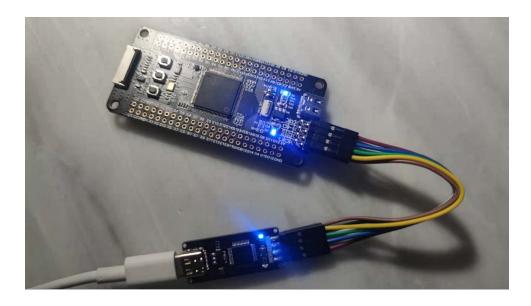
STM32 程序烧写教程

方法 1: MDK 中下载

使用 ST-Link 连接到核心板,即 SWDIO、SWCLK、GND、VCC



打开 MDK 工程文件,并点击魔术棒

```
E:\STM32H730VBT6\RGB LED\MDK-ARM\STM32H730VBT6.uvoroix - uVision
BE EAST MASCHT/SOVB10KUSE_LEUPRUK-NANN(S) MASCHT/SOVB10KUS-PLOSP, PERIABNI-BLEE
BIE Edit View Project Flags bebug Peripherals Tools SVCS Window Help

STATES AND STAT
                                                                                                                                                                                                                                                                                                      OSPLRegularCmdTypeDe 🔊 🥬 🝭 • 🔸 🔘 • 🐧 🗳
                                                                                                                                                                                           /* USER CODE BEGIN Header
             STM32H730VBT6

Application/MDK-ARM

Application/MDK-ARM

Application/Uber/Core

main.

Bigio.c

Stm32h7xx_it.c

Stm32h7xx_it.c

Drivers/STM32H7xx_HAL
                                                                                                                                                                                                    * @file
* @brief
*********
* @attention
                                                                                                                                                                                                                                                                                                                           main.c
Main program body
                                                                                                                                                               * 

* <h2><center>&copy; Copyright (c) 2021 STMicroelectronics.
* All rights reserved.</center></h2>
                              Drivers/STM32H7xx,HAL

STM32H7xx,hal rcc.es

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stm32h7xx,hal fisch

stm32h7xx,hal fisch

stm32h7xx,hal mac

stm32h7xx,hal mac

stm32h7xx,hal mac

stm32h7xx,hal pwr.e

stm32h7xx,hal pwr.e
                                                                                                                                                                                                    * This software component is licensed by ST under BSD 3-Clause license,

* the "License"; You may not use this file except in compliance with the

* ticense. You may obtain a copy of the License at:

* opensource.org/licenses/BSD-3-Clause
                                                                                                                                                                                                    stm32h7xx_hal_exti.c
                          stm32h7xx_hal_tim.c

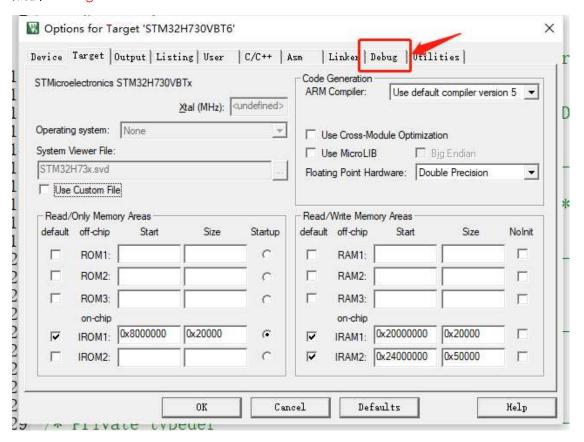
stm32h7xx_hal_tim.e

stm32h7xx_hal_tim_e

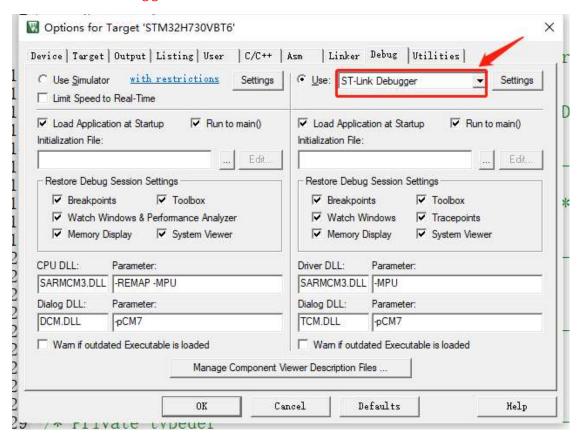
privers/CMSIS

system_stm32h7xx.c
Project Books {} Func... 0, Temp...
                                                                                                                                                                                                                                                                                                                                                                                                                          ST-Link Debugger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L:21 C:18
```

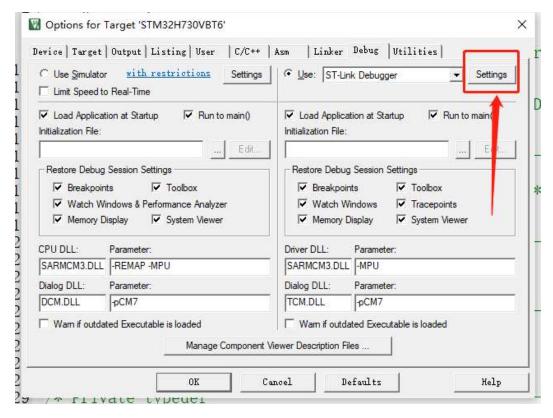
点击 Debug



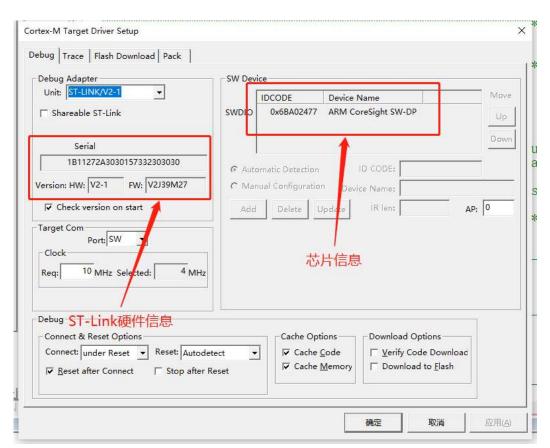
选择 ST-Link Debugger



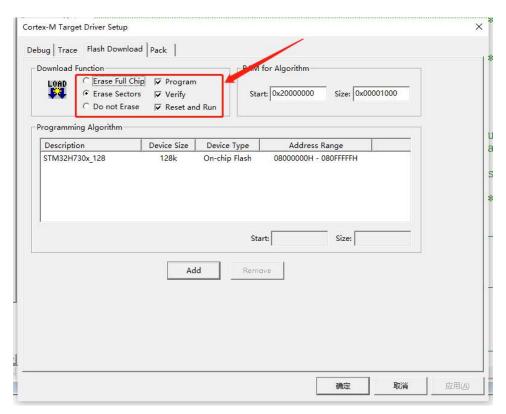
点击 Settings



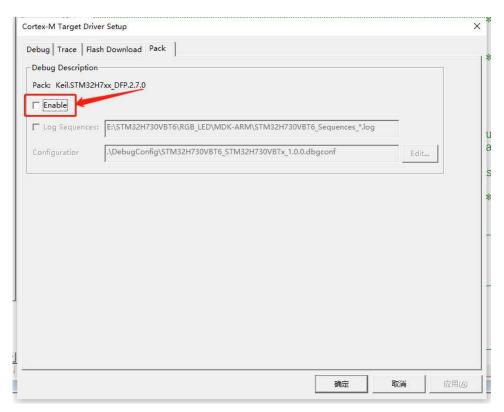
可以看到相应的信息,选择 SW 模式



点击 Flash Download, 设置如图一致



点击 Pack, 取消 Enable (否则下载后不能软件复位)



退出, 回到主页面

点击下载即可

```
E:\STM32H730VBT6\RGB_LED\MDK-ARM\STM32H730VBT6.uvprojx - µVision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           置きに対象を対象では「Verw Broject Flash Debug Perjohensis Iools SVCS Window Help

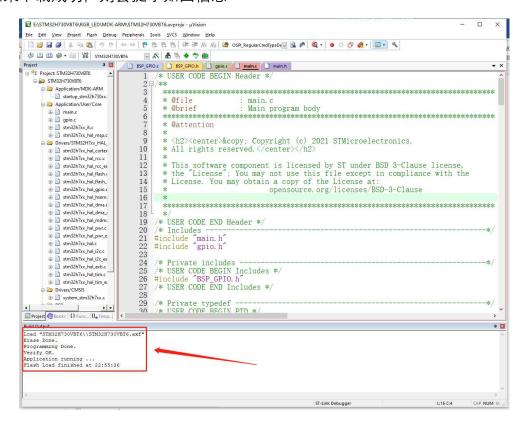
| Die Edit View Broject Flash Debug Perjohensis Iools SVCS Window Help

| ロップ | ロッ
                                                                                       BSP_GPIO.c BSP_GPIO.h gpio.c main.c main.h
         Project: STM32H730VBT6
                                                                                                                                                               * USER CODE BEGIN Header
                     Application/MDK-ARM
startup_stm32h730xx.
                                                                                                                                                                  * @file : main.c
* @brief : Main program body
                                                                                                                                                                 * @file
                         main.c
gpio.c
stm32h7xx_it.c
stm32h7xx_hal_msp.c
Drivers/STM32H7xx_HAL_
                                                                                                                                                                    * @attention
                                                                                                                                                                  * <h2><center>&copy; Copyright (c) 2021 STMicroelectronics.
* All rights reserved.</center></h2>
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    → Drivers/STM32H7xx, Hal, corte
    → stm32h7xx, hal, rcc, e
    → stm32h7xx, hal, rcc, e
    → stm32h7xx, hal, flashx
    → stm32h7xx, hal, dmax
    → stm32h7xx, hal, dmax
    → stm32h7xx, hal, dmax
    → stm32h7xx, hal, dmax
    → stm32h7xx, hal, dmax

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                                                                                                                                                                  * This software component is licensed by ST under BSD 3-Clause license, 
* the "License"; You may not use this file except in compliance with the 
* License. You may obtain a copy of the License at: 
* opensource.org/licenses/BSD-3-Clause
                                                                                                                                                                   ************
                                                                                                                                                       stm32h7xx_hal_mdm:
stm32h7xx_hal_pwr.c
stm32h7xx_hal_pwr_e
                                 stm32h7xx hal.c
                                                                                                                                        22
23
                                 stm32h7xx_hal_i2c.c
                            stm32h7xx, hal_i2c.e
stm32h7xx, hal_i2c.ex
stm32h7xx, hal_izc.ex
stm32h7xx, hal_tim.e
stm32h7xx, hal_tim.e
privers/CMSIS
system_stm32h7xx.c
                                                                                                                                        24
25
26
                                                                                                                                                       /* Private includes -----/* USER CODE BEGIN Includes */
#include "BSP_GPIO.h"
/* USER CODE END Includes */
                                                                                                                                                        /* Private typedef -----
             Project Books | () Func... | () Ter
    Build Output
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              t 🗷
```

如果下载成功,则会提示如图信息

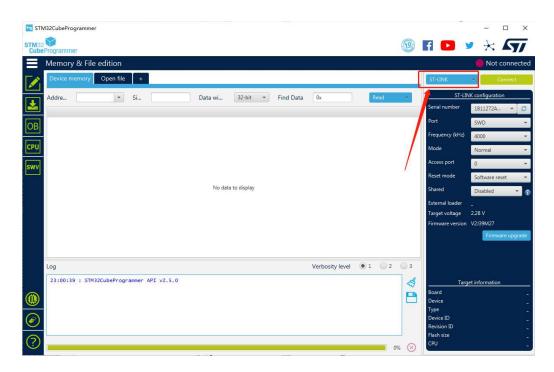


方法 2: 使用 STM32CubeProgrammer 下载

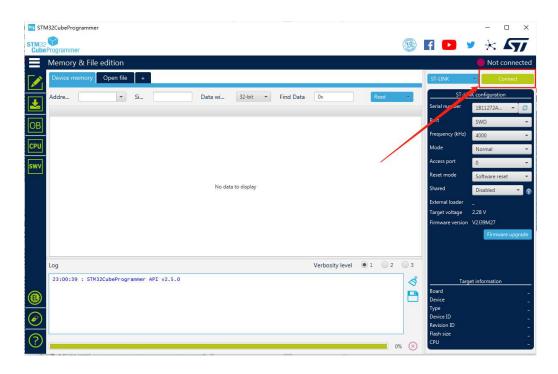
● ST-Link 模式

使用 ST-Link 连接到核心板,即 SWDIO、SWCLK、GND、VCC

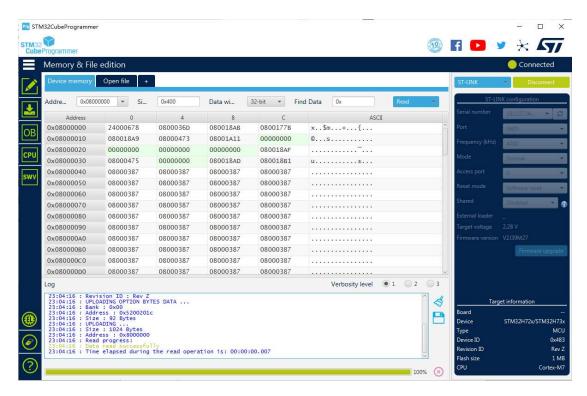
选择 ST-Link (如果已经连接到电脑,则会显示相应信息)



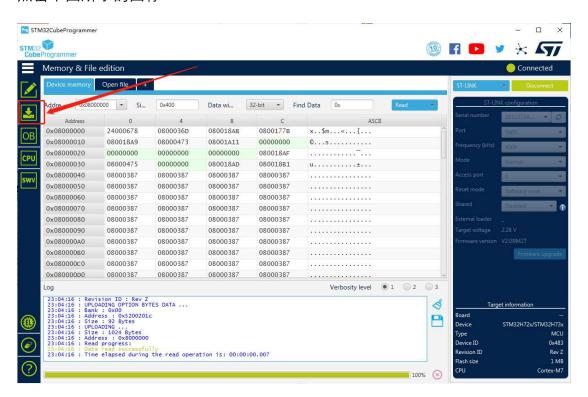
点击 Connect



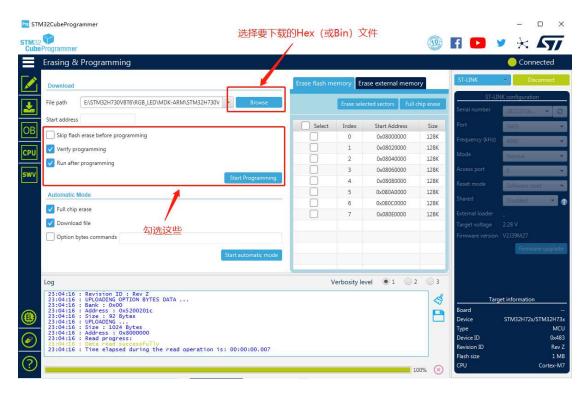
如果连接成功,则会显示如图



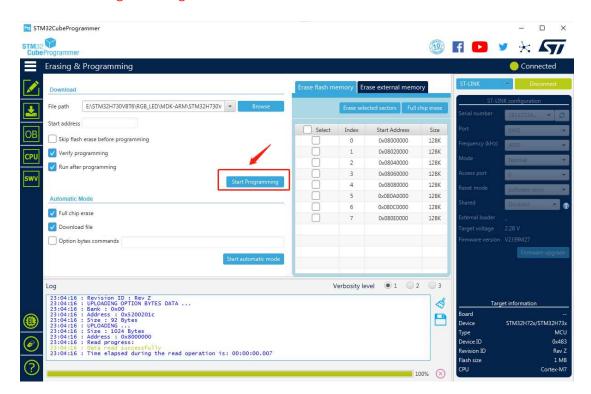
点击下图所示的图标



选择 Hex 或 Bin 文件

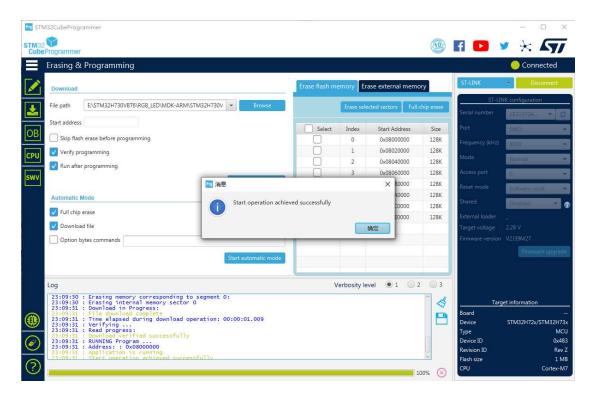


点击 Start Programming, 进行下载



如果下载成功,则会提示相应信息

并且, 芯片会复位, 执行程序

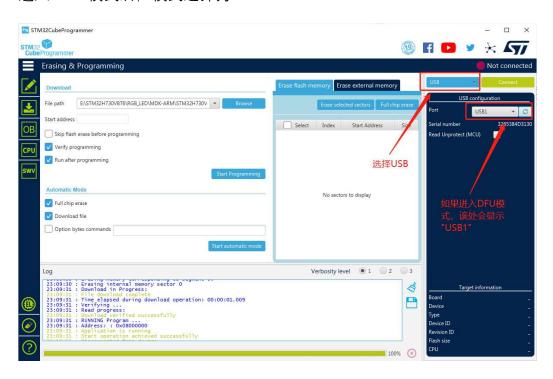


● USB DFU 模式

该方式需要芯片进入 USB DFU 模式。若是本店的开发板,请按住 BOOT 按键,然后插上 USB。(或者先连接 USB,然后一起按下 BOOT、RST 按键,再依次 松开 RST、BOOT 按键)。

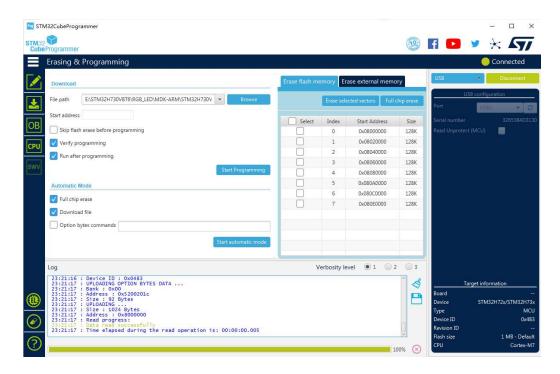
请注意: DFU 模式下, 芯片将不执行片内代码 (BOOT 方式已改变)。

进入 DFU 模式后,模式选择为: USB

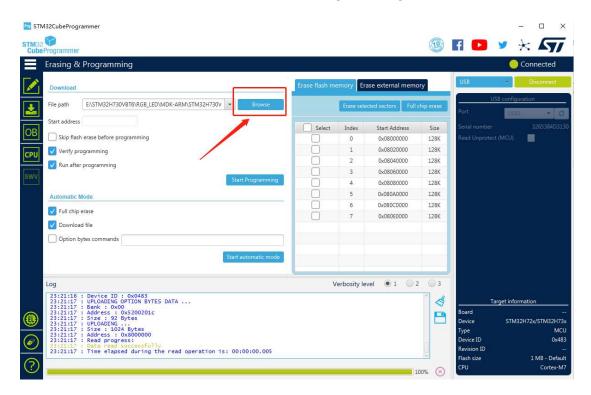


点击 Connect, 连接到芯片

如成功,则会显示如下信息



选择 Hex 文件 (或其他),然后点击 Start Programming,进行下载



如果下载成功,会自动断开连接。芯片会执行刚刚下载的程序 (因为下载成功后,芯片会复位,此时 BOOT 方式发送了改变)

