FSC-DB200 Development Board

User Guide

Release 1.1.0

Table of contents

[中文版]

Chapter 1

Introduction

1.1 Overview

The FSC-DB200 development board integrates Type-C (including UART/USB/charging/power supply), audio input/output, microphone, lithium battery, buttons, reset button, 2.54mm pitch pin headers, status indicator lights, etc.

It can be used in conjunction with our company’s serial port assistant and AT commands for functional testing, facilitating customer familiarity with our products, reducing development cycles, and improving efficiency.”

1.2 Features

- All-in-One Type-C
- Universal 3.5mm Headphone Jack Input
- Universal 3.5mm Headphone Jack Output
- Built-in microphone for convenient call testing
- Lithium battery/USB powered
- Button controls (power on/off, pause/play, volume adjustment, track selection) and a one-key reset
- 2.54mm pitch pin headers for easy DuPont wire connections
- Multifunctional indicator lights for status indication
- RF interface (not included in the standard package) for convenient RF signal testing
- Built-in USB to serial chip

- Built-in headphone amplifier chip, capable of driving 16/32 ohm headphones
- Reserved Adafruit board connection port

1.3 Application Module

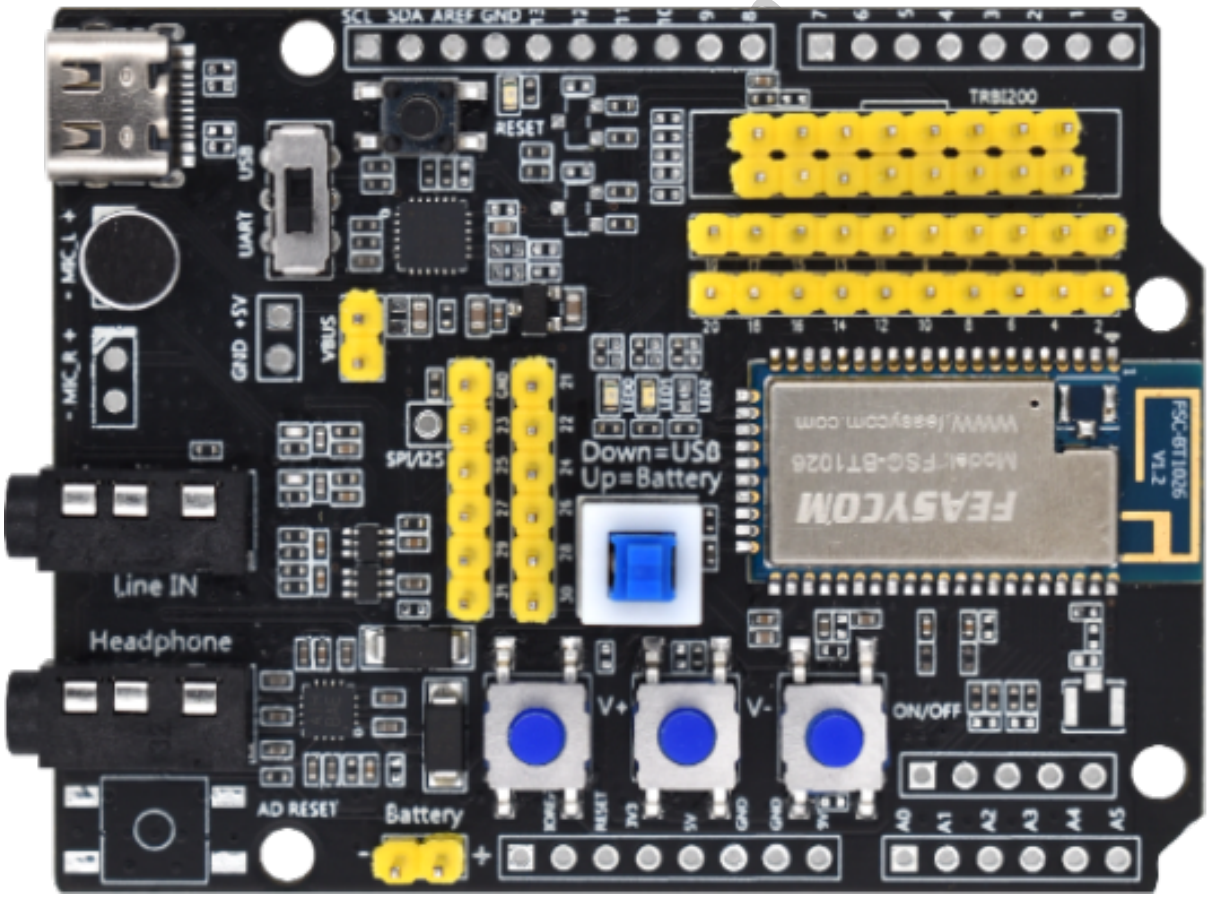
- BT1026X
- BT1035
- BT1036C
- BT1032C
- BT955
- BT958

etc

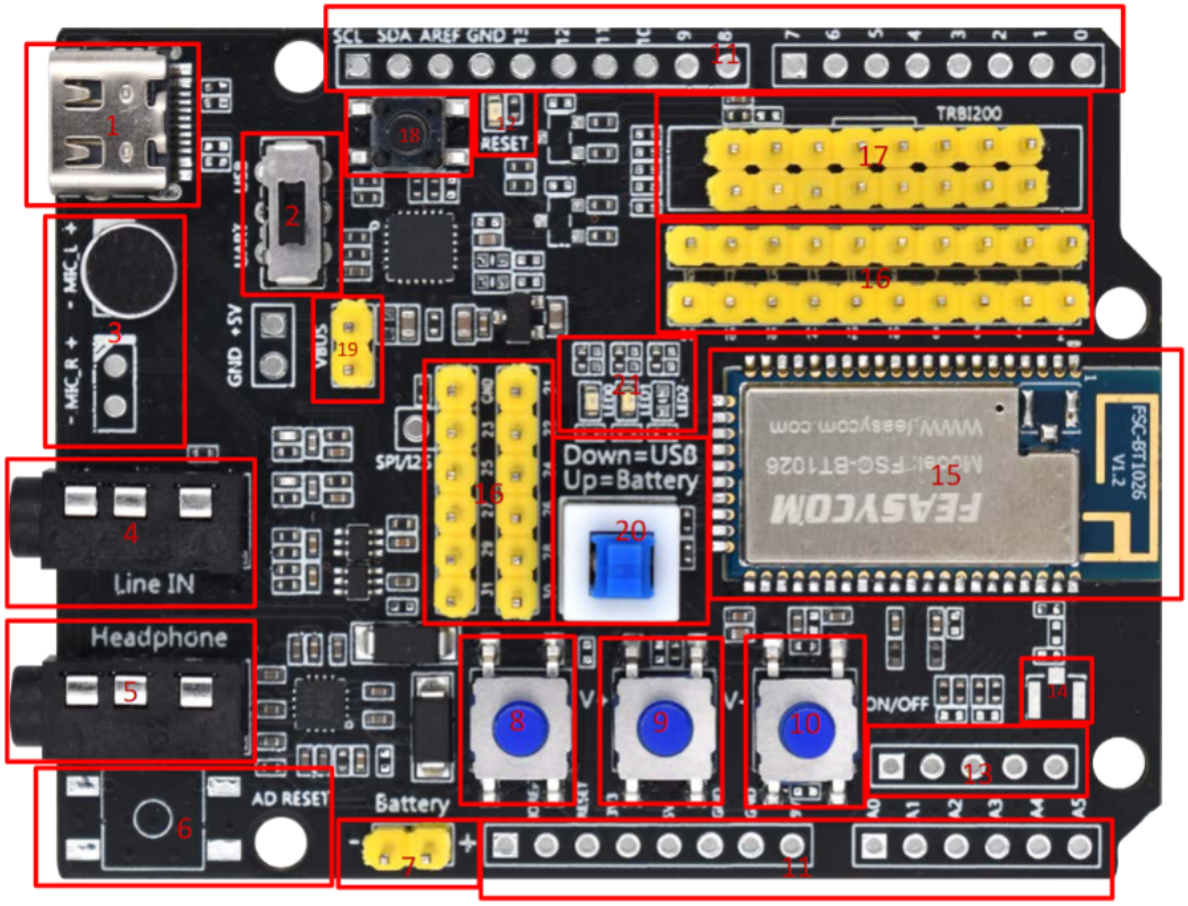
Chapter 2

Hardware and Function

2.1 Sample Image



2.2 Funticon Design



2.3 Function Description

NO.	Description	remark
1 *	Type-C	Power the module/communicate with the module/charge the battery through the module
2	USB/UARTswitch	The UART can be selected to communicate with the module, and the USB function of the module can be selected; Not all modules have USB capability
3	microphone	HFP (for outgoing calls, the default channel is L); And applications that require microphones
4	Audio input	Standard 3.5mm audio socket
5	Audio output	Standard 3.5mm headphone output drives 16/32 ohm speakers up to 60mW
6	Adu board reset button	Reset the extended adu board. The default is empty
7	Battery powered	Lithium battery interface. 3.7V to 4.2V. Do not exceed the voltage, otherwise the module will be damaged
8	Volume plus	Short press Volume increase/Long press next track
9	Volume down	Short press volume decrease/Long press previous track
10	On-off key	Long press 2s switch machine; Play music: short press pause/play; Incoming call: Press to answer and then press to hang up
11	Adu board expansion row pin	Adu board extension, empty by default
12	Adu board indicator light	Adu board status indication
13	Analog audio differential out-put pin	Expansion pin, empty by default
14	External IPEX seat son	The module external antenna is connected to the seat
15	module	Can support BT1026X series/BT1035 / BT1036C/BT1032C BT955 / BT958 and so on
16	Module pin	Module each pin
17	TRBI200	TRBI200 burner interface, empty by default
18	Module reset key	Press the module to reset

Note: The three marked with * can be combined to achieve battery charging, and the maximum current is 200mA. Generally, this function is disabled by default. Not all modules support battery charging.

Chapter 3

Development and Use

3.1 Driver

FSC-DB200 Uart Driver

3.2 Tools

Feasycom serial debugging assistant, is an official development of Fei Yi Tong to facilitate developers efficient and convenient desktop serial debugging tools.

For tools to download and use, visit the following links:

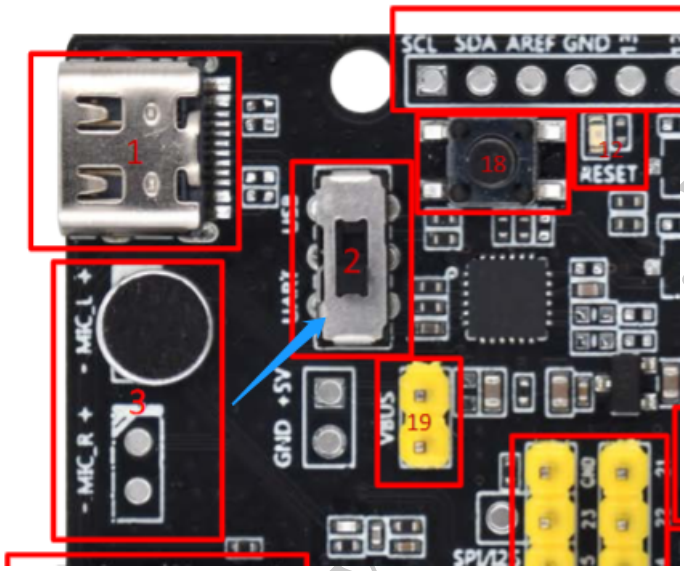
Feasycom serial debugging assistant download and use guide

3.3 Quick Start

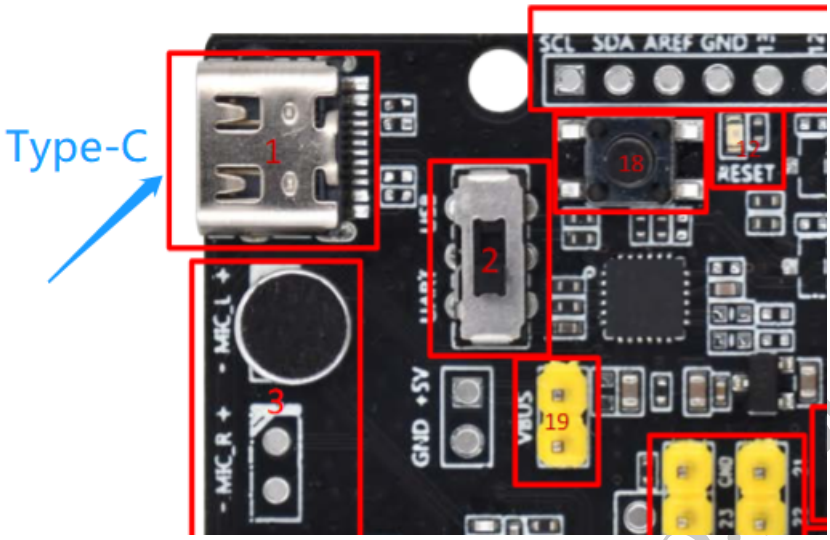
Take FSC-BT1026C dual-mode Bluetooth audio module and universal firmware as an example to demonstrate the quick operation steps:

(1). Switch the development board to UART serial communication debugging mode:

Switch the USB/UART toggle switch (component number 2) on the development board to the UART

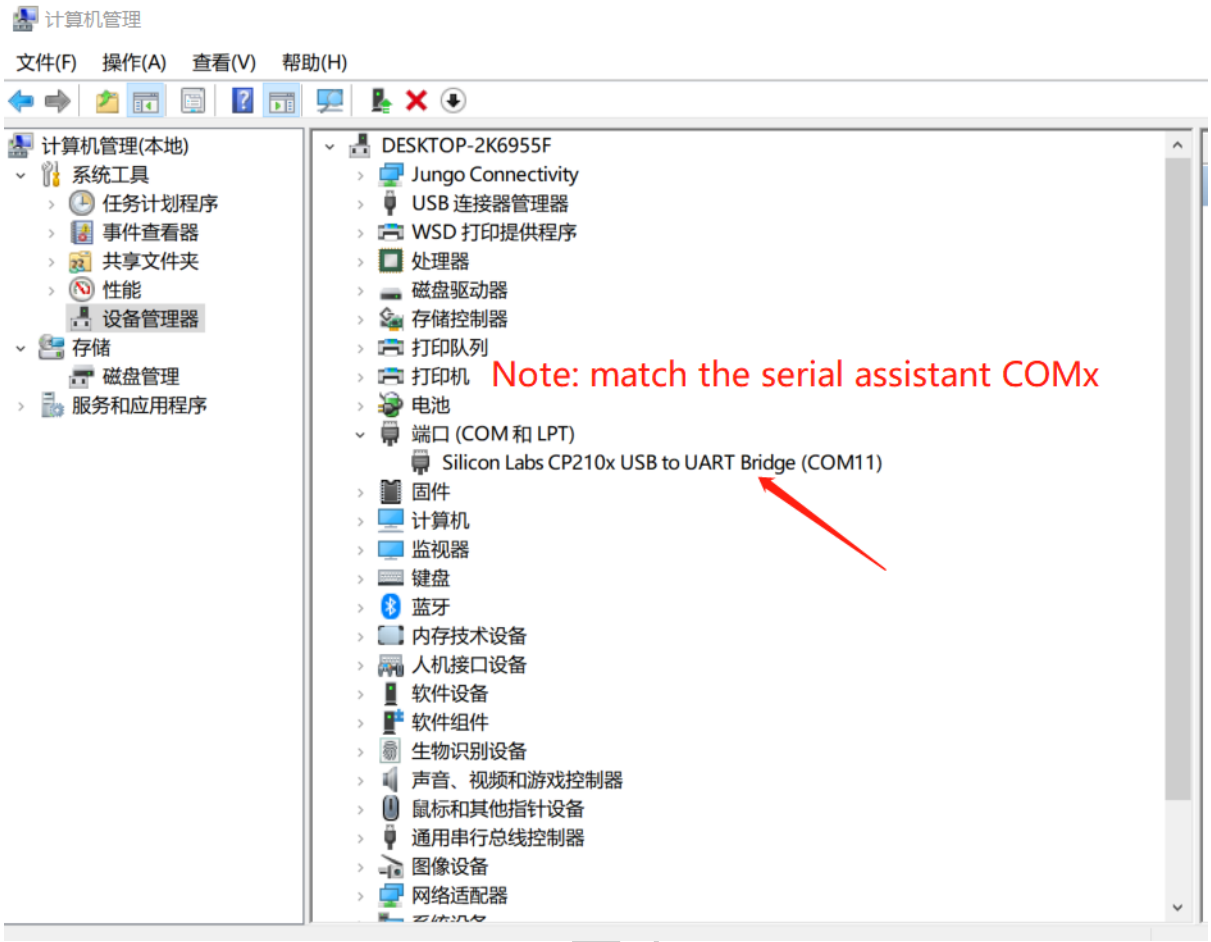


(2). Connect the development board to the PC through a Type-C cable

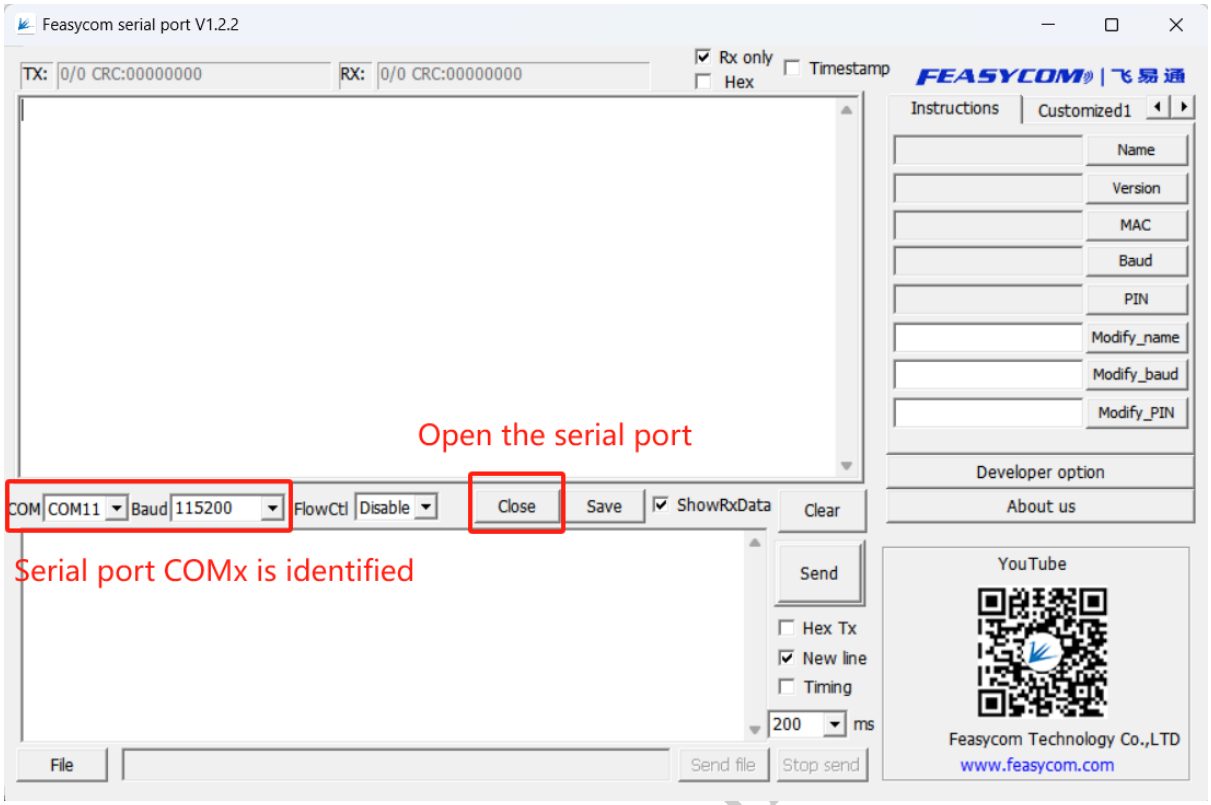


(3). After the connection, the PC recognizes the serial port COMx

PC serial port identification:



Feasycom serial debugging assistant Serial identification:

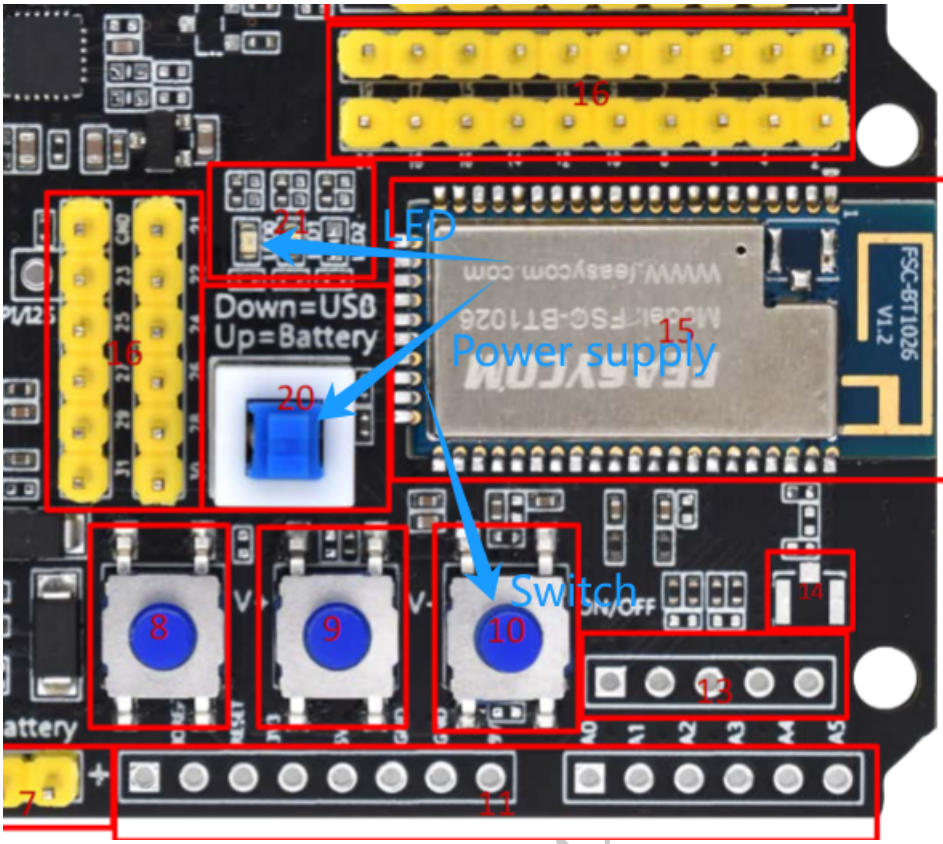


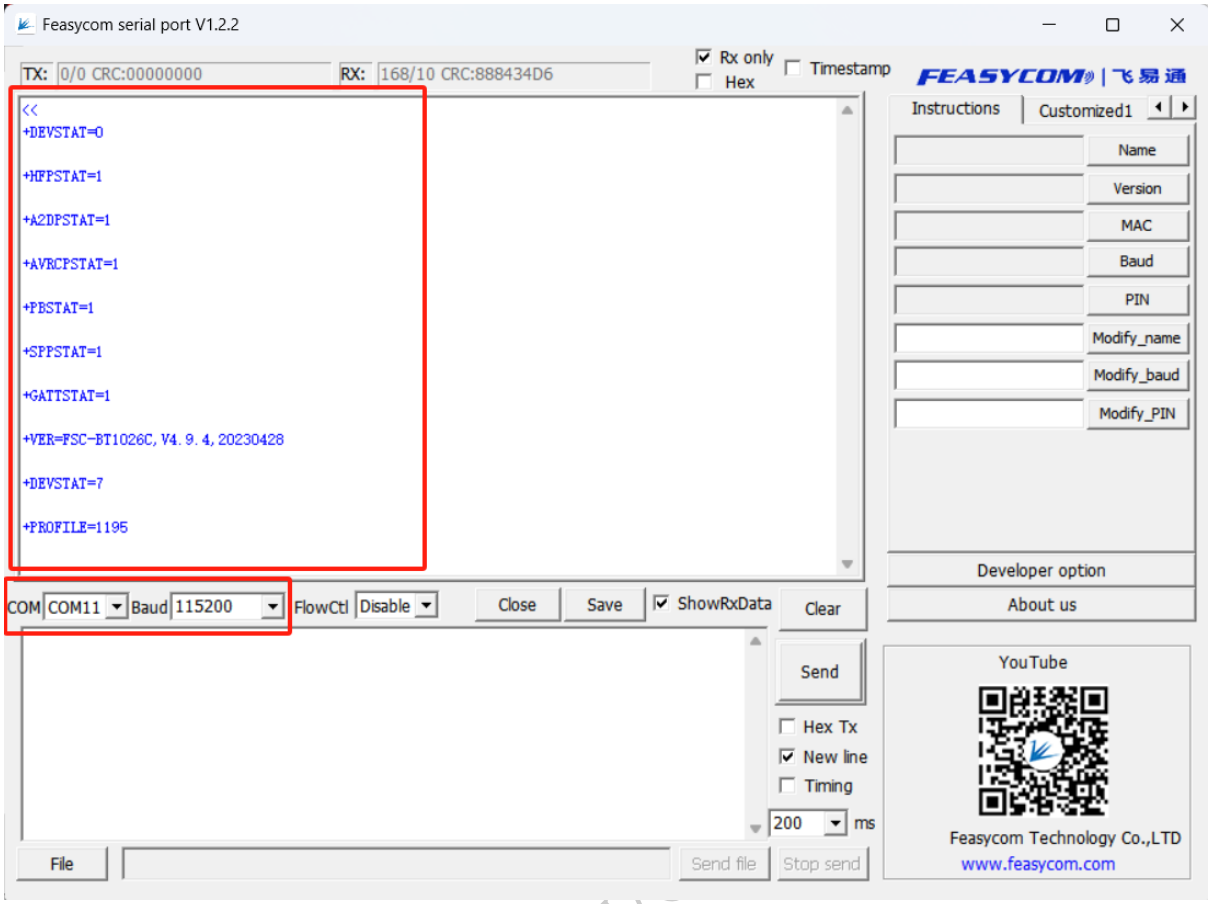
(4). The module is powered on

Press the module power supply button (component number 20) to switch to Type-C power supply (Down=USB);

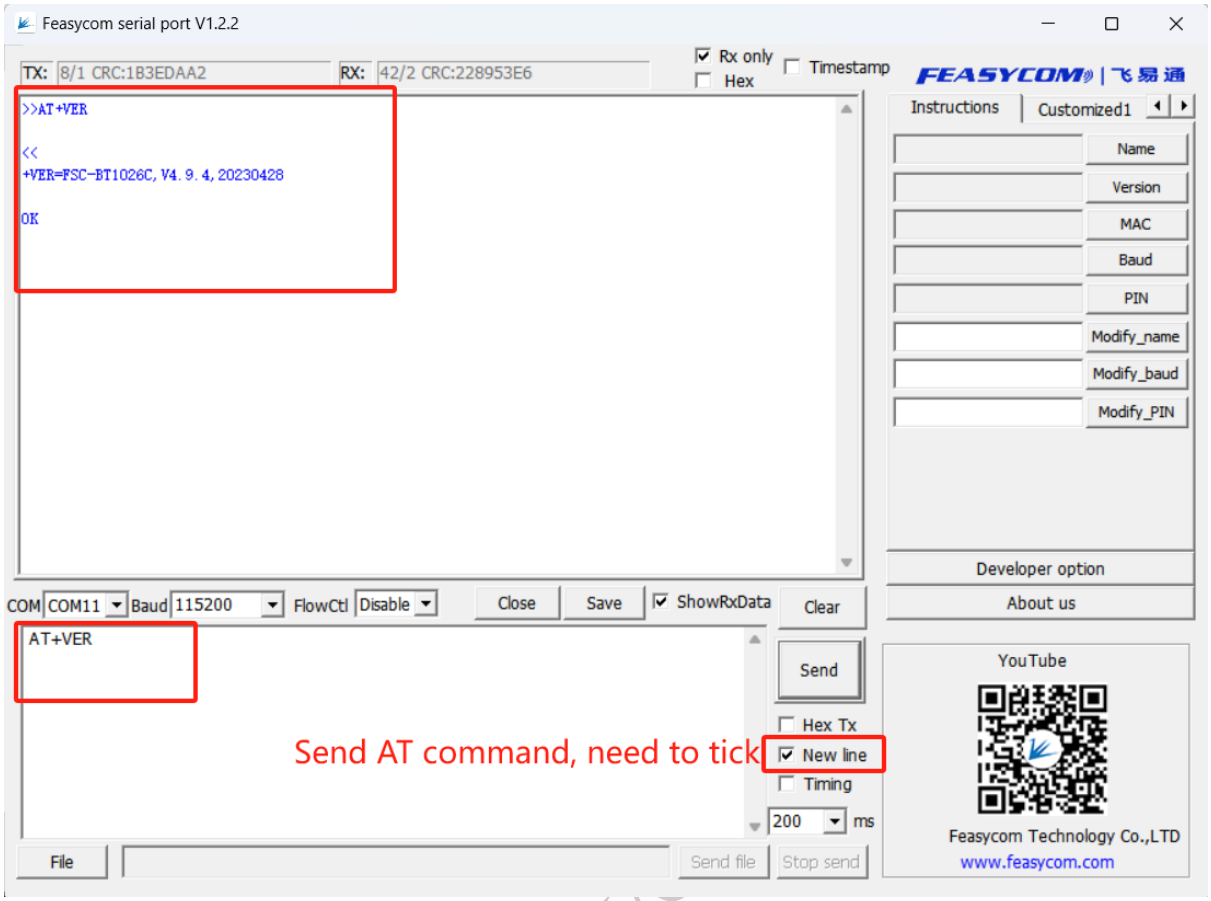
Press and hold the on/off button (component number 10) for 2s;

Indicator LED00 (Component No. 21) The blue indicator blinks: The device is powered on



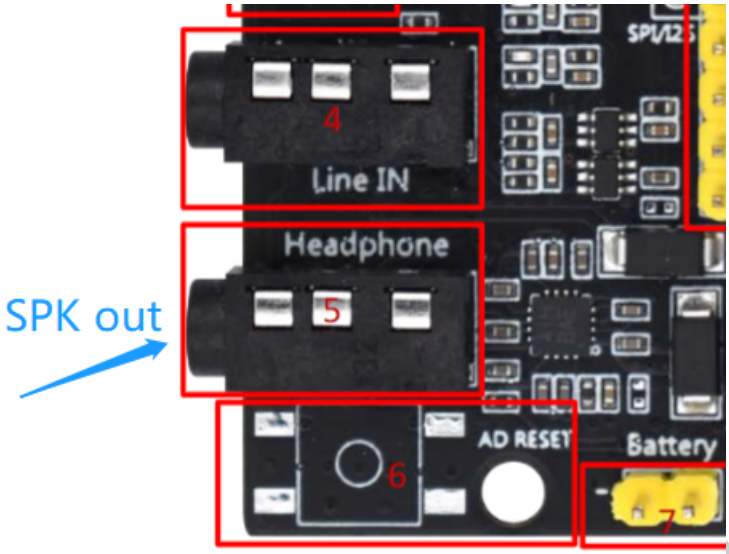


This demonstration, firmware configuration, power-on response configuration data, different firmware may be different, the actual situation shall prevail.



Supports the use of modules with AT commands, such as sending AT+VER in response to the firmware version information of the module

(4). Connect the speaker or headphones to the SPK audio output port (component number 5) of the development board through the 3.5mm AUX audio cable.



(5). Scan and connect modules on the mobile phone

Serial port response +HFPSTAT=3 indicates that the HFP protocol is connected (for calls)

Serial port response +A2DPSTAT=3 indicates that A2DP is connected (for music)

(6). Music mode（A2DP）

When the phone plays music, the serial port feedback:

+A2DPSTAT=3 //A2DP connected,Mobile phone playing music

+PLAYSTAT=1

+A2DPSTAT=4

+A2DPSTAT=5 //Media streaming

(7). Call mode (HFP)

When the mobile phone makes a call, the serial port feedback:

+HFPSTAT=3 //Make a call from a mobile phone

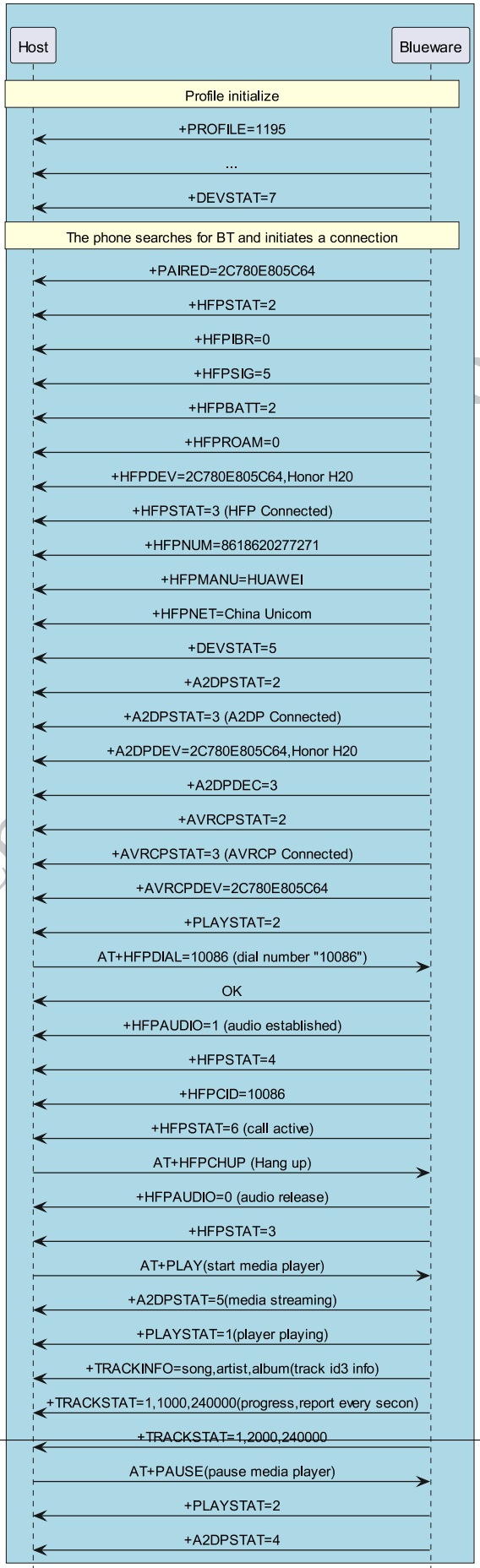
+HFPAUDIO=1 //Create HFPAUDIO

+HFPSTAT=4

+HFPSTAT=6 //call active

Chapter 4

AT Communication Example



Chapter 5

appendix

5.1 FSC-DB200(BT1026)Schematic diagram

FSC-DB200(BT1026)Schematic diagram

5.2 FSC-BT1026 Instruction Manual

FSC-BT1026 programming user guide

5.3 Download PDF version

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