

Lesson 1 Image Classification

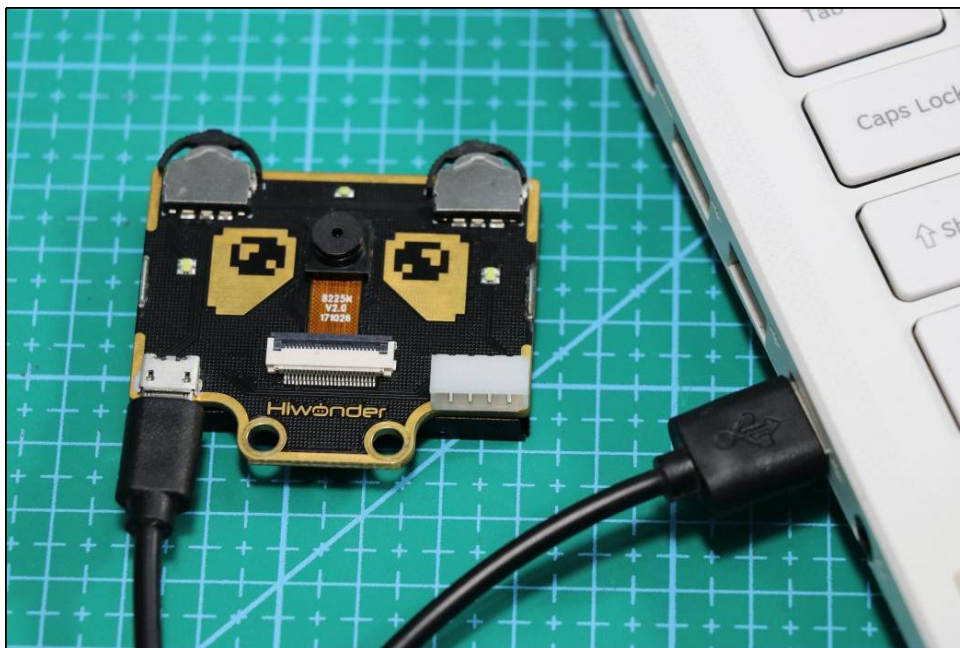
Note: The firmware for waste sorting has been burnt into WonderCam module. If you want to learn mask recognition, please refer to this lesson to download the firmware for make recognition.

1. Burn Classification Models

Firmware burning method is as follow:

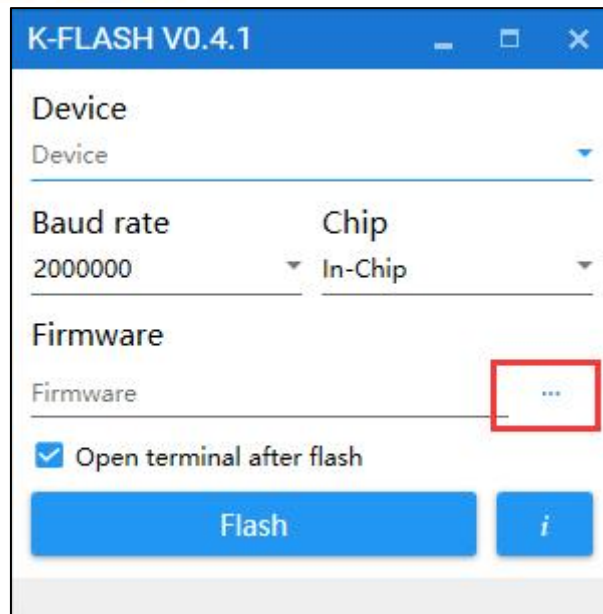
It is recommended to use Windows 10 to download model.

1) Connect WonderCam module to computer through USB cable.



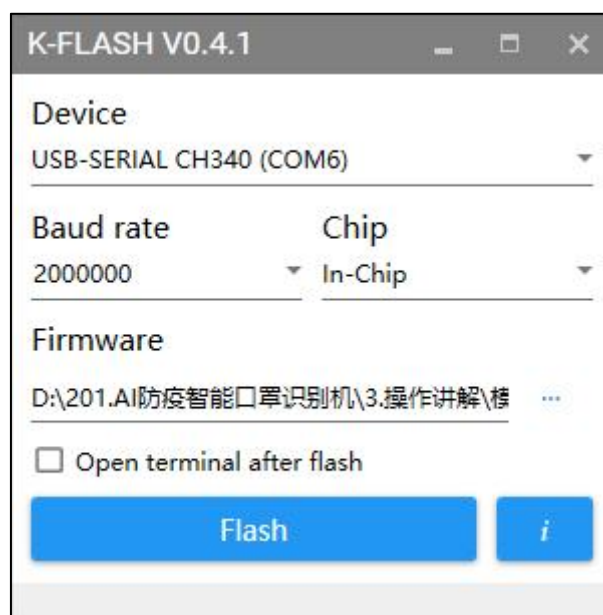
2) Open K-Flash software in the same directory. (If fail to open K-Flash, please install K-Flash first and then run it)

3) Run K-Flash software, and then click "...". Find and load the model file "facemask.kfpkg".



4) Set the parameters in K-Flash according to the following parameters:

- Device: Select the corresponding COM port of your computer. The port name contains “USB-SERIAL CH340”.
- Baud rage: 2000000
- Chip: In-Chip
- It is not recommended to check this option “Open terminal after flash”.



5) Click “Flash” to start burning. It takes about 5 minutes.

Note: During this process, do not disconnect or move the USB cable.



6) After the burning is completed, the prompt “Flash completed” will appear.



Note: If want to burn the firmware for waste sorting, you can following the steps above.
The specific operation refers to the content in “Appendix/WonderCam Module Learning/3.
Appendix/4. Firmware (Installation method included)”.

2. Notices for Image Classification

The distance between human face and camera should be 20-30cm and the ambient light should be light enough. It is recommended to use white background foe better realization effect.

3. Introduction to Image Classification Function

Image Classification Function: Image classification can use the trained MobileNet model to classify images according to different features reflected in different images.

This function can be applied in mask recognition, image detection, waste sorting and etc.

4. Operation

4.1 Enter Function

Push Navigation button to Image Classification menu.



4.2 Image Classification

After starting the image classification function, the face with or

without a mask can be recognized. The ID with a mask corresponds to ID2 and the ID without a mask corresponds to ID3. The closer the confidence level is to 1.0, the more reliable the recognition result is.

