.

Filter the Bluetooth module signal to be linked through RSSI	
Connect to the broadcaster named "EBYTE BLE"	
After connecting, open the service of 0xFFF0 and start the subsequent operations	

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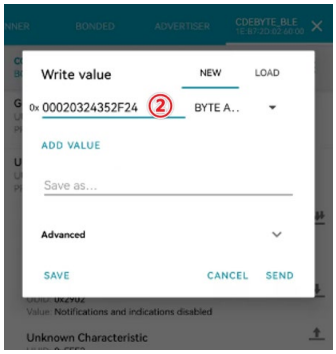
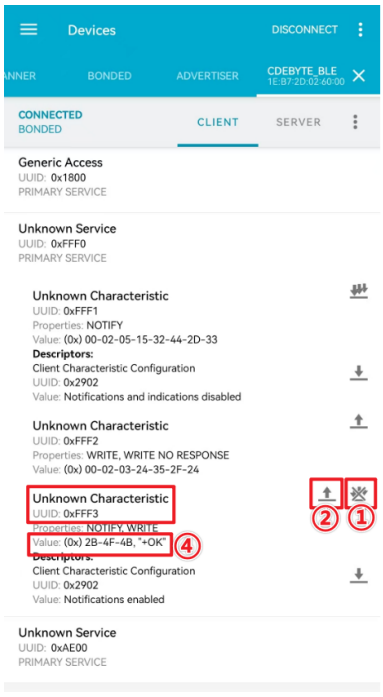
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- Perform data transmission test.

<table>
<tr><td>operate</td><td>Mobile</td><td>PC</td></tr>
<tr><td>Open the service with UUID FFF1: APP receives data</td><td>Receive data: Select ①;
The received data will be displayed at the position shown in ②</td><td>Sending Data</td></tr>
<tr><td></td><td>
</td><td>
</td></tr>
<tr><td>Open the service with UUID FFF2: APP sends data</td><td>Send data: open ①;
Fill in the sending data in the position shown in ②;
③The location shown echoes the data sent</td><td>Receiving Data</td></tr>
<tr><td></td><td>
</td><td>
</td></tr>
</table>

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<table>
<tr><td></td><td>
</td><td></td></tr>
<tr><td rowspan="2">Open the service with UUID FFF3: Configuration Operation:
The module can be configured over the air by sending AT commands via Bluetooth connection.
Please note that the password must be verified before air configuration: see Section 5.1</td><td>Send AT commands and receive echo:
Open ① receive data echo;
Open②Edit the content to be sent;
Fill in the instructions in the position shown in ③, and make sure to select TEST format;
At position ④, you can view the command operation result echo.</td><td>No data transmission occurs</td></tr>
<tr><td>
</td><td>/</td></tr>
</table>

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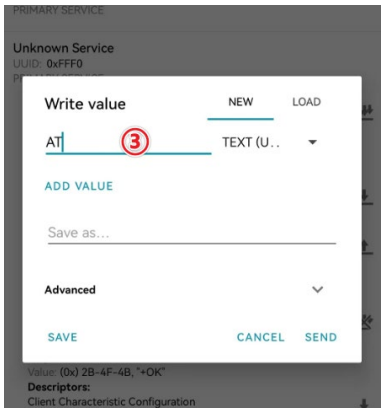


Figure 4-4 RF connect over-the-air configuration process

- Configure the module according to the instructions shown in the instruction table
- The format of the returned message refers to the instruction table. Some instructions may display several extra 0x00s, which can be ignored.

  When the message returned by Apple users is too long, such as querying the Bluetooth name, it may only display 22 bytes depending on the app. In this case, please limit the set value to a reasonable length.

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3.3 SPP Data Transmission

1.Open the SPP Bluetooth serial port app, search for the Bluetooth name: CDEBYTE_SPP and connect.

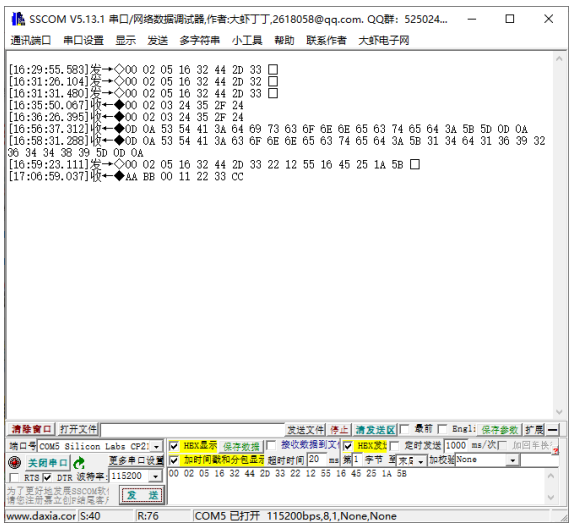
Filter the Bluetooth module signal to be linked through RSSI	
Connect to the broadcast named "EBYTE SPP"	

operate	Mobile	PC
Bidirectional transparent data transmission	Receiving Data	Sending Data
		
	Sending Data	Receiving Data

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Revision History

Version	Revision Date	Revision Notes	Maintainer
1.0	2025-08-01	Initial version	Lei

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