FSC-DB218 User Guide

Release 3.8.0

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[中文版]

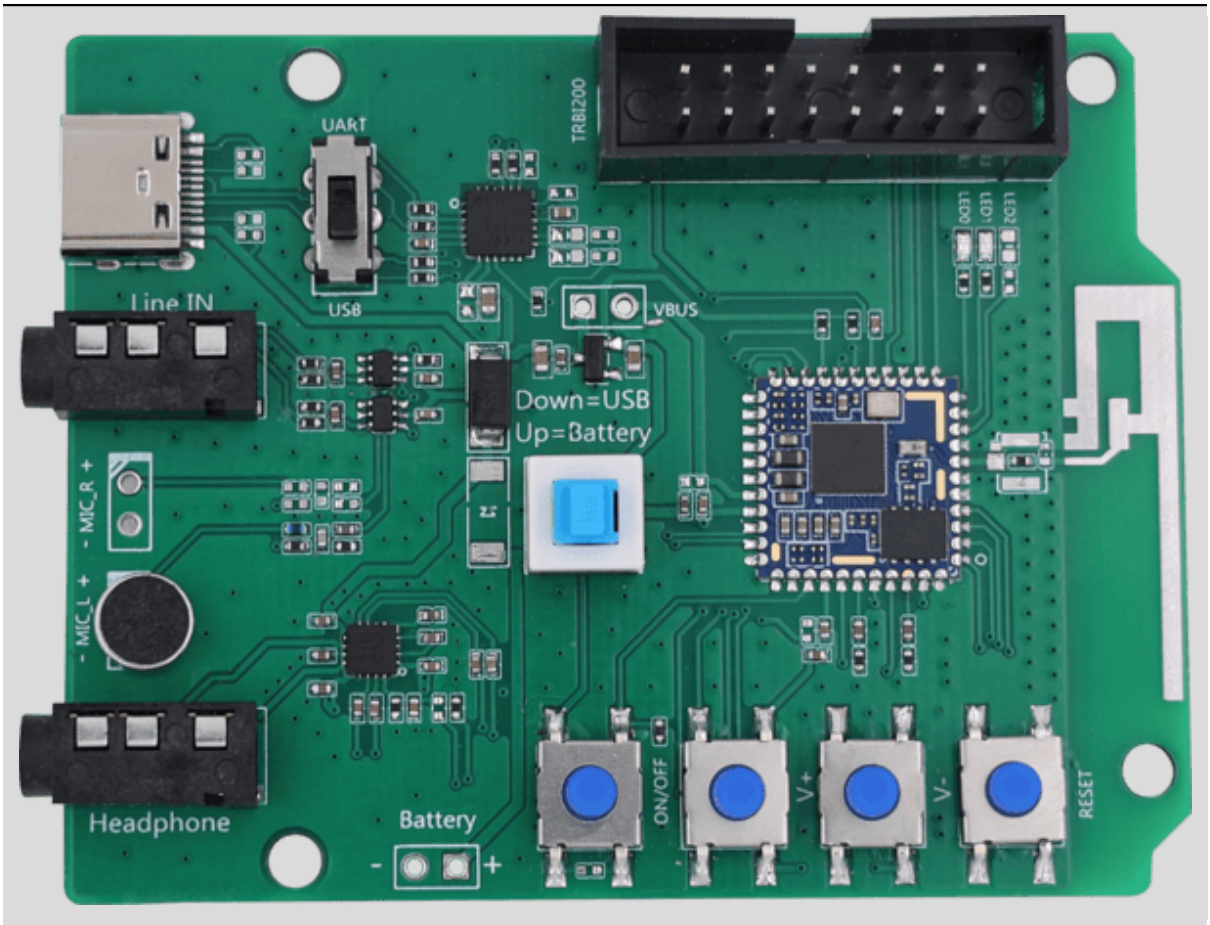
This guide introduces how to use the FSC-DB218 and provides further information about this development board.

Chapter 1

Overview

Feasycom FSC-DB218 development board integrates Type-C (including UART/USB/power supply), audio input/output, microphone, lithium battery, buttons, reset button, status indicators, and other components.

It is compatible with Feasycom serial port tool and AT commands for function testing, allowing developers to quickly familiarize themselves with Feasycom’s products, shorten the development cycle, and improve efficiency.



FSC-DB218 - Front

Chapter 2

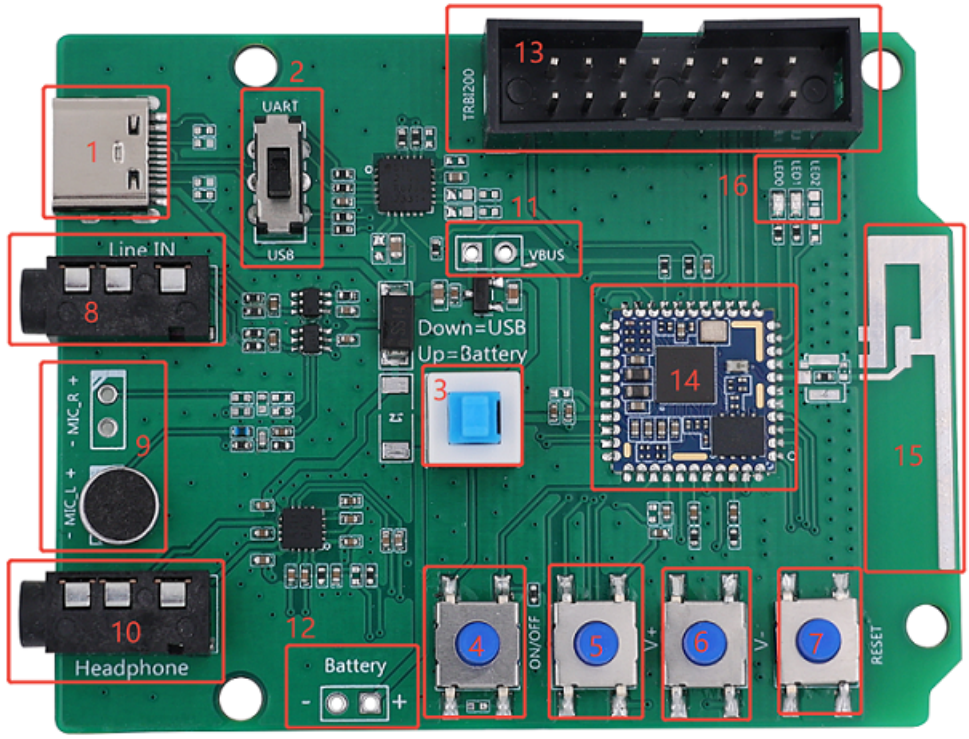
Scope of Application

Applicable to :

FSC-BT1046 Bluetooth audio modules.

Chapter 3

Functional Components



序号	Com-po-nent	Description
1	Type-C	Powers the module.Communicates with the module.Charges the battery via the module.
2	USB/U. Se-lector	Dual-mode communication interface selector (UART/USB).UART mode: USB power supply & UART serial communication.USB mode: USB power supply & USB interface communication.Note: Not all modules support USB function.
3	Power Se-lector	Short (Down): Module powered by Type-C.Open (Up): Module powered by battery.(Multifunctional)Battery charged when Type-C has input voltage and Battery Charging/Module Upgrade Pin (Component 11) is shorted.
4	ON/OF But-ton	Module power control button.Long press for 3s to power on/off (Note: Not required for all module programs).(Multifunctional) A2DP music playback: short press to pause/play.(Multifunctional) HFP incoming call: short press to answer, short press again to hang up.
5	V+ But-ton	Volume up: short press to increase volume.(Multifunctional) Long press to switch to next track during A2DP music playback.
6	V- But-ton	Volume down: short press to decrease volume.(Multifunctional) Long press to switch to previous track during A2DP audio playback.
7	Reset But-ton	Module reset button: short press to reset the module.
8	MIC	Microphone audio input.Used for incoming/outgoing calls during HFP proto-col communication (L channel by default).
9	Line IN	Analog audio input, standard 3.5mm audio interface.
10	Head-phone	Analog audio output (SPK out).Standard 3.5mm headphone output. Can drive 16/32 ohm speakers with a maximum output of 60mW.
11	VBUS	Battery charging/module upgrade.Charges the battery when shorted.Used for module upgrade/fixed frequency (shorted by default).
12	Bat-tery	Lithium battery interface.3.7V~4.2V: Do not exceed this voltage range, other-wise the module may be damaged.
13	TRBI2(	TRBI200 programmer interface (empty by default).
14	Mod-ule Area	Example : FSC-BT1046 Bluetooth audio module.
15	An-	On-board external antenna for the module.

Chapter 4

What You Need

Take FSC-DB218 with FSC-BT1046 an example:

4.1 Required Hardware

- 1 x FSC-DB218-BT1046 : FSC-DB218 development board with Feasycom FSC-BT1046 (optional) Bluetooth audio module integrated.
- 1 x USB to Type-C data cable
- 1 x PC（Windows / Mac）
- 1 x Phone or music player
- 1 x 3.5mm AUX Male-to-Male audio cable (optional)
- 1 x Bluetooth speaker or wired audio input Bluetooth speaker (optional)

4.2 Software and Setup

- **Serial Driver**: CP210x Universal Driver for Windows PC, generally plug-and-play, install this driver if the PC fails to recognize the device in specific environments.
- Feasycom Serial Port Tool : A serial communication analysis tool based on Windows PC.
- FeasyBlue App ： Feasycom APP & SDK resource supporting Android and iOS, which enables functions such as Bluetooth BLE & SPP data communication debugging, Feasycom module firmware version reading, OTA upgrade, OTA command, parameter configuration, etc.
- **Communication Interface** : UART

- **UART Configuration**: 115200/8/N/1 (Feasycom general firmware default)

Chapter 5

Hardware Access

5.1 Power-on Options

- Type-C power supply (default)
- 3V3 / GND pin power supply

Note : The above power supply modes must not be connected simultaneously, as this may damage the development board and/or the power source.

5.2 Hardware Access Note

- Before powering on, ensure the development board is intact and all components are secure without looseness or shorts.
- Development board connects to a PC via a USB to Type-C cable.
- Select the communication mode using the USB/UART Communication Selector (Component 2): Choose UART mode for USB power supply & UART serial communication, or USB mode for USB power supply & USB port communication.
- Set the Power Selection Switch (Component 3) to the down position to switch to USB power supply mode.
- After powering on, the LED lights up steadily, indicating the board is powered normally and ready for debugging.

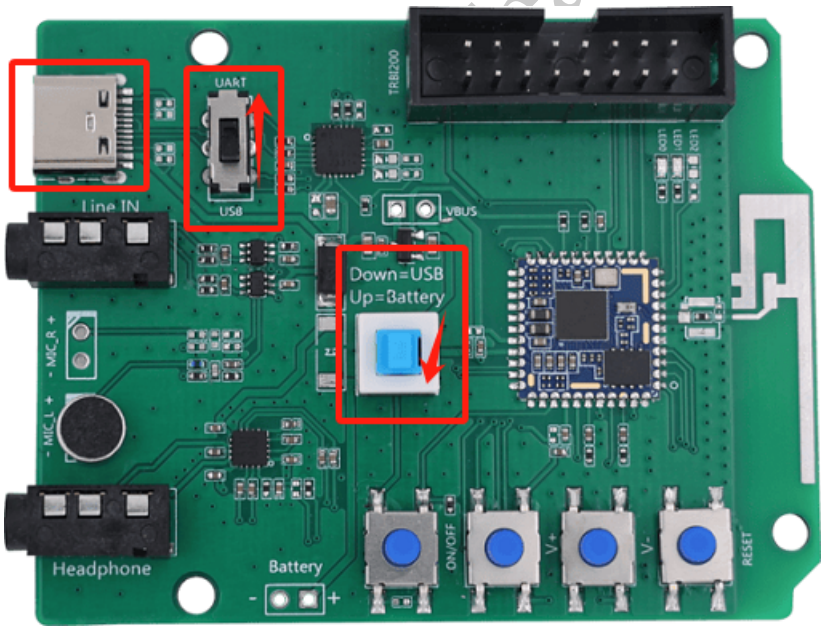
Chapter 6

Get Start

6.1 Power Supply Connection

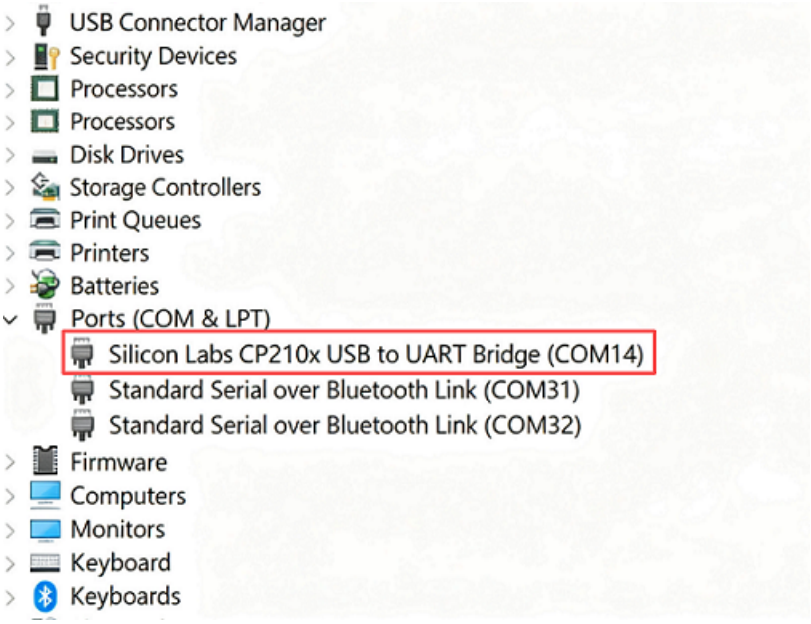
Connect the Type-C port (Component 1) of the FSC-DB218-BT1046 development board to the PC via a USB to Type-C cable.

Set the USB/UART Communication Selector (Component 2) to UART mode and the Power Selection Switch (Component 3) to the down position for USB power supply. The LED will light up and flash slowly, indicating the FSC-BT1046 Bluetooth module has started successfully.



6.2 Serial Port Recognition

The PC will automatically recognize the serial port and create a virtual COM port.



6.3 AT - Uart Communication Test

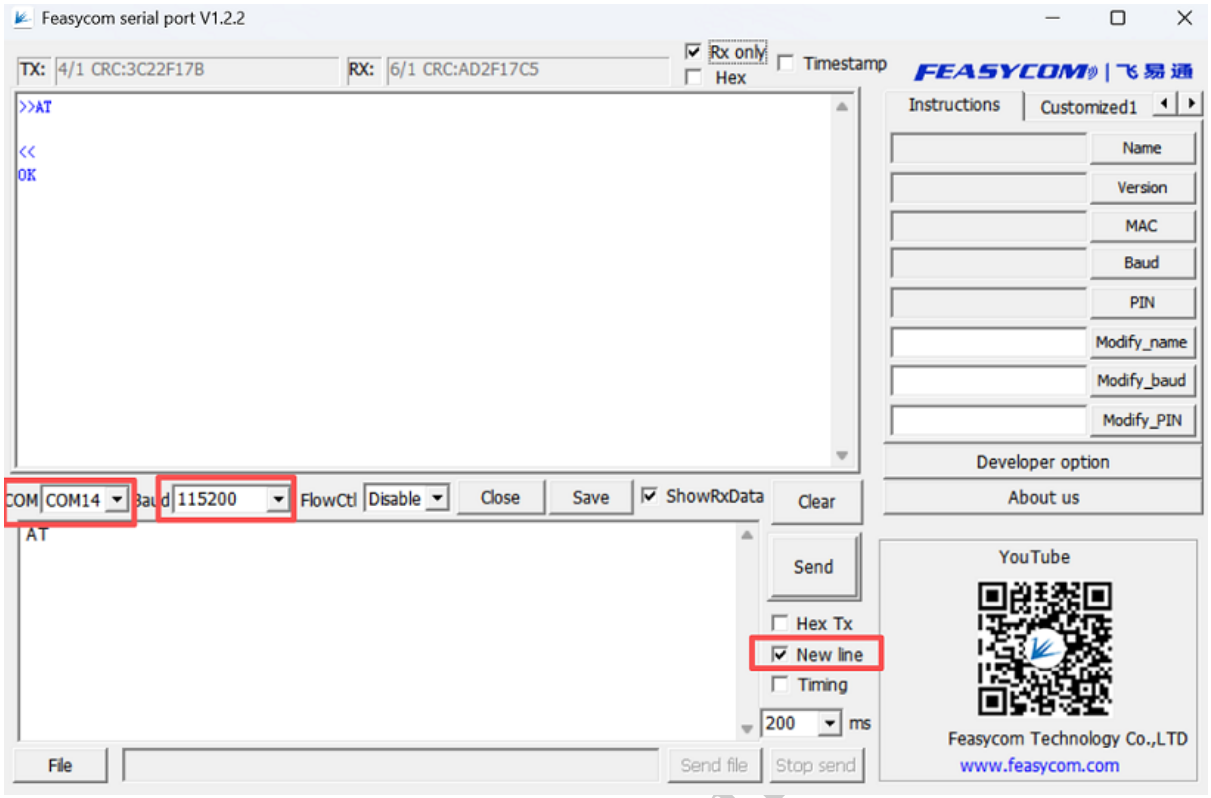
Run the Feasycom Serial Port Tool on the PC, set the correct **COM** and **Baud**, and check the **New Line**.

Send the serial communication test command `AT`, If it responds with `OK`, it indicates that the serial communication test is successful. Example:

Command	**AT\r\n**
Response	**\r\nOK\r\n**
Description	Test the UART communication between HOST and Module after power on, baudrate changed, etc.

Example:

```
send:     >>AT\r\n
response: <<\r\nOK\r\n   //Successfully
```



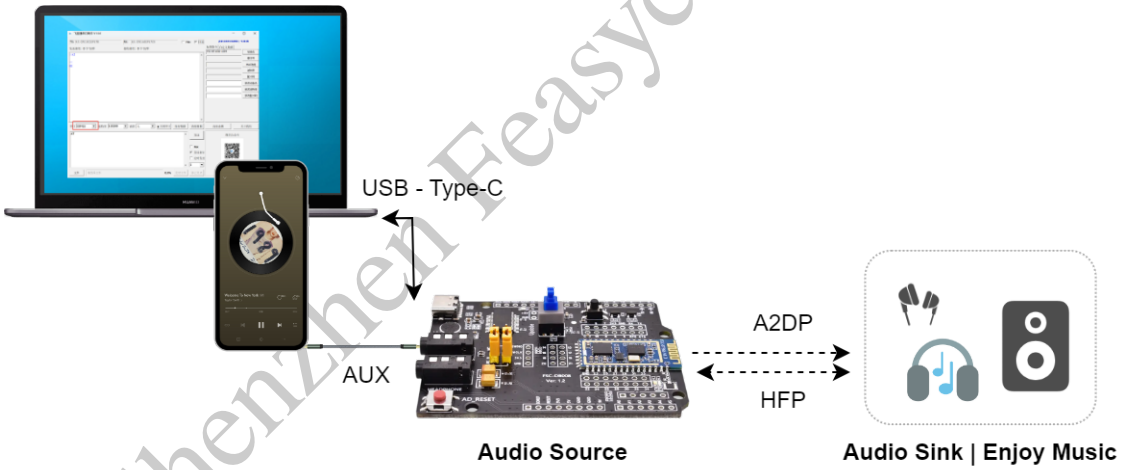
Chapter 7

Application Examples

Take FSC-DB218 with FSC-BT1046 an example:

7.1 Bluetooth Audio Source Mode

Note: FSC-BT1046 only supports Bluetooth audio source application.



Chapter 8

Related Documents

- FSC-DB218 DK Board Schematic (PDF)
- FSC-BT1046 General Audio AT Command Manual (LINK)

Chapter 9

Contact Information

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Chapter 10

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