

# How to flash firmware?

## 1. File introduction

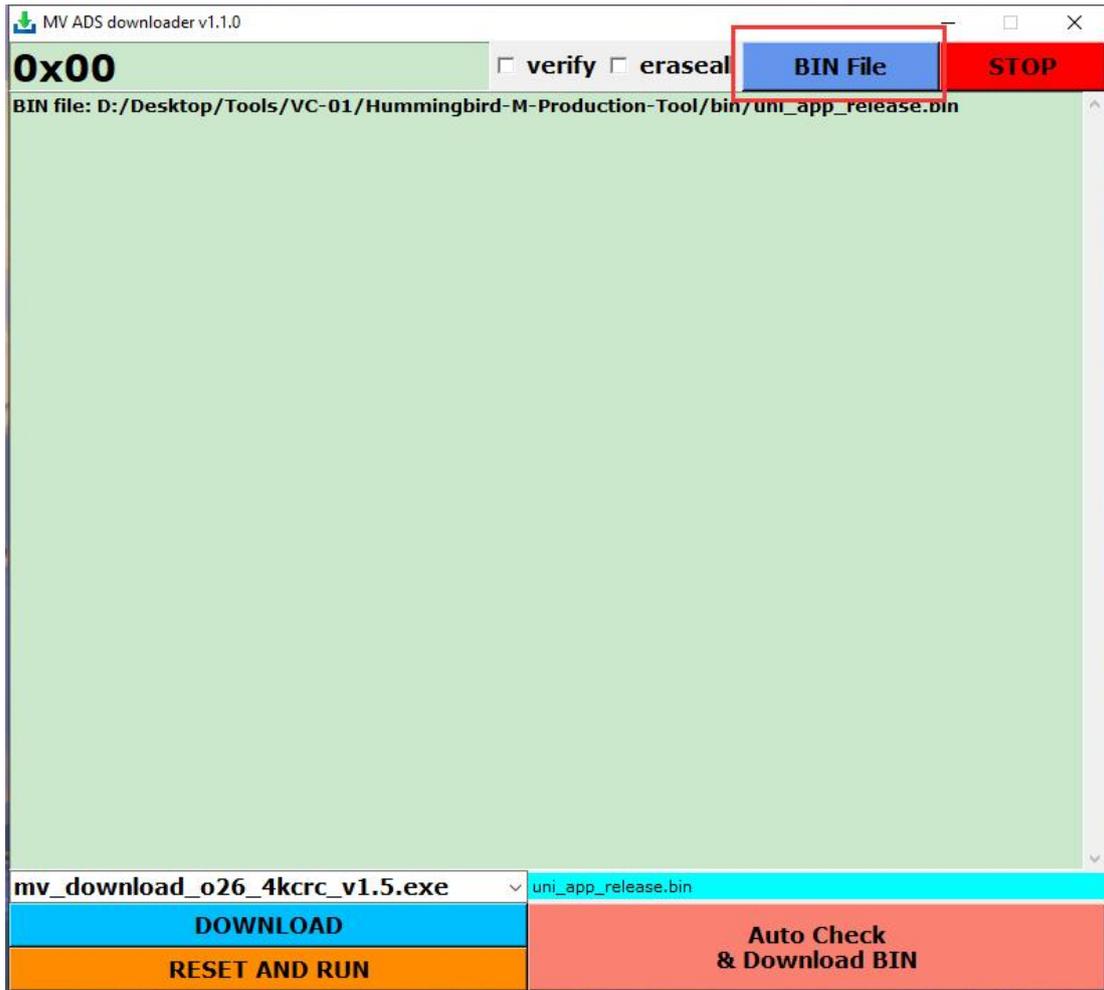
After the product's sdk is downloaded successfully, unzip the file, you can see the following file directory

Name	Date modified	Type	Size
image_demo	7/11/2022 11:04 AM	File folder	
unione_lite_app_hb_m	7/27/2022 9:23 AM	File folder	
build.properties	7/11/2022 11:04 AM	Properties 源文件	68 KB

If you want to use it directly and experience the voice function, please open “image\_demo/Hummingbird-M-Production-Tool” folder, double click “UniOneDownloadTool”, Run the burning tool

Name	Date modified	Type	Size
bin	7/11/2022 11:04 AM	File folder	
dbg	7/11/2022 10:50 AM	File folder	
dll	7/11/2022 10:50 AM	File folder	
flash_downloader	7/11/2022 10:50 AM	File folder	
ice	7/11/2022 10:50 AM	File folder	
py	7/11/2022 10:50 AM	File folder	
downloader.ico	7/11/2022 10:50 AM	ICO 图片文件	1,057 KB
M_Download_Tool_User_Guide.pdf	7/11/2022 10:50 AM	WPS PDF 文档	872 KB
openocd.cfg	7/11/2022 10:50 AM	Configuration 源...	0 KB
reset_and_run.bat	7/11/2022 10:50 AM	Windows Batch File	1 KB
run_download.bat	7/11/2022 10:50 AM	Windows Batch File	2 KB
run_download_data.bat	7/11/2022 10:50 AM	Windows Batch File	2 KB
UniOneDownloadTool.exe	7/11/2022 10:50 AM	Application	9,357 KB

The configuration interface of the burning tool is shown in the following figure:



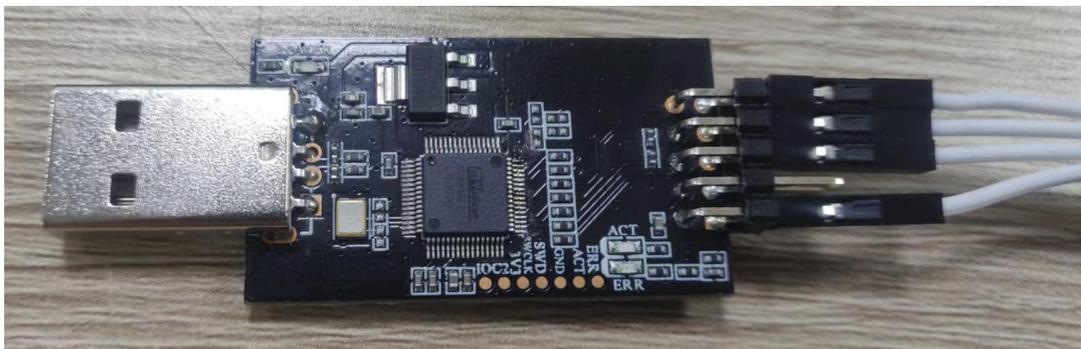
## 2. Burning Guide

### 2.1 Introduction before burning

Before starting to burn, you need to prepare:

- Micro USB cable for power supply
- burner, used for burning
- development board
- firmware package

Burner

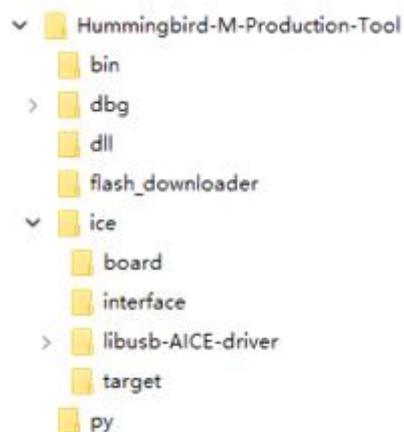


Development board example diagram



Before starting to burn, you need to prepare:

Open the burning package, Hummingbird-M-Production-Tool, you can see the following directory structure:



User-related directories are as follows:

- \bin : The directory where users store bin/mva files
- \flash\_downloader : flash downloader Storage directory, you need to extract the

downloader.exe provided in the corresponding chip SDK

- \ice\libusb-AICE-driver : Emulator driver

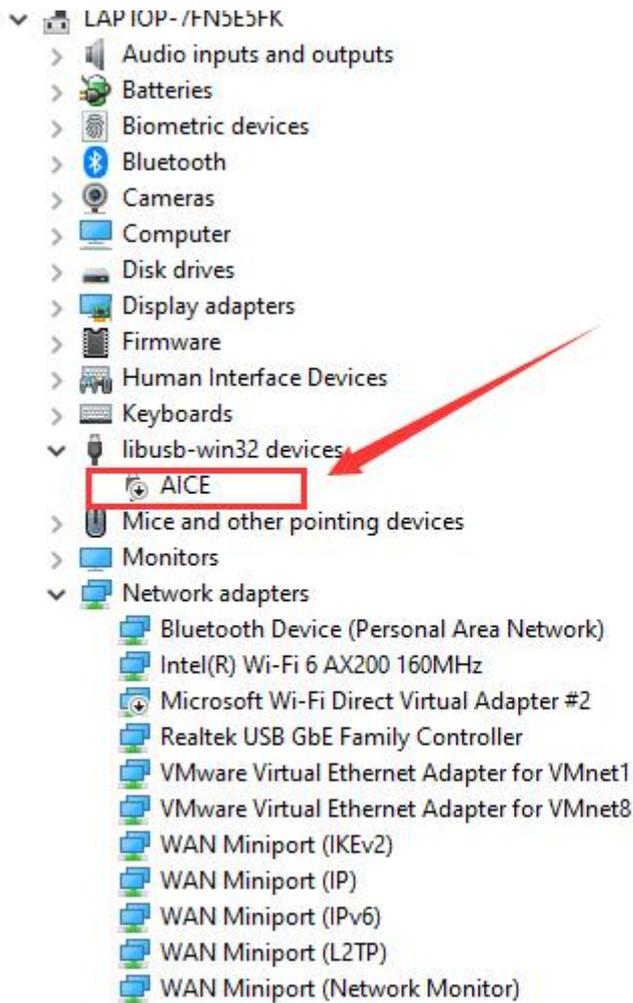
bin	10/9/2022 9:28 AM	File folder	
dbg	12/21/2021 6:01 PM	File folder	
dll	12/21/2021 6:01 PM	File folder	
flash_downloader	12/21/2021 6:01 PM	File folder	
ice	1/12/2022 3:07 PM	File folder	
py	12/21/2021 6:01 PM	File folder	
downloader.ico	12/6/2021 11:33 AM	ICO 图片文件	1,057 KB
M_Download_Tool_User_Guide.pdf	12/6/2021 11:33 AM	WPS PDF 文档	872 KB
openocd.cfg	12/6/2021 11:33 AM	Configuration 源...	0 KB
reset_and_run.bat	12/6/2021 11:33 AM	Windows Batch File	1 KB
run_download.bat	12/6/2021 11:33 AM	Windows Batch File	2 KB
run_download_data.bat	12/6/2021 11:33 AM	Windows Batch File	2 KB
UniOneDownloadTool.exe	12/6/2021 11:33 AM	Application	9,357 KB

The root directory has the following user-related files:

- UniOneDownloadTool\_x64.exe : Burning tool starts exe
- run\_download.bat : Execute script routines in batches

## 2.2 Install the driver (if already installed, skip it)

Insert the burner, if you see an unknown device in the device manager, you need to install the driver.



- Prepare firmware: Released firmware packages, such as Hummingbird-M-Production-Tool
- Open Hummingbird-M-Production-Tool\ice\libusb-AICE-driver, double-click Install\_driver.exe, and click Agree to install

Name	Date modified	Type	Size
amd64	12/21/2021 6:01 PM	File folder	
license	12/21/2021 6:01 PM	File folder	
x86	12/21/2021 6:01 PM	File folder	
AICE.cat	12/6/2021 11:33 AM	Security Catalog	6 KB
AICE.cer	12/6/2021 11:33 AM	Security Certificate	1 KB
AICE.inf	12/6/2021 11:33 AM	Setup Information	8 KB
dpinst_amd64.exe	12/6/2021 11:33 AM	Application	1,026 KB
dpinst_x86.exe	12/6/2021 11:33 AM	Application	901 KB
FTDI_USB_device.cat	12/6/2021 11:33 AM	Security Catalog	8 KB
FTDI_USB_device.cer	12/6/2021 11:33 AM	Security Certificate	1 KB
FTDI_USB_device.inf	12/6/2021 11:33 AM	Setup Information	9 KB
Install_driver.exe	12/6/2021 11:33 AM	Application	45 KB
installer_x64.exe	12/6/2021 11:33 AM	Application	129 KB
installer_x86.exe	12/6/2021 11:33 AM	Application	111 KB

- Select Browse my computer for drivers
- drive path: Hummingbird-M-Production-Tool\ice\libusb-AICE-driver



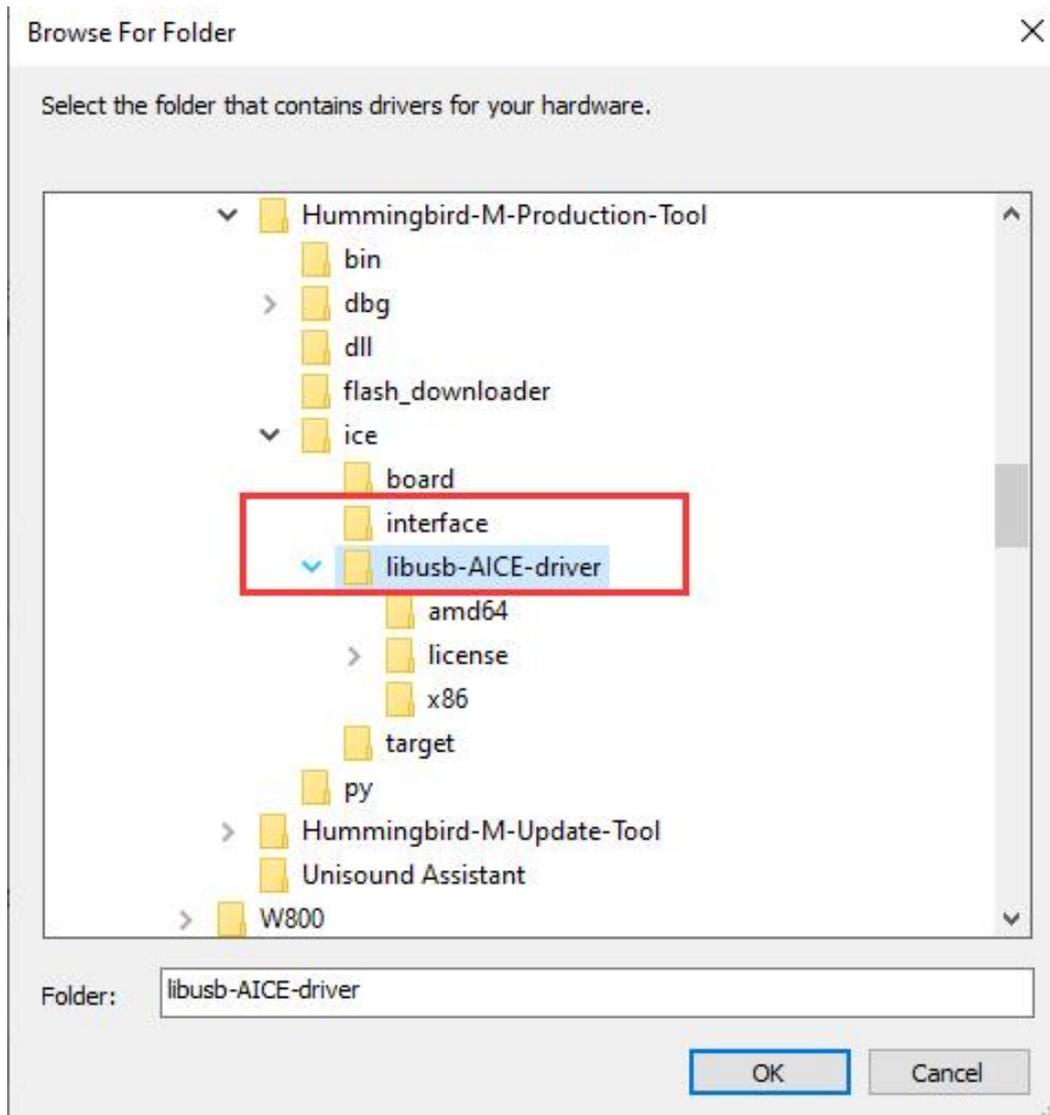
← Update Drivers - AICE

How do you want to search for drivers?

→ Search automatically for drivers  
Windows will search your computer for the best available driver and install it on your device.

→ Browse my computer for drivers  
Locate and install a driver manually.

Cancel



- e. After clicking OK, go back to the update driver page, click Next, and wait for the driver to be installed successfully.

← Update Drivers - AICE



### The best drivers for your device are already installed

Windows has determined that the best driver for this device is already installed. There may be better drivers on Windows Update or on the device manufacturer's website.

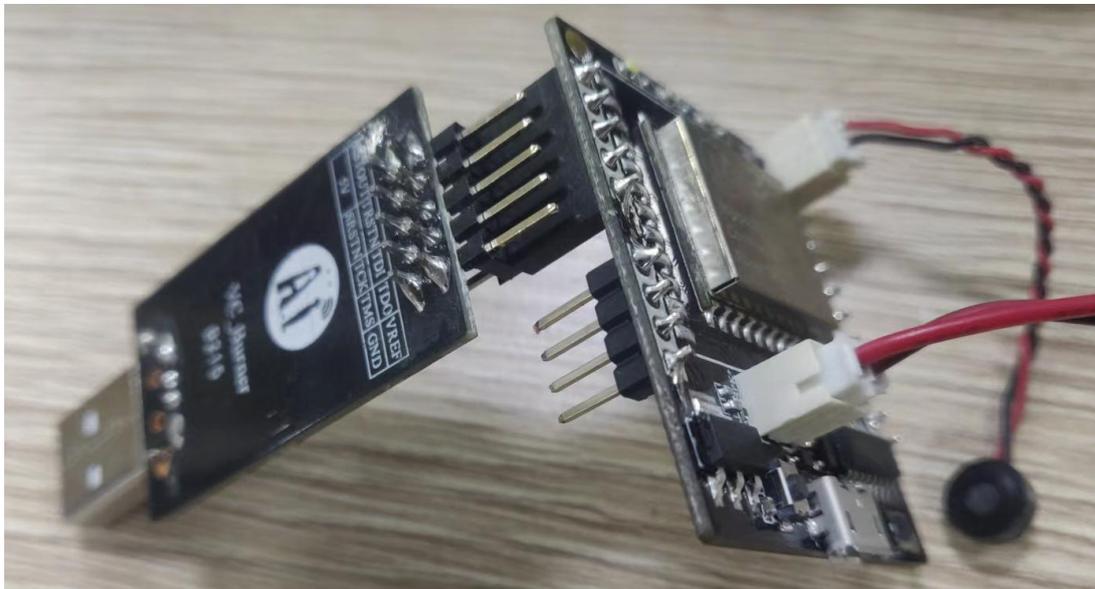


→ [Search for updated drivers on Windows Update](#)

Close

## 2.3 enter burning mode

### 2.3.1 Access the burner



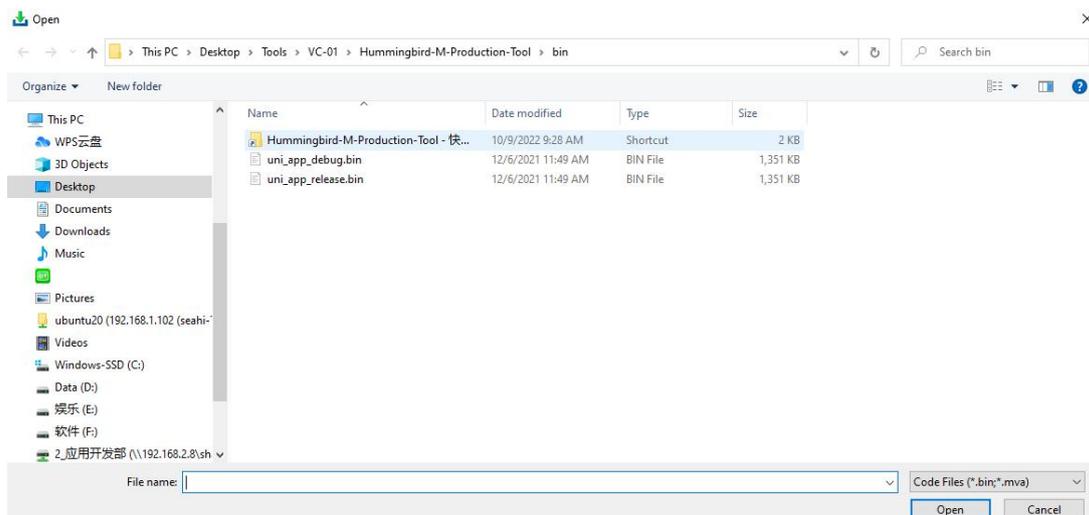
### 2.3.2 Power on the development board and start programming

Use the USB cable to power up the development board, that is, connect to the power supply. It can be directly connected to the computer, or any 5V power adapter (such as a mobile phone charger).

Click the "BIN File" button on the burning tool interface and select the bin file to be burned

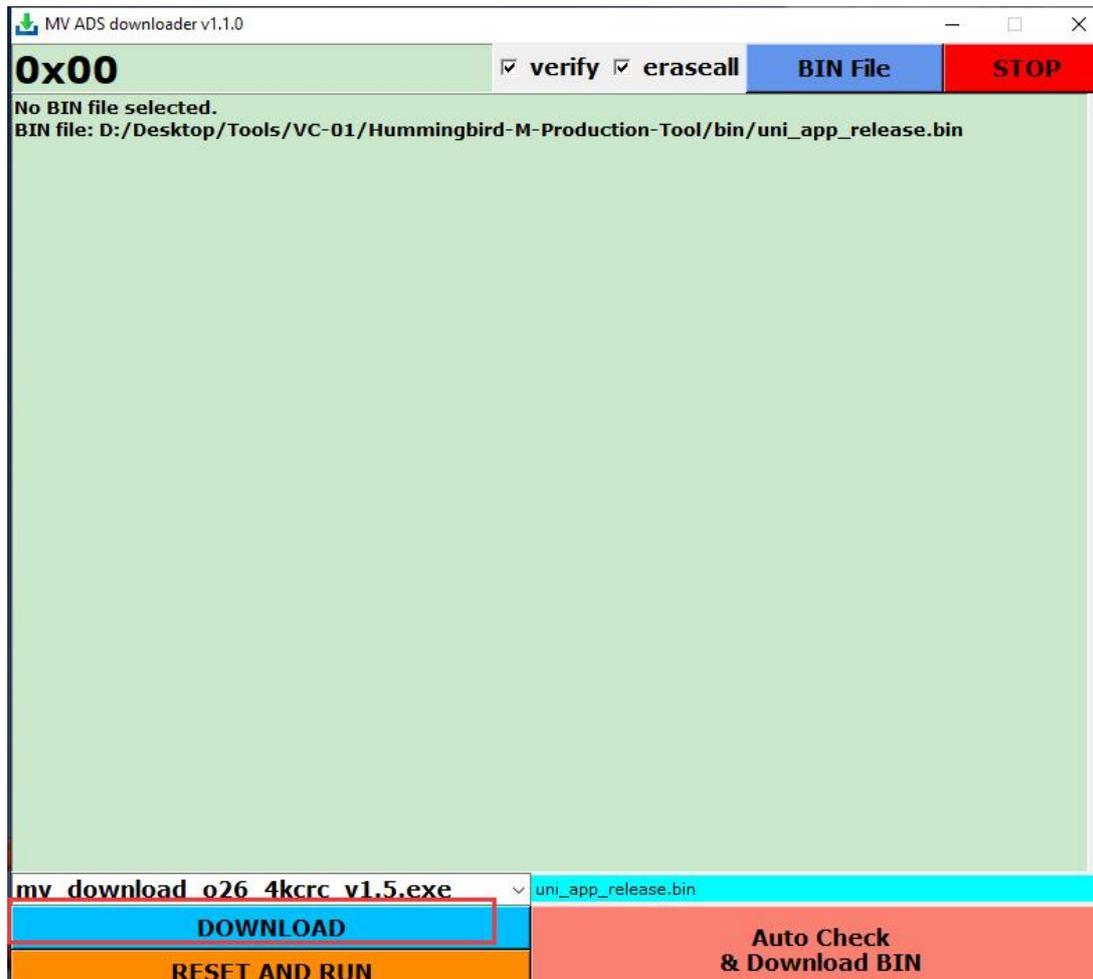


The default selection path is "image\_demo/ Hummingbird-M-Production-Tool /bin", and other paths can also be selected through the file browser:

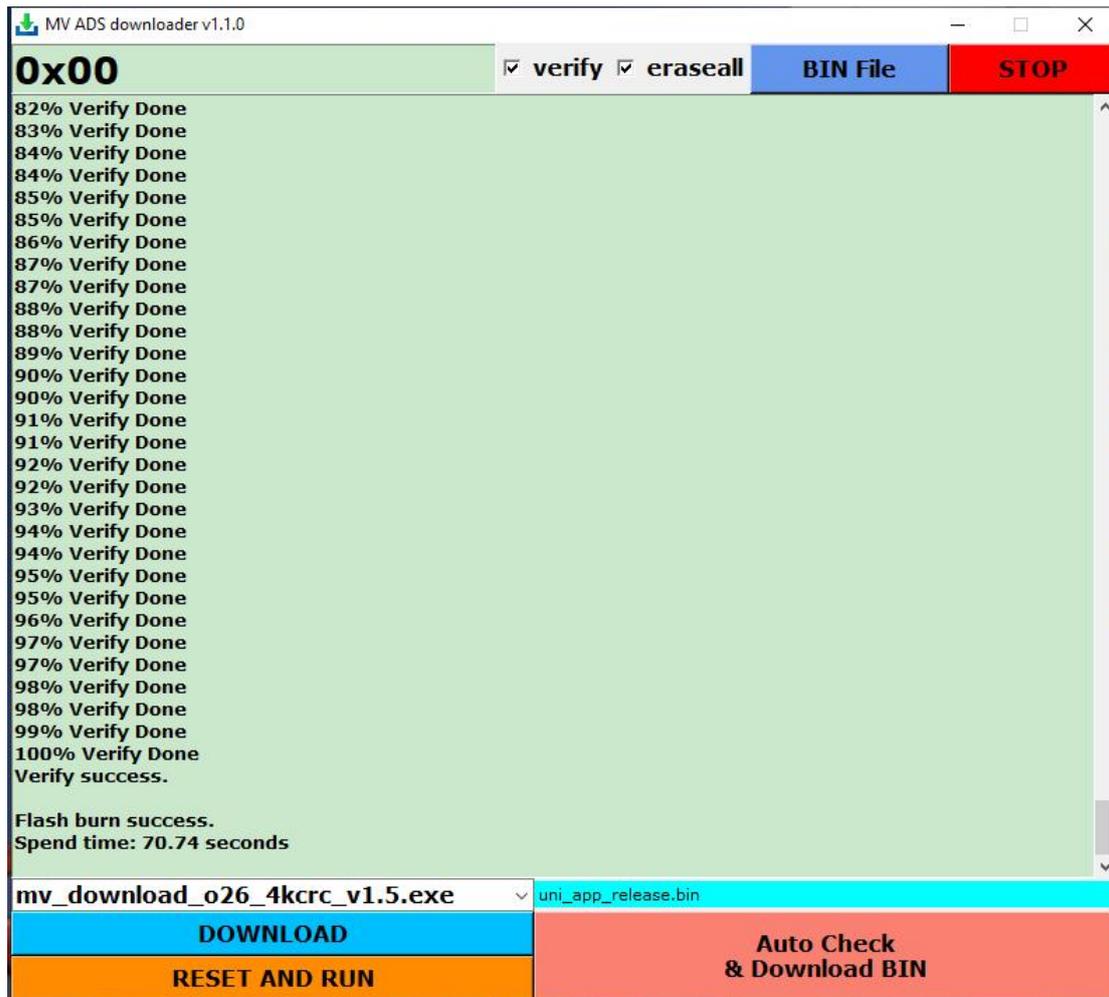


**Note:** The current release package contains two versions, uni\_app\_debug.bin and uni\_app\_release.bin, of which release is the official version, and debug is the debug version with log. Compared with the release version, the response speed is slower and it is only used for debugging.

After selecting the burning bin file, click the "DOWNLOAD" button on the burning tool interface to start burning:



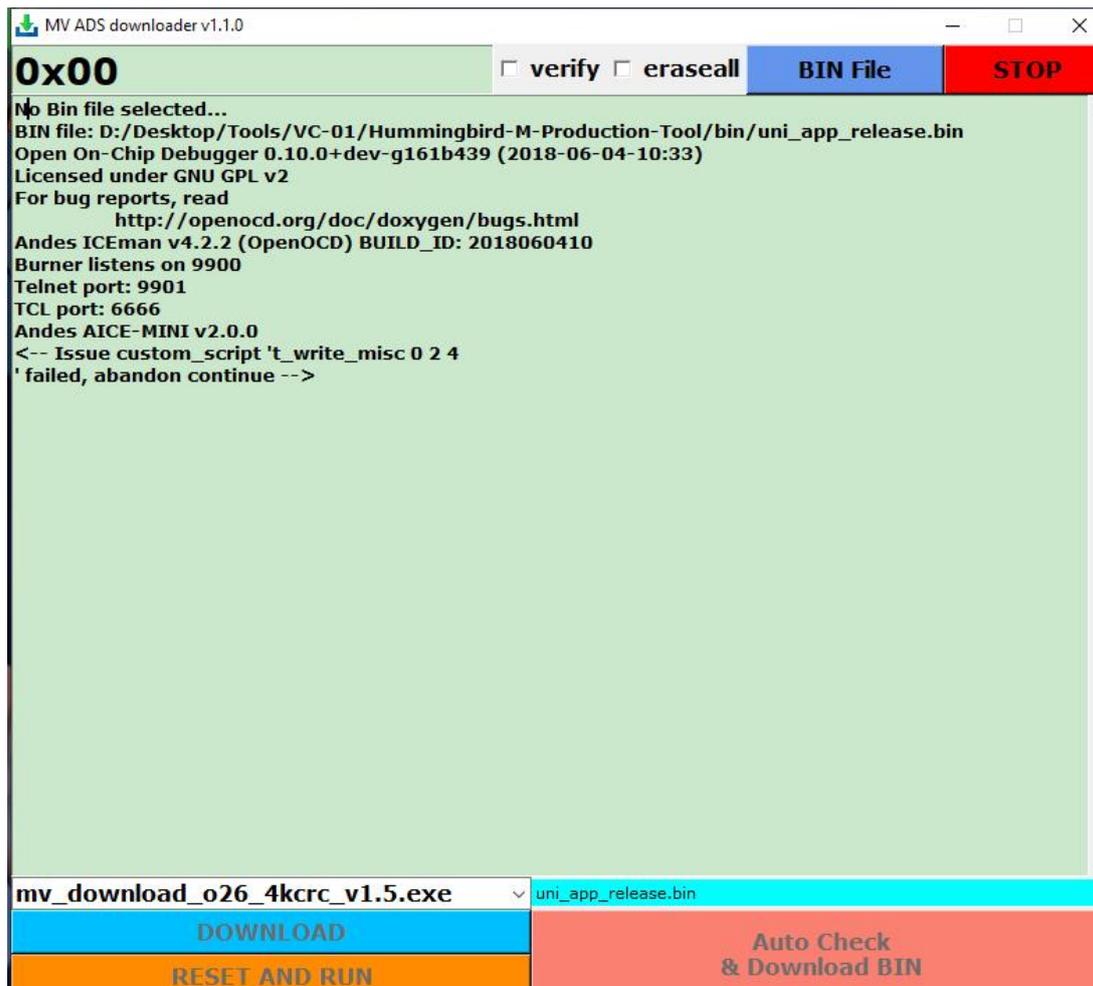
If the burning is successful, the burning tool interface will print the burning progress until the "Verify success" message is printed:



If it is not displayed, it means that the COM port is not recognized, please check:

- ① Is the serial line connected?
- ② Is the serial cable reversed?
- ③ Is the driver corresponding to UART installed?

The burn failure interface will output an error message, as shown below:



If the burning fails, please check:

- ① Is the development board powered?
- ② Is the SW Debug interface of the development board connected?
- ③ Is the SW line reversed as required? After confirmation, please go back to step 1 to short-circuit the power again, and re-enter the programming mode
- ④ For other errors, please follow the prompts on the burning interface to troubleshoot the problem