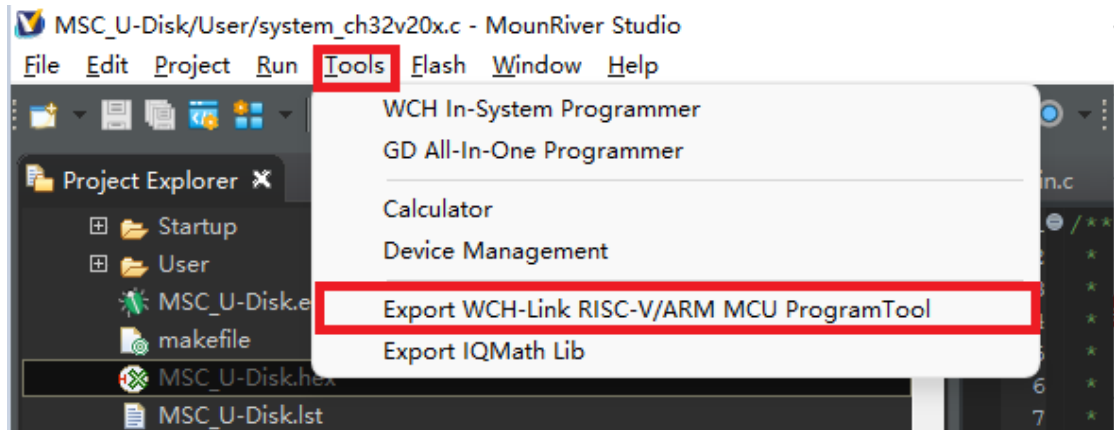


需要使用 WCH-LinkE，在 SWD 接线基础上，将 LinkE 的 RST 引脚与板子的 NRST 引脚相连

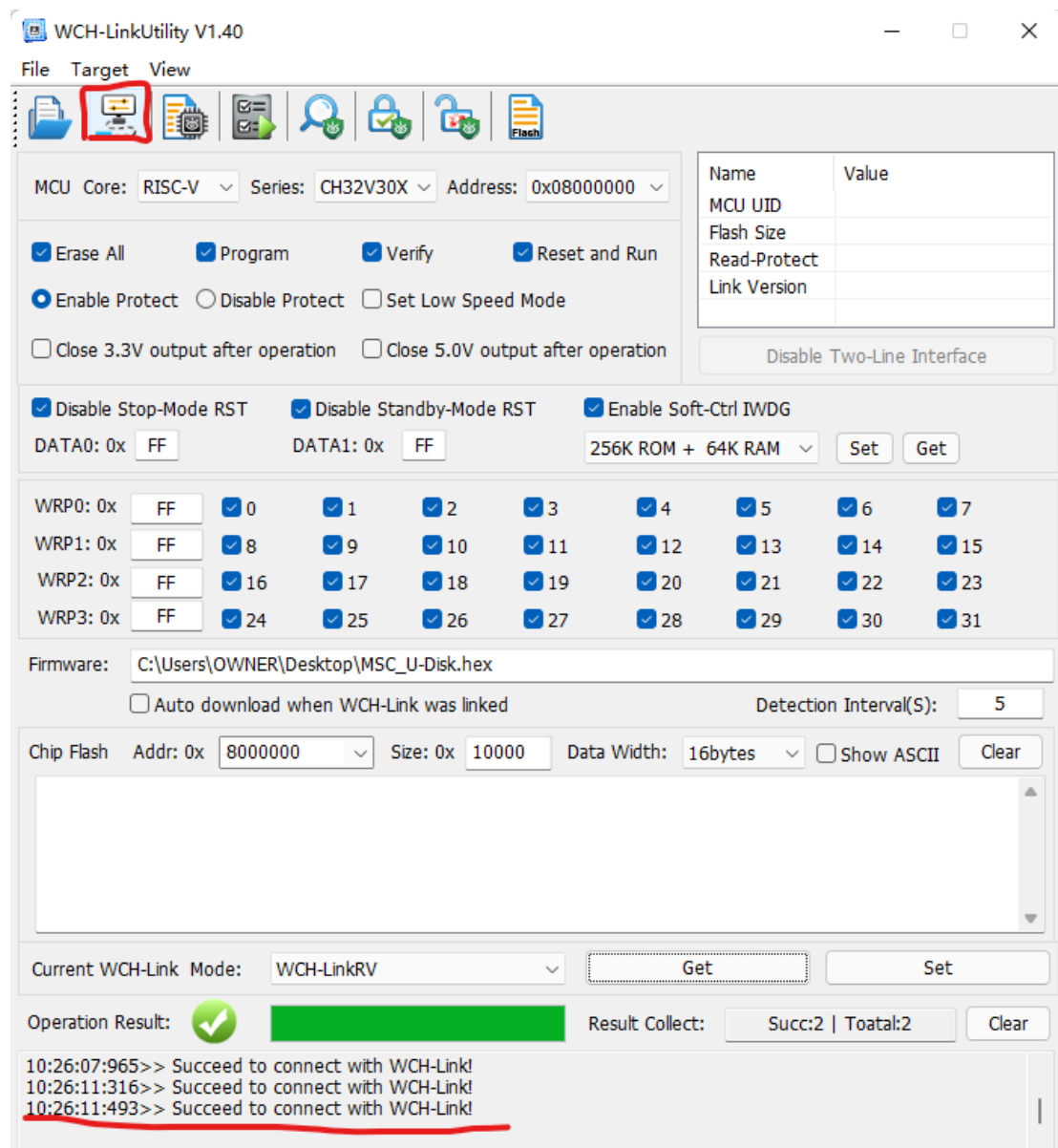
在 MRS 中导出 WCH_MCU_ProgramTool



解压后，打开 WCH-LinkUtility

Drv_Link	2022/9/28 16:34	文件夹	
Firmware_Link	2022/9/28 16:34	文件夹	
libusb-1.0.dll	2022/9/19 16:20	应用程序扩展	233 KB
LinkUtilityUI.ini	2022/10/19 10:11	配置设置	1 KB
McuCompilerDll.dll	2022/9/21 11:13	应用程序扩展	1,600 KB
version.txt	2022/9/28 16:35	文本文档	1 KB
WCH-LinkUtility.exe	2022/9/29 13:36	应用程序	1,906 KB

1. 点击 connect wch-link, 显示成功连接



2. 配置 LinkE 为 RSIC-V 模式

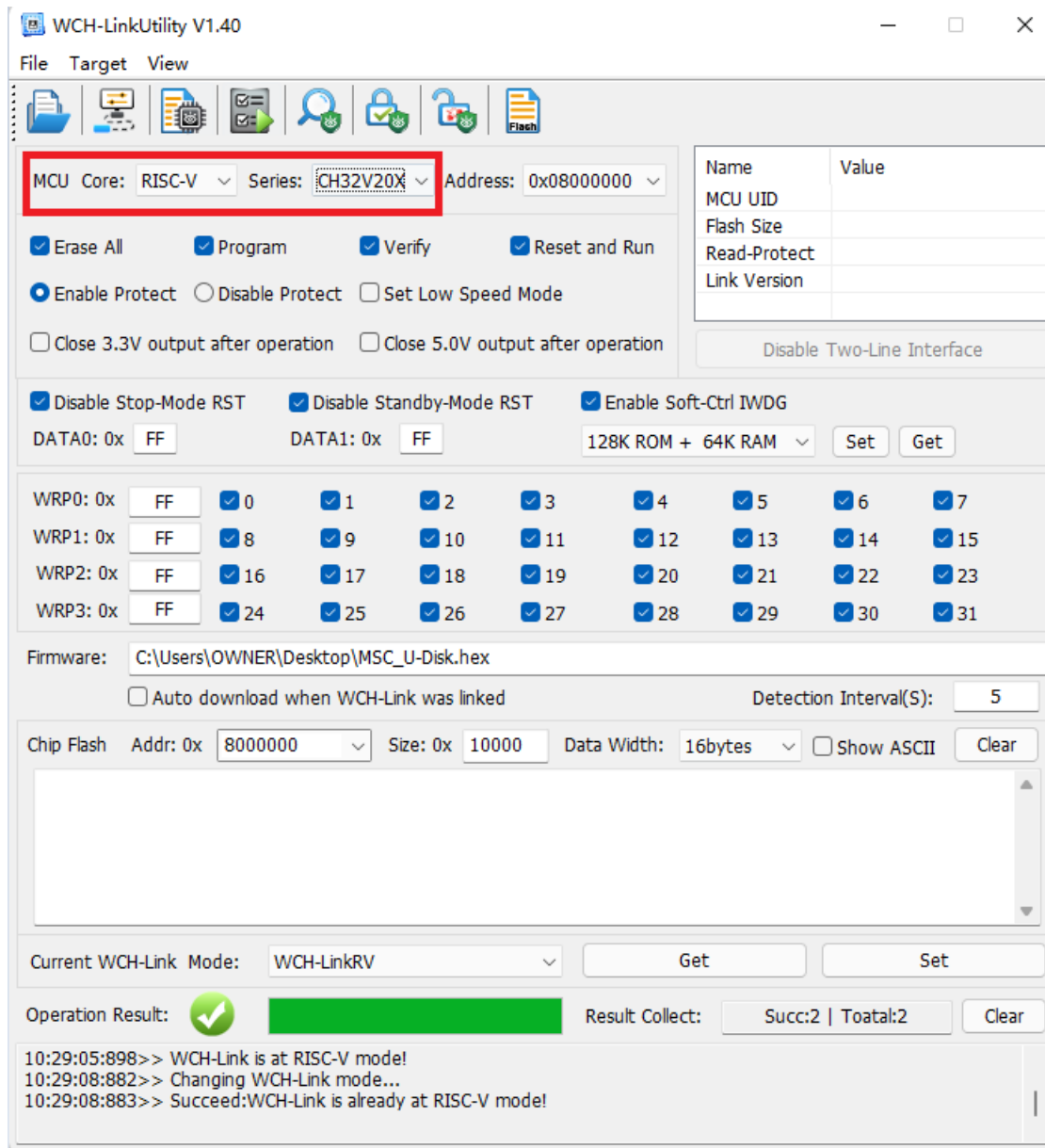
The screenshot shows the WCH-LinkUtility V1.40 interface. The 'Current WCH-Link Mode' is set to 'WCH-LinkRV', which is highlighted with a red box. Below this, the 'Operation Result' shows a green checkmark and a green bar, indicating success. The log at the bottom shows the following commands and responses:

```
10:29:05:898>> WCH-Link is at RISC-V mode!  
10:29:08:882>> Changing WCH-Link mode...  
10:29:08:883>> Succeed:WCH-Link is already at RISC-V mode!
```

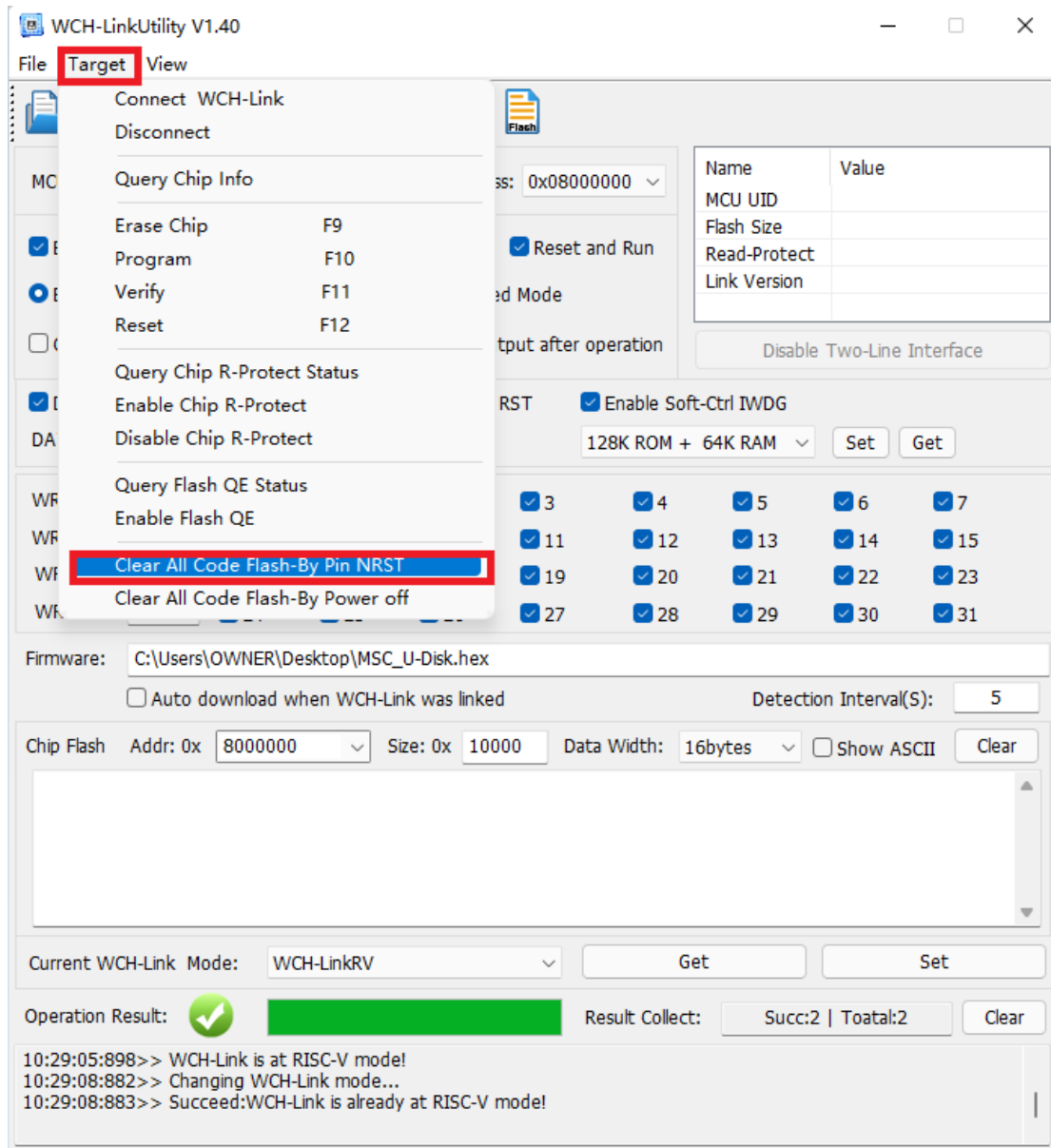
The interface also displays various configuration options for the MCU Core (RISC-V), Series (CH32V30X), and Address (0x08000000). It includes checkboxes for 'Erase All', 'Program', 'Verify', and 'Reset and Run'. A table on the right shows the Name and Value for MCU UID, Flash Size, Read-Protect, and Link Version. The 'Disable Two-Line Interface' button is also visible.

Name	Value
MCU UID	
Flash Size	
Read-Protect	
Link Version	

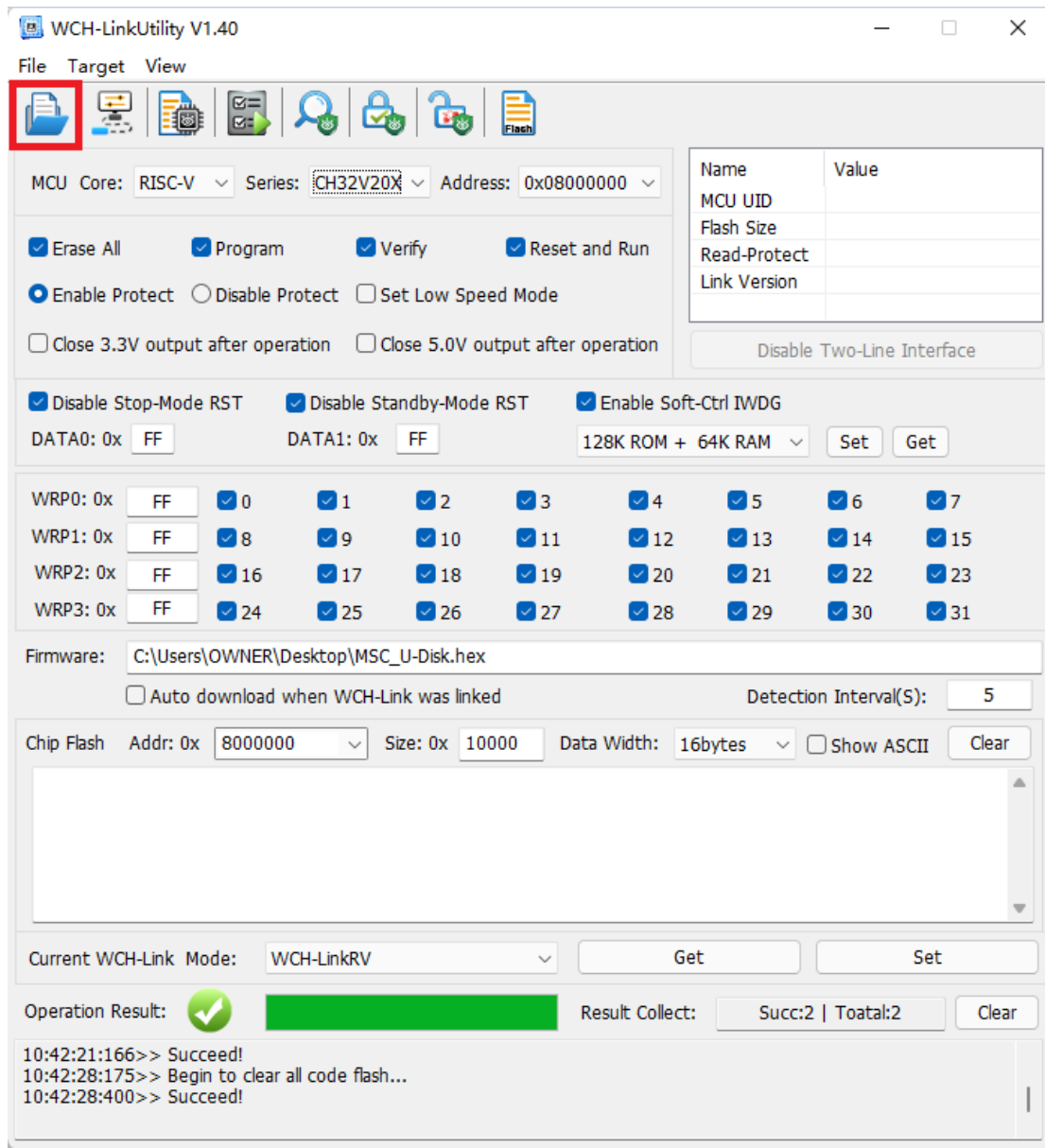
3.选择芯片型号



4. 当 SWD 功能被占用时，使用 LinkE 擦除 flash



5. 选择 Hex 或 Bin 文件



6. 解除读保护

WCH-LinkUtility V1.40

File Target View

MCU Core: RISC-V Series: CH32V20X Address: 0x08000000

Erase All Program Verify Reset and Run

Enable Protect Disable Protect Set Low Speed Mode

Close 3.3V output after operation Close 5.0V output after operation

Name	Value
MCU UID	
Flash Size	
Read-Protect	
Link Version	

Disable Two-Line Interface

Disable Stop-Mode RST Disable Standby-Mode RST Enable Soft-Ctrl IWDG

DATA0: 0x FF DATA1: 0x FF 128K ROM + 64K RAM Set Get

WRP0: 0x FF	<input checked="" type="checkbox"/> 0	<input checked="" type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/> 5	<input checked="" type="checkbox"/> 6	<input checked="" type="checkbox"/> 7
WRP1: 0x FF	<input checked="" type="checkbox"/> 8	<input checked="" type="checkbox"/> 9	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 11	<input checked="" type="checkbox"/> 12	<input checked="" type="checkbox"/> 13	<input checked="" type="checkbox"/> 14	<input checked="" type="checkbox"/> 15
WRP2: 0x FF	<input checked="" type="checkbox"/> 16	<input checked="" type="checkbox"/> 17	<input checked="" type="checkbox"/> 18	<input checked="" type="checkbox"/> 19	<input checked="" type="checkbox"/> 20	<input checked="" type="checkbox"/> 21	<input checked="" type="checkbox"/> 22	<input checked="" type="checkbox"/> 23
WRP3: 0x FF	<input checked="" type="checkbox"/> 24	<input checked="" type="checkbox"/> 25	<input checked="" type="checkbox"/> 26	<input checked="" type="checkbox"/> 27	<input checked="" type="checkbox"/> 28	<input checked="" type="checkbox"/> 29	<input checked="" type="checkbox"/> 30	<input checked="" type="checkbox"/> 31

Firmware: C:\Users\OWNER\Desktop\MSC_U-Disk.hex

Auto download when WCH-Link was linked Detection Interval(S): 5

Chip Flash Addr: 0x 8000000 Size: 0x 10000 Data Width: 16bytes Show ASCII Clear

Current WCH-Link Mode: WCH-LinkRV Get Set

Operation Result: Result Collect: Succ:2 | Total:2 Clear

```
10:43:40:141>> Begin to set chip type...
10:43:40:203>> Succeed
10:43:40:207>> Please disable read-protect before program or verify!
```

7. 下载程序

