A98x_PCM5121_EVB_V04 Board Quick Start Guide

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1 Introduction

This document provides guidance to set up the A98x Evaluation Kit (EVK), version 3. The EVK could be used to evaluate Linkplay A98 platform or develop additional software. The SDK documentation will be provided separately.

2 Overview of the A98x_EVB_V04

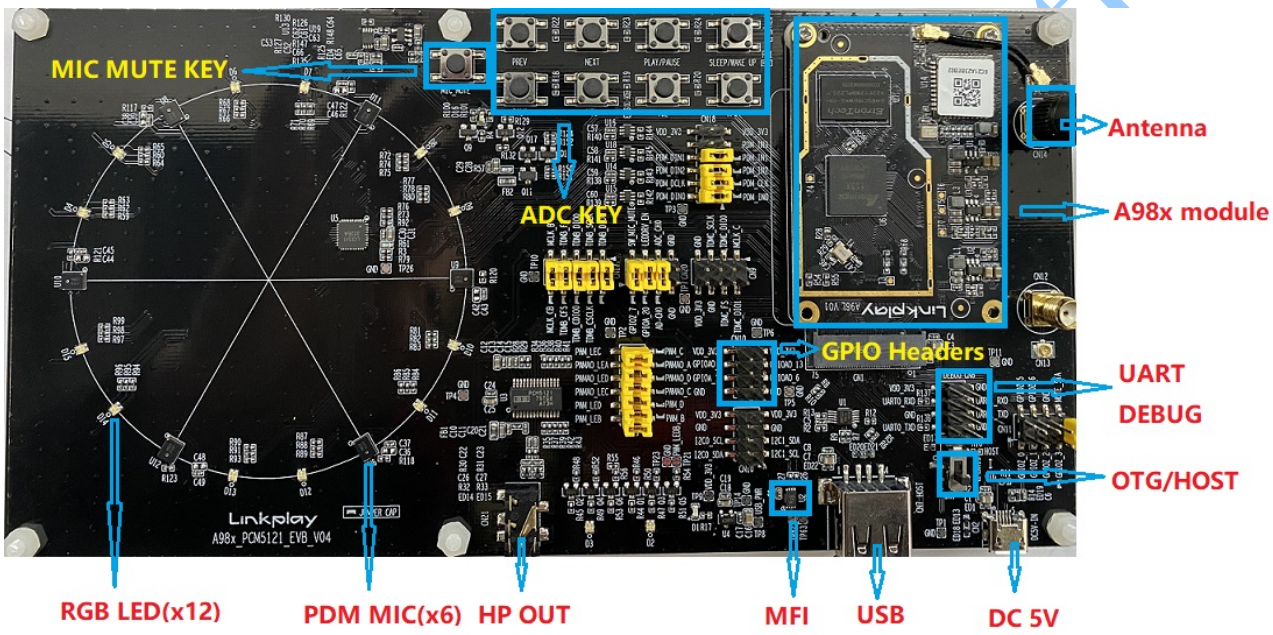


Figure 1. A98x EVB_V04

The interfaces are listed in the following table:

Item	Name	Function	Remark
1	Micro USB	Power in 5V and firmware downloading	In OTG mode, used for firmware downloading
2	Slide Switch	OTG/HOST state control	
3	A98x module	Wi-Fi smart audio module	
4	USB	Host for USB disk	Used in USB host mode
5	8 pins header	GPIO Headers	
6	6 pins header	UART Headers(x2)	
7	Push buttons	ADC KEY and MIC MUTE	
8	MIC	PDM MIC(x6)	
9	LED	RGB(x12)	
10	HP OUT	Audio out	
11	MFI	Apple Authentication 3.0	

The EVB has these features:

- A98x module supported
- Digital PDM MIC supported
- Audio output for headphone or active speaker
- One Micro USB connector for power and firmware download
- One Type A USB connector for USB flash disk
- NGFF headers for connecting external daughter boards with A98x module
- 8 Bit ADC push buttons for application use
- UART, GPIO, PWM are connected to the headers
- Apple Authentication 3.0 for Apple device

3 Modules Interface

This EVK board could be used with all A98 series modules

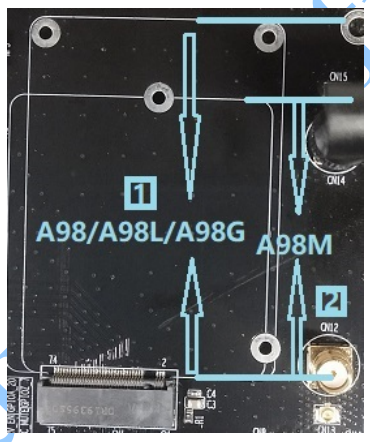


Figure 2. A98x EVB_V04 Modules Interface

1: The item 1 is for A98 or A98L/G series

2: The item 2 is for A98M series

4 Power Interface

This board is powered by 5V with a Micro USB. Please connect the Micro USB to a 5v adapter with a USB cable.

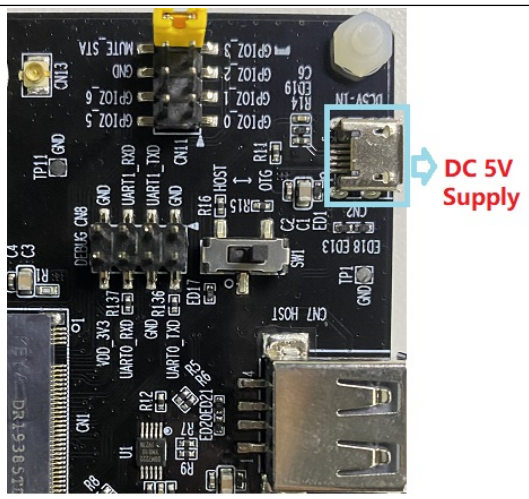


Figure 3. A98x EVB_V04 Power Interface

5 Mode Select Interface

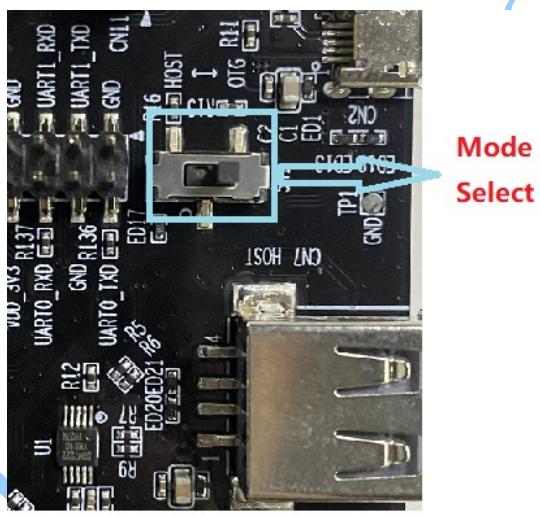


Figure 4. A98x EVB_V04 Mode Select Interface

When the switch moves to the HOST position, the module is in HOST mode. If the switch moves to the OTG position, the module will enter into the OTG mode.

6 A98x Interface

The interface of the A98x module is 67-pin NGFF and displayed as below.

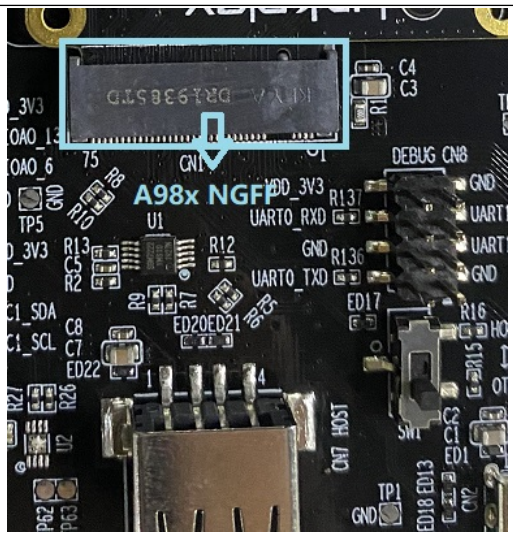


Figure 5. A98x EVB_V04 A98x NGFF Interface

7 UART Interface

UART0: UART0 is the debug interface

UART1: UART1 is a common serial communication interface

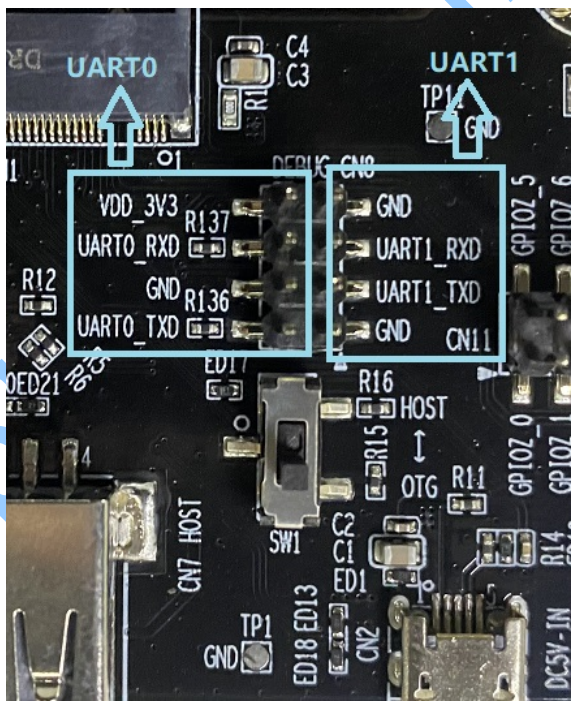


Figure 6. A98x EVB_V04 A98x UART Interface

8 Buttons

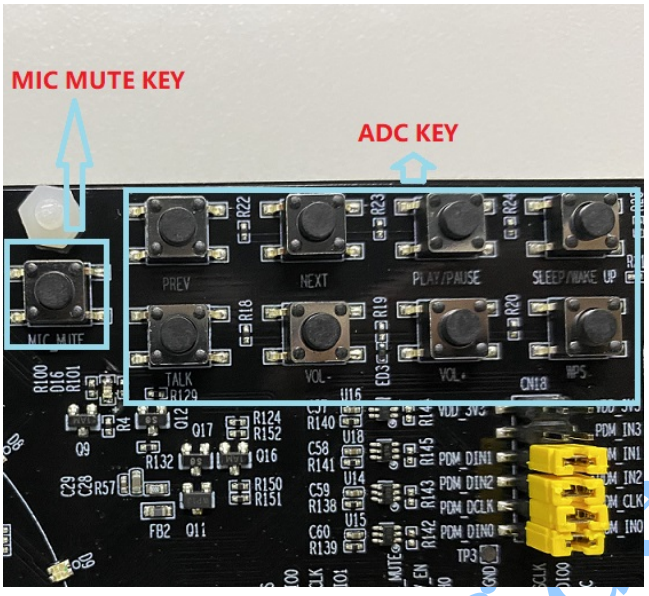


Figure 7. A98x EVB_V04 A98x Buttons

Function of Buttons:

Button	Short Press	Long Press (3 seconds)	ADC voltage
TALK	Push to talk	Restore to factory setting	0.151V
VOL-	Volume down one step		0.435V
VOL+	Volume up one step		0.573V
WPS	Enter BT pairing mode		0.743V
PREV	Previous music		0.900V
NEXT	Next music		1.224V
PLAY/PAUSE	Play/Pause		1.505V
SLEEP/WAKE UP	Sleep/Wake up		1.648V
MUTE	MIC mute	Enter Wi-Fi Setup mode	/

9 Audio Interface

HP OUT: Connect with EARPHONE or Active Speaker

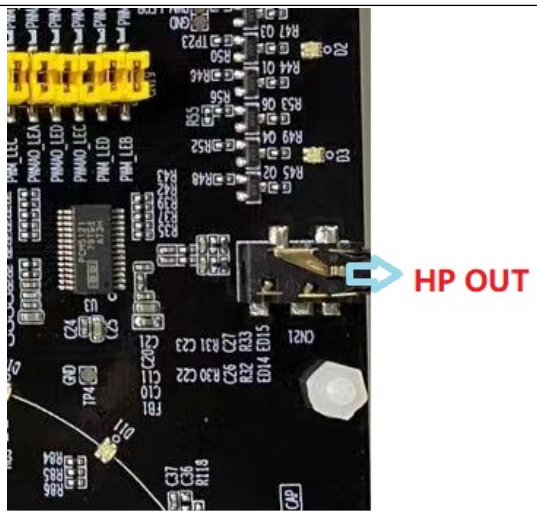


Figure 8. A98x EVB_V04 A98x audio Interface

10 Setup Wireless Network

The platform provides wireless network provisioning via BLE. Please download the setup App from the following links:

iOS: https://dln.bz/i/imuzo/2.9.7524/1447

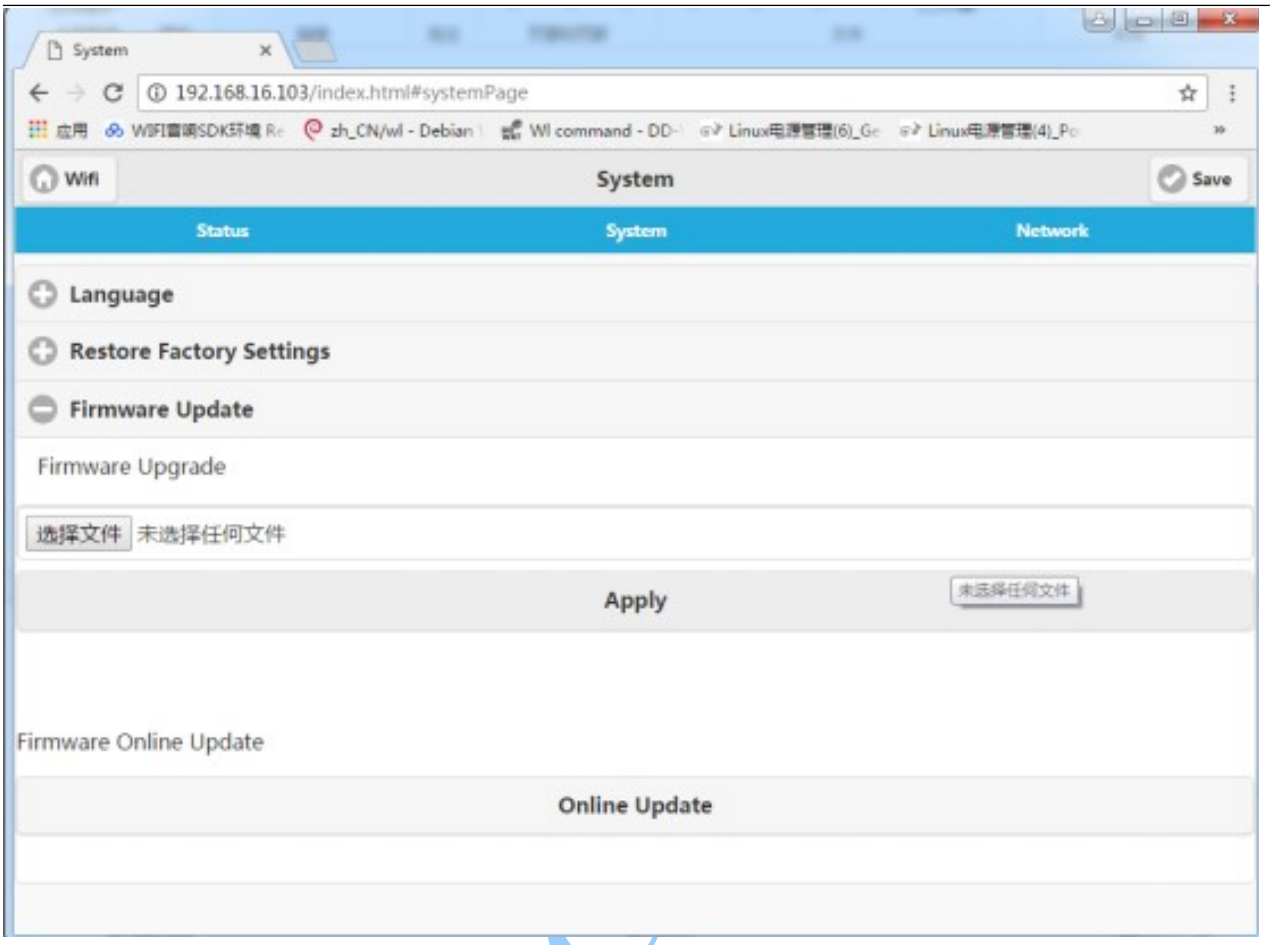
Android: https://dln.bz/a/muzoplayer/3.1.0.190425

Press and hold "MUTE" key for three seconds to enter network setup mode, then open the App and follow the network setup guide.

11 Firmware Update

There are two ways to update firmware on the EVK. The easiest one is to update the firmware image via the web browser.

To do that, first get the IP address of the EVK via the setup App. Then find one PC connected into the same LAN, launch web browser and enter the IP address into the address bar. Choose the system and enter the follow page:



Choose the firmware update and tap the Apply button. One progress bar will be shown. When the update is complete, the EVK will be reboot.

There is another way to use the PC burning tool described below.

Micro USB: used as firmware burning by PC tool (Select the OTG mode).

Move the mode selector switch to the OTG position as follows

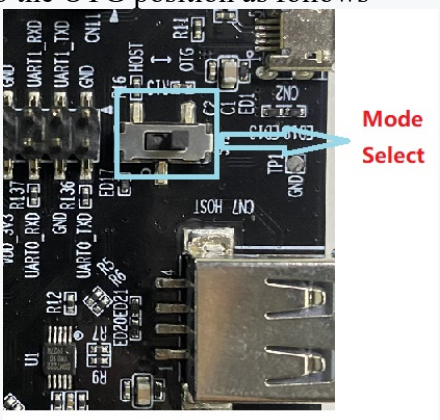
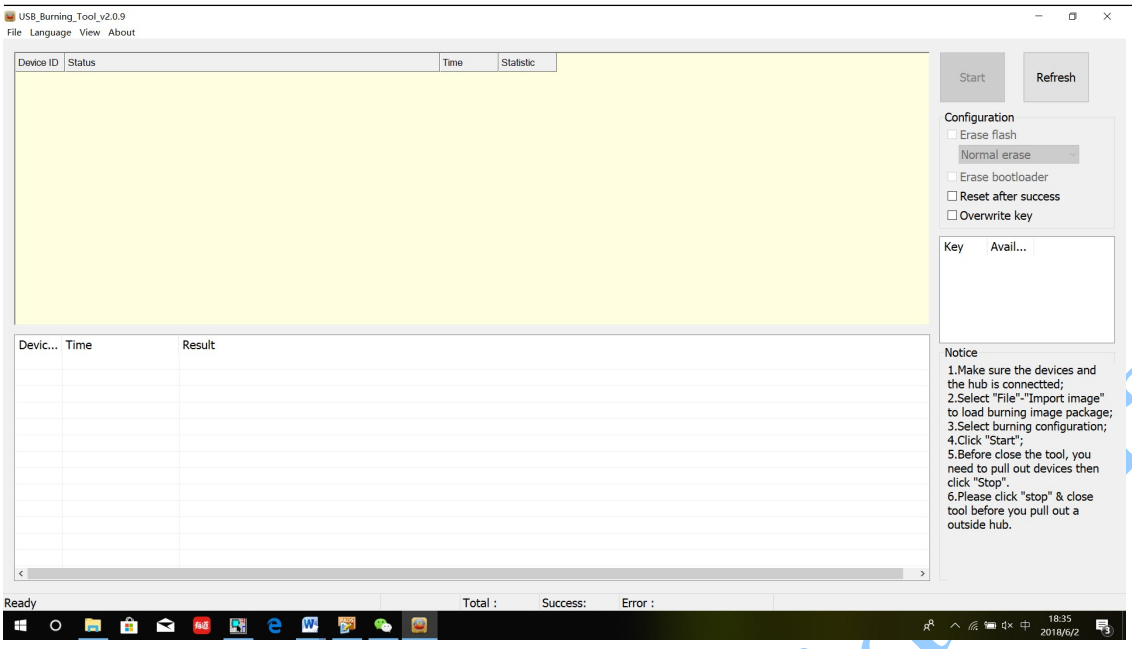


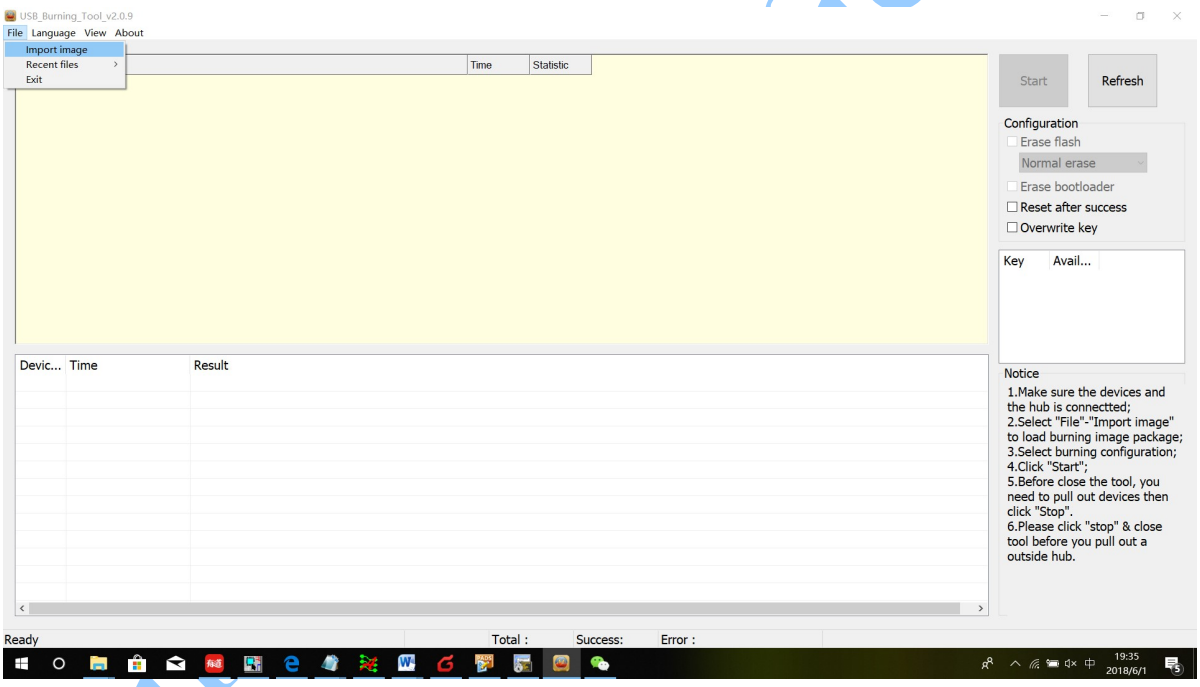
Figure 9. A98x EVB_V04 A98x OTG Interface

The steps of burning firmware are operated as following:

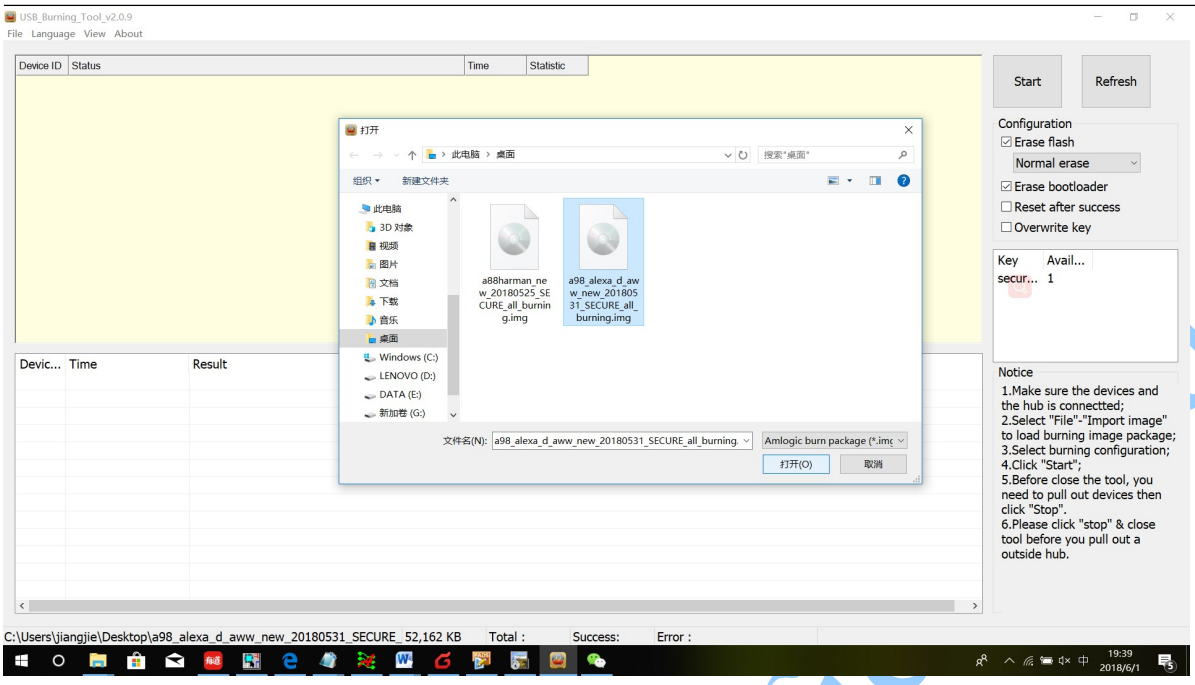
[1]. Store the USB driver on your PC, the folder of the driver is named “USB_Burning_Tool.exe”



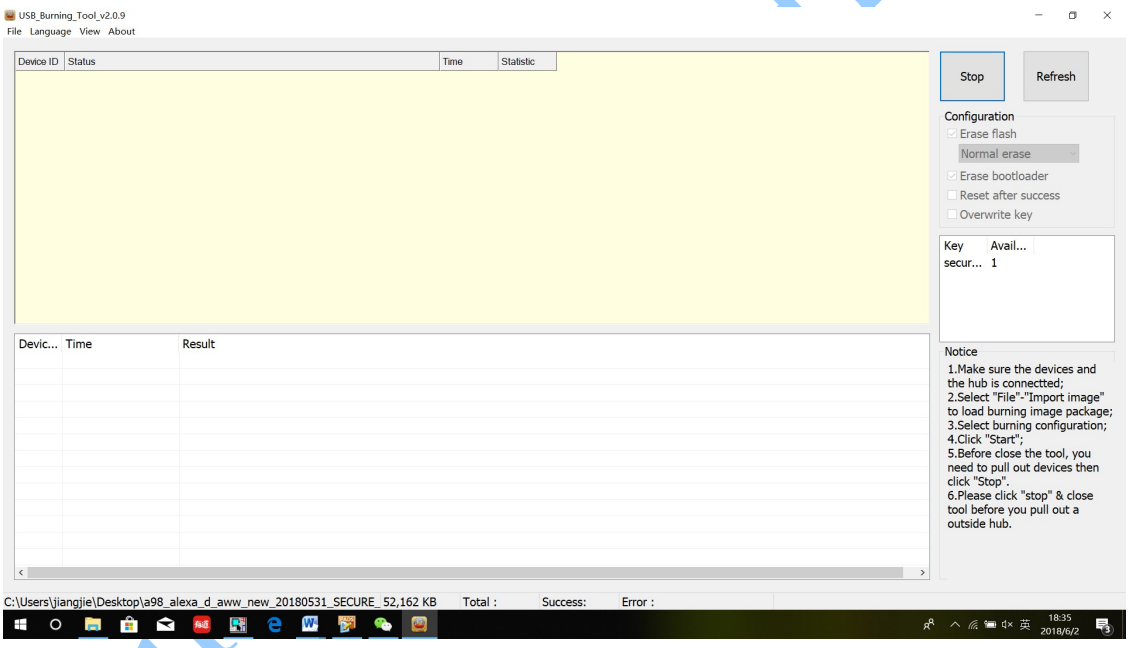
[2]. Click ‘File-import Image’ button and select the firmware



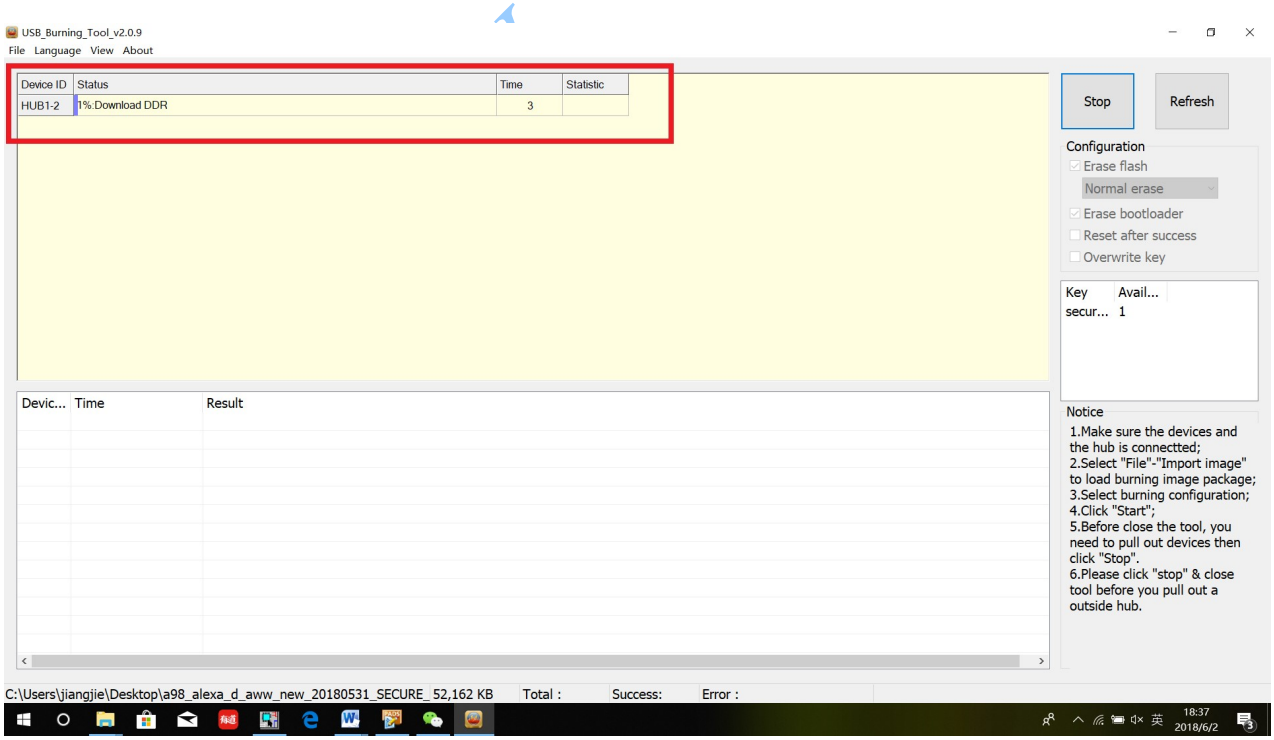
[3].Then click Open button



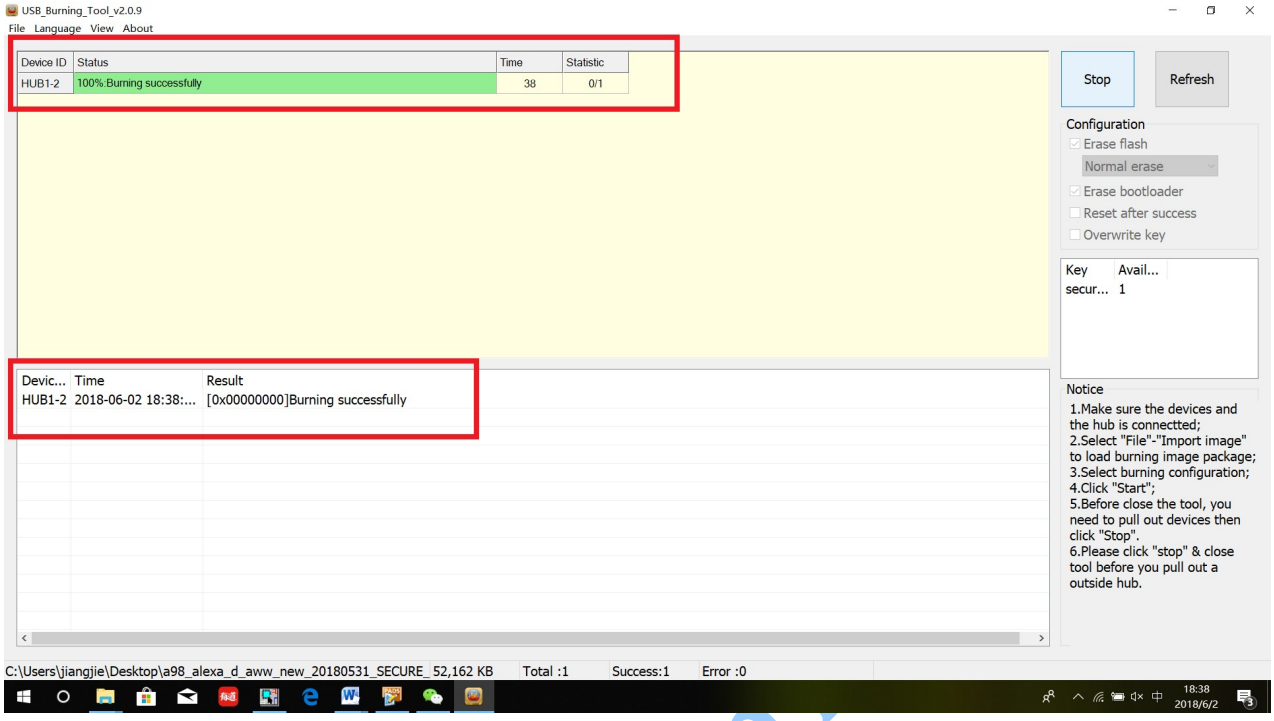
[3]. Click Start button



[4]. Connect the OTG cable to your PC and then firmware burning process will start


USB_Burning_Tool_v2.0.9
File Language View About
Device ID
Status
Time
Statistic
HUB1-2
1%:Download DDR
3
Stop
Refresh
Configuration
Erase flash
Normal erase
Erase bootloader
Reset after success
Overwrite key
Key
Avail...
secur...
1
Devic...
Time
Result
Notice
1.Make sure the devices and the hub is connectted;
2.Select "File"-"Import image" to load burning image package;
3.Select burning configuration;
4.Click "Start";
5.Before close the tool, you need to pull out devices then click "Stop".
6.Please click "stop" & close tool before you pull out a outside hub.
C:\Users\jiangjie\Desktop\a98_alexa_d_aww_new_20180531_SECURE_ 52,162 KB
Total :
Success:
Error :
18:37
2018/6/2

[5]. firmware burning ends and reset board.



12 Revision History

Revision	Date	Originator	Comments
V0.1	12/11/2019	Weiwei Nie	Initial release