

Multichannel Audio Module MCU Quick Start

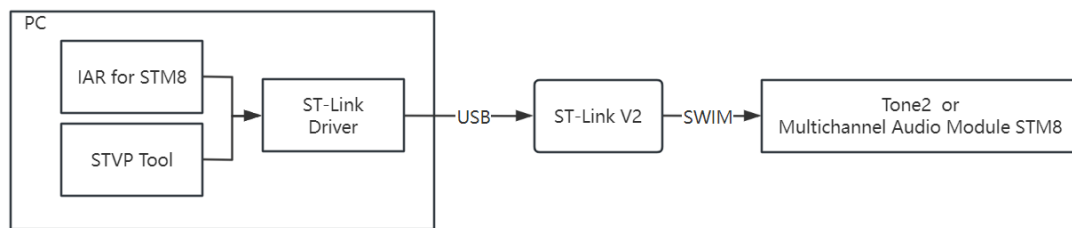
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MCU Quick Start For Multichannel Audio Module

Multichannel Audio Module MCU development tool instructions

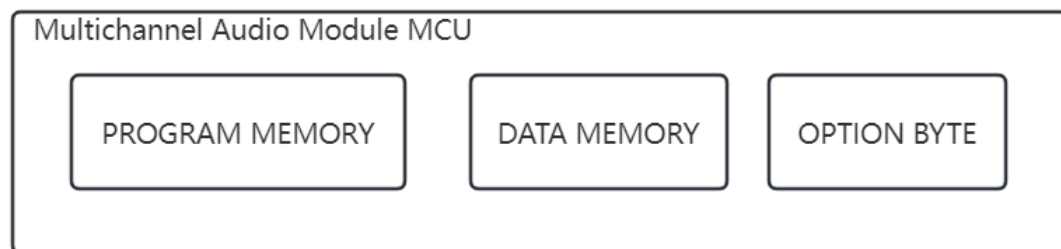
The Multichannel Audio Module uses the STM8S003F3 controller chip. The Windows development tools for this MCU are as follows:



1. Download IAR EWSTM8-2104 and install.
2. Download [STVP\(ST Visual Programmer\)](#) and install.
3. Download [ST-Link Driver](#) and install.
4. Purchase the [ST-Link V2](#) debugging tool and 2.54mm "through-hole straight" pin header.

Note: Other development tools can be used instead, but they will not be explained in detail here.

Multichannel Audio Module MCU framework description



MCU firmware is divided into 3 parts:

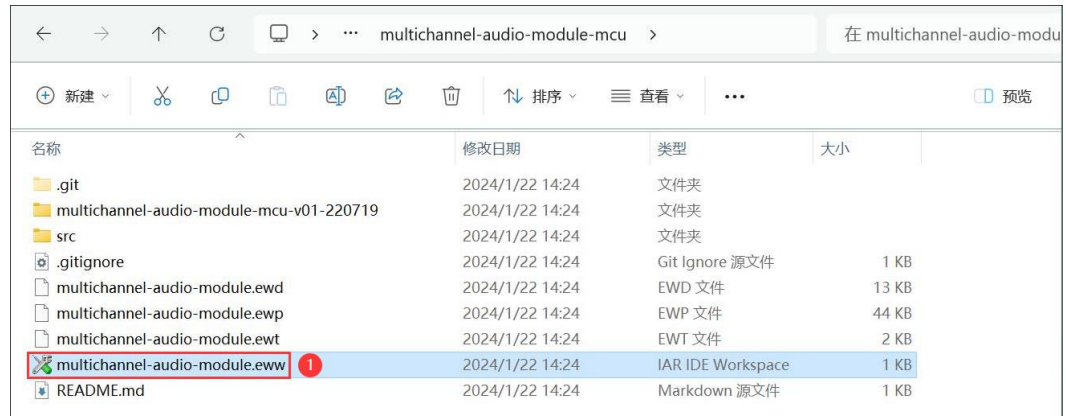
- 1、 PROGRAM MEMORY: The main MCU program. Upgrade file: multichannel-audio-module-mcu-prog-v01-220719.hex
- 2、 DATA MEMORY: The MCU's EEPROM file, used to store data that can be saved when power is off. Such as: volume, filter, THD+N calibration data and other settings of the Multichannel Audio Module device. Upgrade file: multichannel-audio-module-mcu-data-v01-220719.hex
- 3、 OPTION BYTE: MCU hardware configuration information. Upgrade file: multichannel-audio-module-mcu-optb-v01-220719.hex

1. Download code

Download code for the Multichannel Audio Module MCU from the default branch.

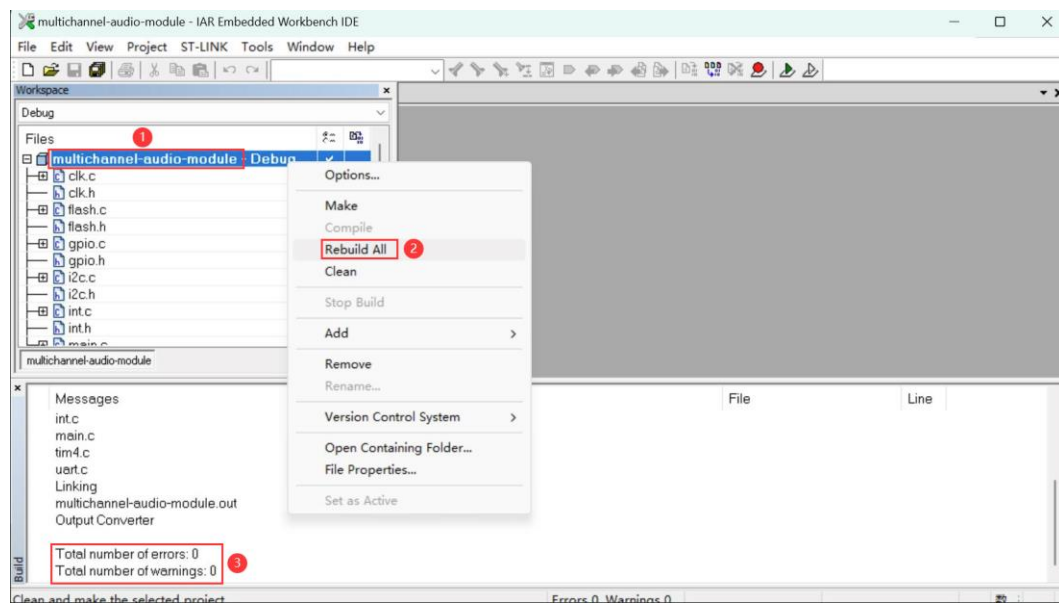
2. Open the multichannel-audio-module.eww project.

Install the compilation tool in advance: IAR EWSTM8-2104



3. Compile

Right-click on the project, then click 'Rebuild All'. You can view the current compilation information and status through the 'Build' window located at the bottom of your screen.



After compilation completes, the firmware will be generated in this directory:

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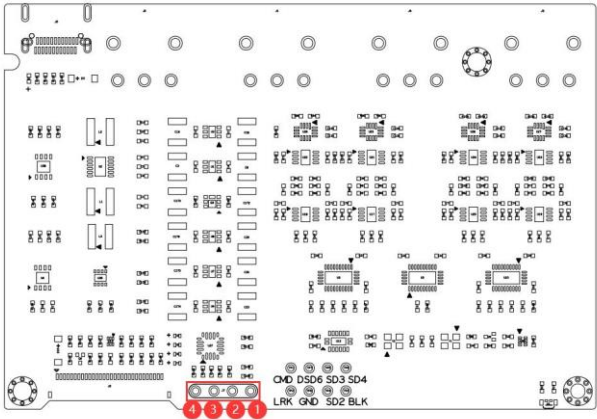
名称	修改日期	类型	大小
 multichannel-audio-module.out	2024/1/22 14:39	OUT 文件	85 KB
 multichannel-audio-module-mcu-prog-v01-220719.hex	2024/1/22 14:39	HEX 文件	12 KB

4. Connect your device

Connect the Multichannel Audio Module to your PC using the ST-Link V2 device (install the ST-Link driver in advance)

Multichannel Audio Module pin show as below

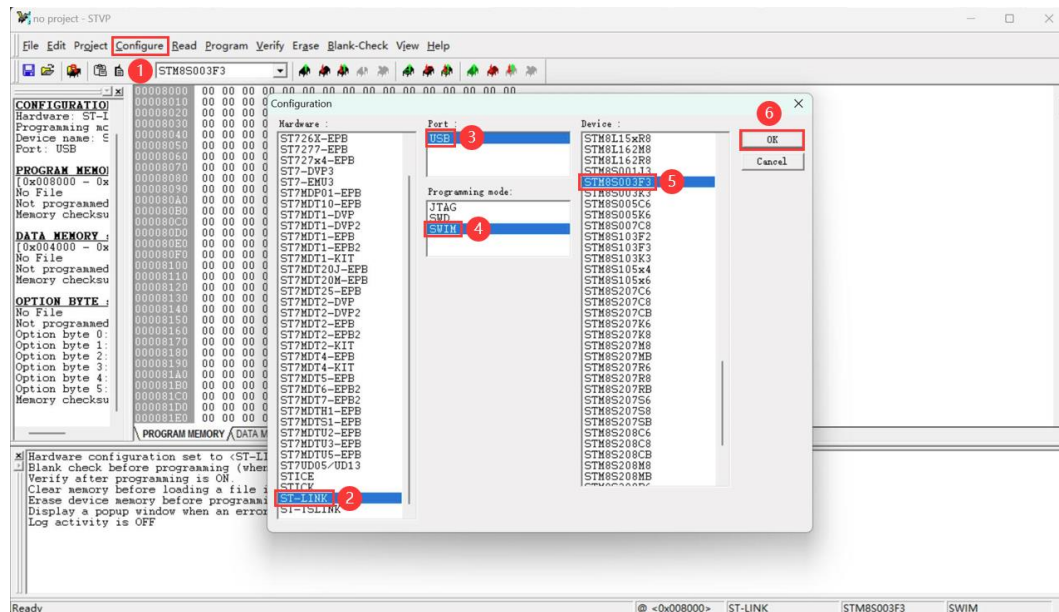
- ① GND
- ② SWIM
- ③ RST
- ④ 3.3V



ST-Link V2 pin show as below:



5. STVP (ST Visual Programmer) upgrade tool configuration



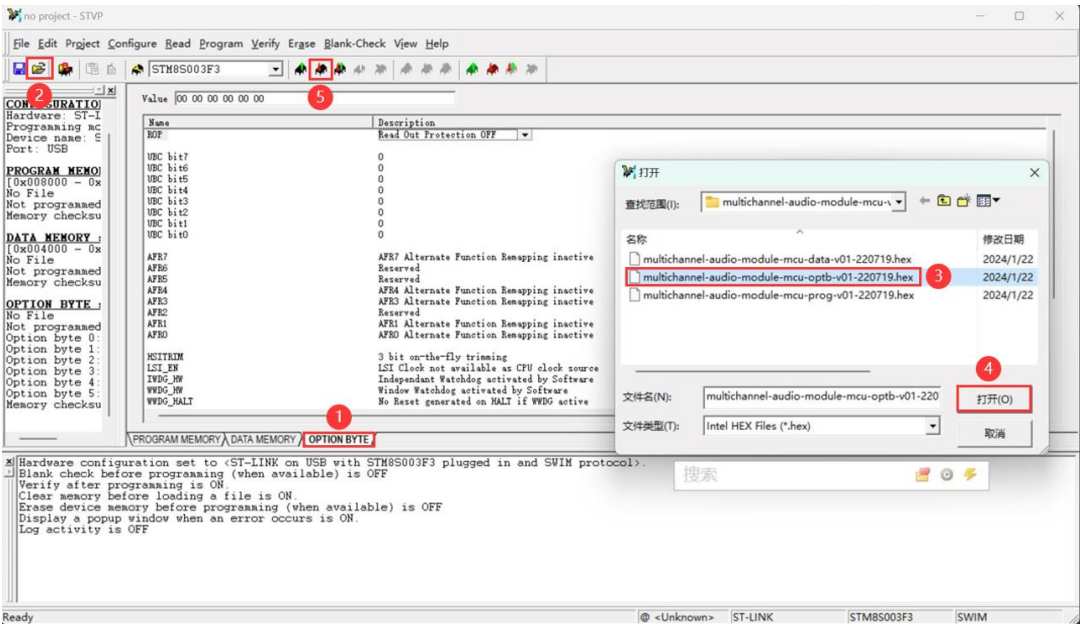
6. Description of upgrade files

3 files need to be upgraded:

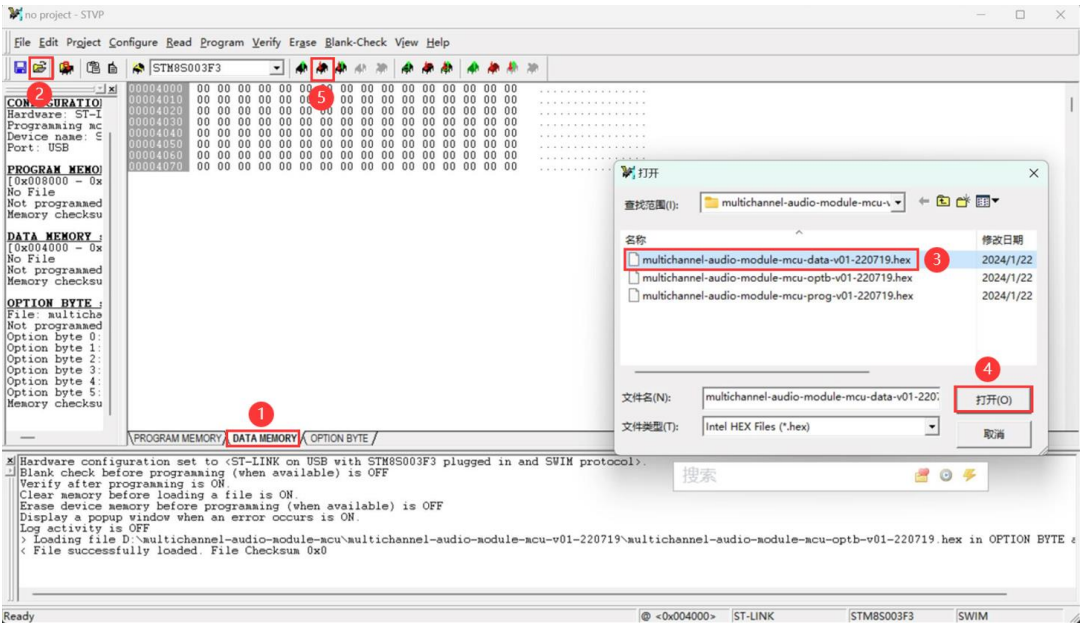
- 1) prog file: which was just compiled:
multichannel-audio-module-mcu-prog-v01-220719.hex
- 2) The data and optb files are in this folder:
multichannel-audio-module-mcu-v01-220719.
- 3) After upgrading, the Multichannel Audio Module MCU will be restored to the default settings.
- 4) MCU upgrade sequence: upgrade the optb file first to remove the read protection, and then upgrade the data and prog files.

7. Upgrade procedure

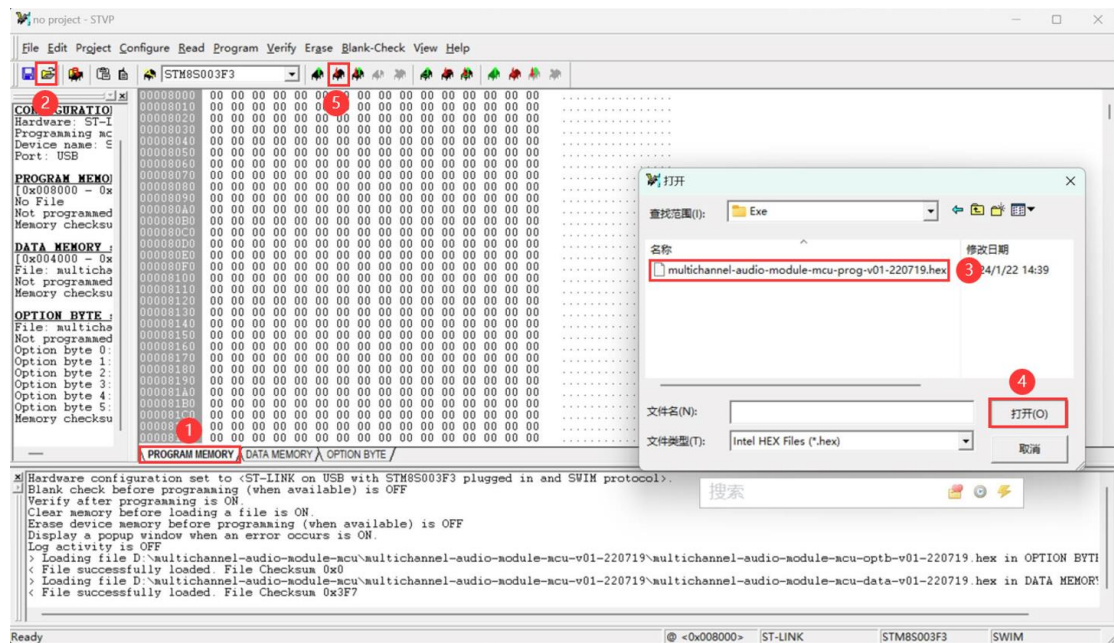
optb file



data file



prog file



After the MCU has been fully upgraded, remove the ST-Link device and power cycle the Multichannel Audio Module to initialize the new code.