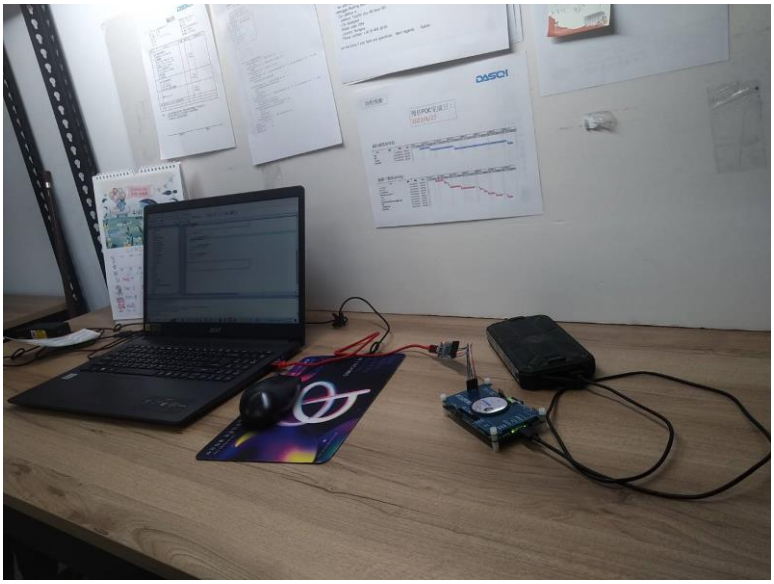
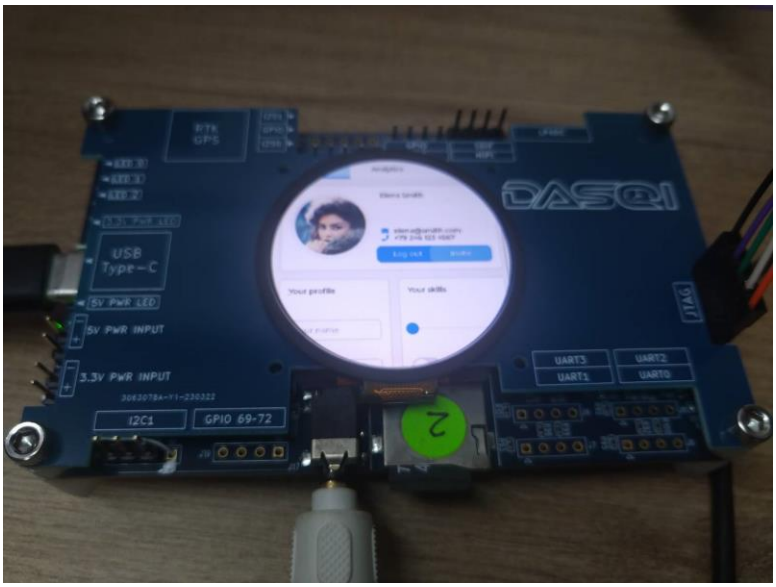
user_guide_to_compiler_n_load_uvision (DASQI Apollo4 Blue plus PCBA EVB board)

(DASQI Apollo4 Blue plus PCBA EVB board)



Run LVGL lv_demo_widgets()



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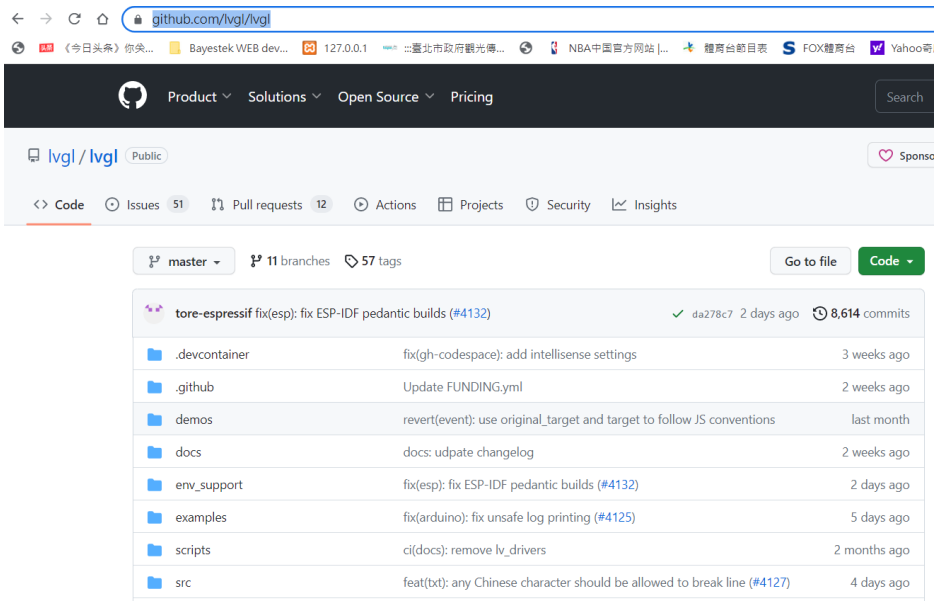
008 To setup the hardware test environment of DASQI Apollo4 BLE plus board

009 To run lv_music_demo() in the DASQI Apollo4 BLE plus board

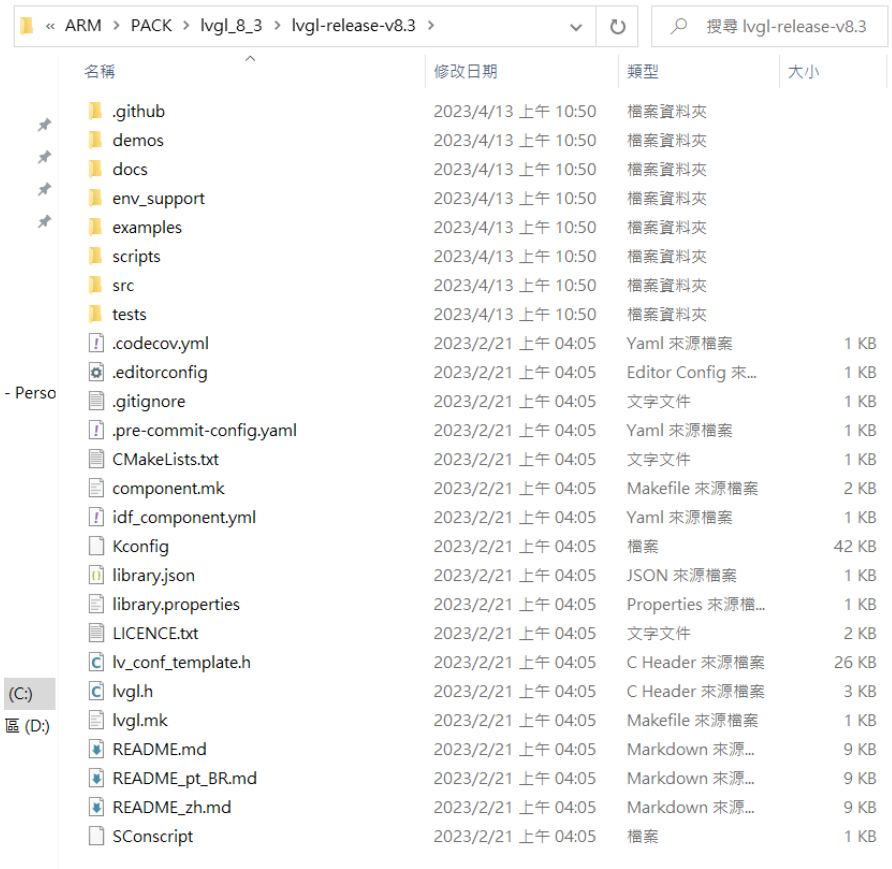
010 To flash the binary code by using SEGGER J-Flash Lite V7.86h

001 To get the lv_demo_music() certified software from LVGL office web site.

1. Using google chrome browser to keyin URL web site https://github.com/lvgl/lvgl , you can see the LVGL music demo software code, as following :



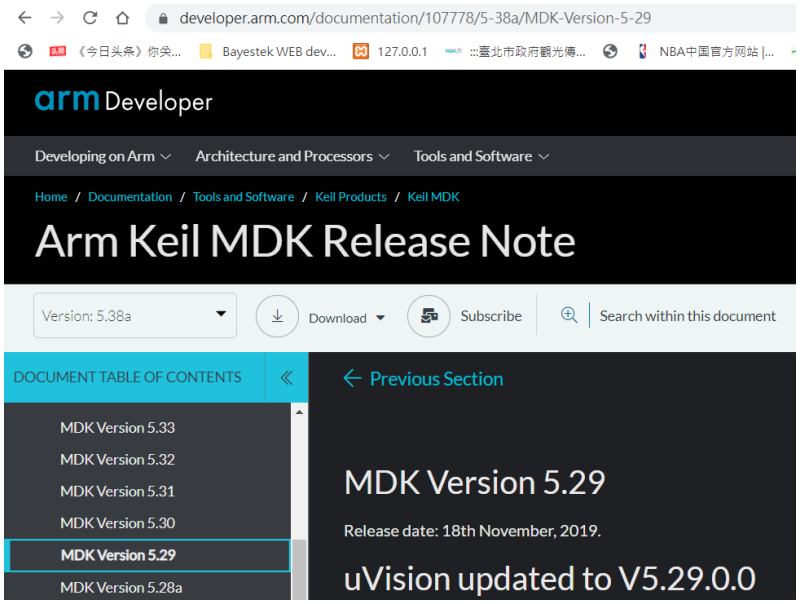
Download as zip , and unzip into computer (windows) , under the directory in drive C: , C:\Keil_v5\ARM\PACK\lvgl_8_3\lvgl-release-v8.3 , as following :



The lv_music_demo() LVGL file is located in C:\Keil_v5\ARM\PACK\lvgl_8_3\lvgl-release-v8.3\demos , the LVGL music demo resource file name is lv_demo_music.c . (under the directory : C:\Keil_v5\ARM\PACK\lvgl_8_3\lvgl-release-v8.3\demos\music) .

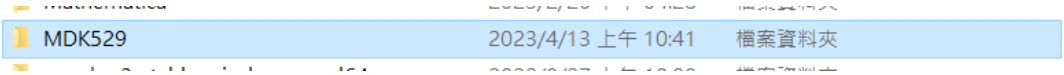
002 To install the ARM keil-uvision V5.29 into windows 10 notebook .

1. Using google chrome browser to keyin URL web site , https://developer.arm.com/documentation/107778/5-38a/MDK-Version-5-29 , you can see the ARM Keil-uvision V5.29 software tool, as following :

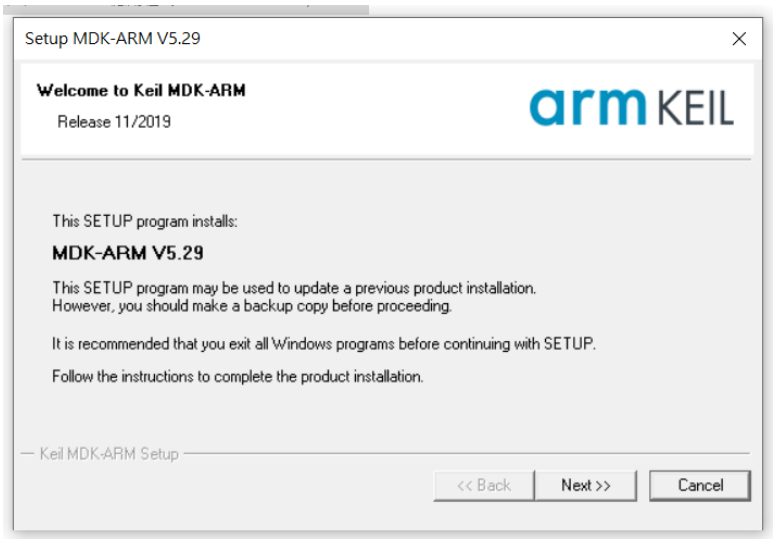


to download ARM Keil-uvision V5.29 software tool. And install ARM Keil-uvision V5.29 IDE developing tool , MDK529.zip , into Windows .

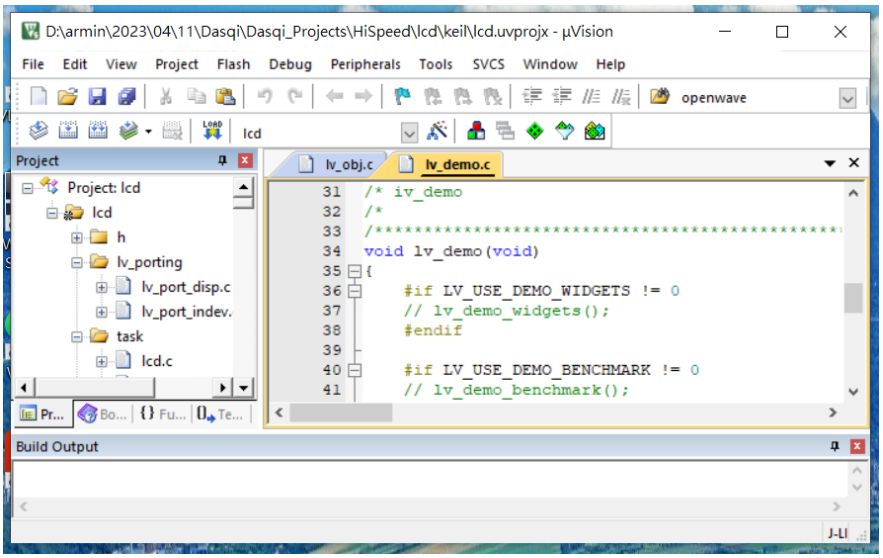
Unzip MDK529.zip



Install ARM Keil-uvision V5.29 MDK tool , as following :

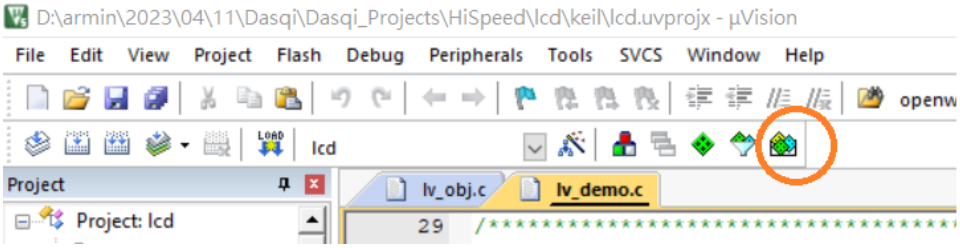


After installed , Keil MDK-ARM icon , as following :



003 To setup the ARM keil-uvision V5.29 environment settings

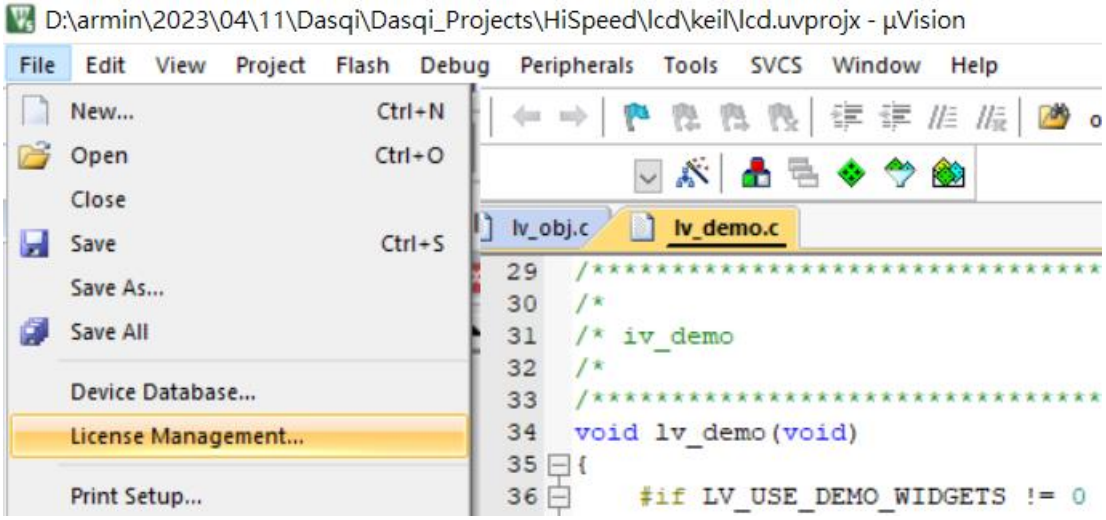
1. First , to check ARM Keil_uvision MDK's MCU setup information :



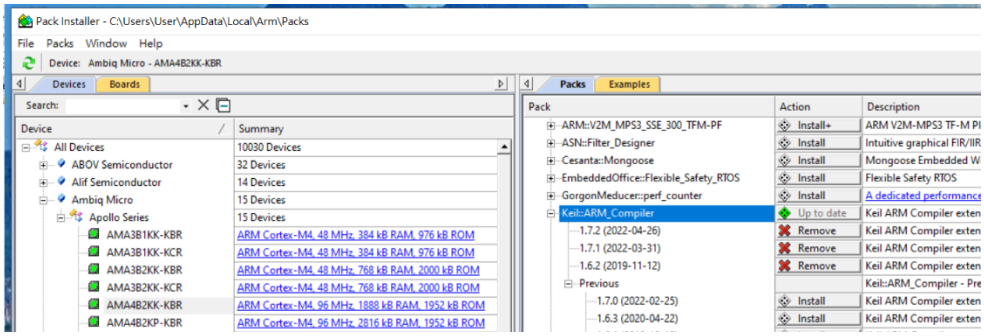
Check the Keil_uvision MDK tool 's License Management information :

Need to check Computer ID : xxxxx-xxxxx

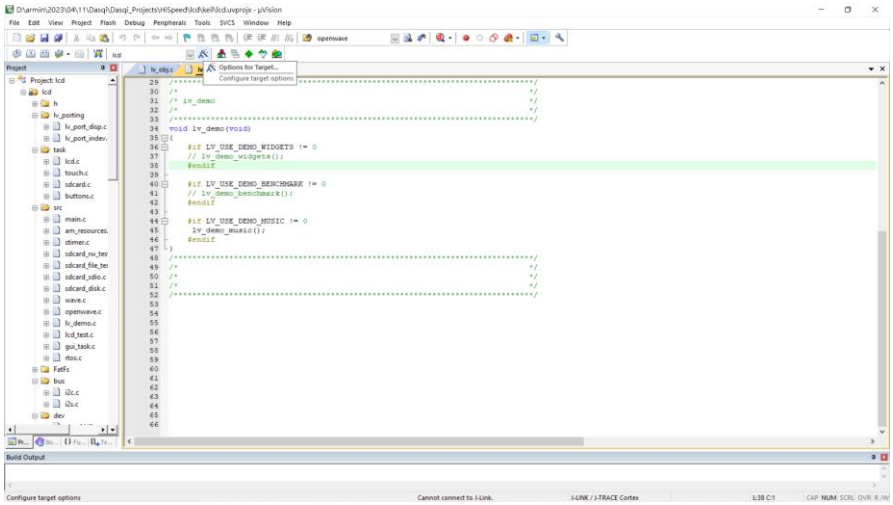
Need to check License ID code : xxxxx-xxxxx-…..

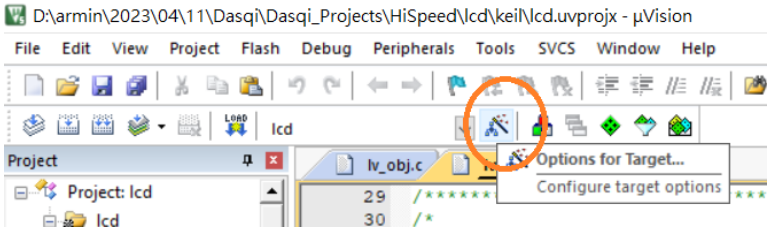


Press the Pack Installer , to check MCU setting .

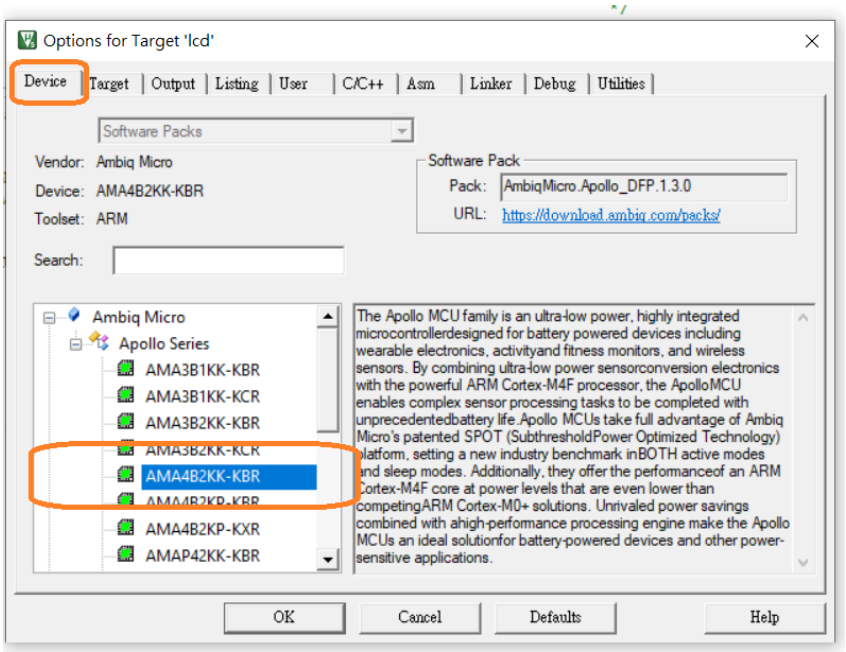


Advance setup information check

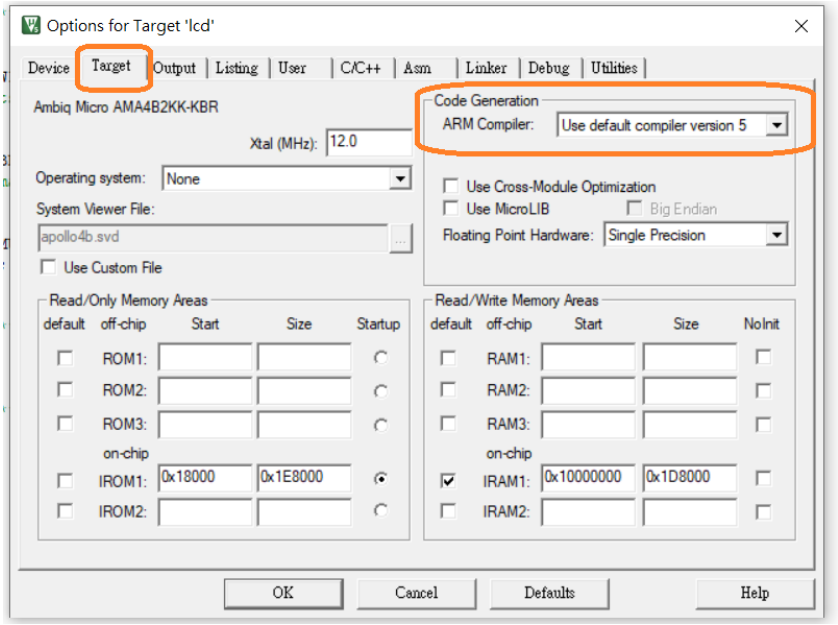




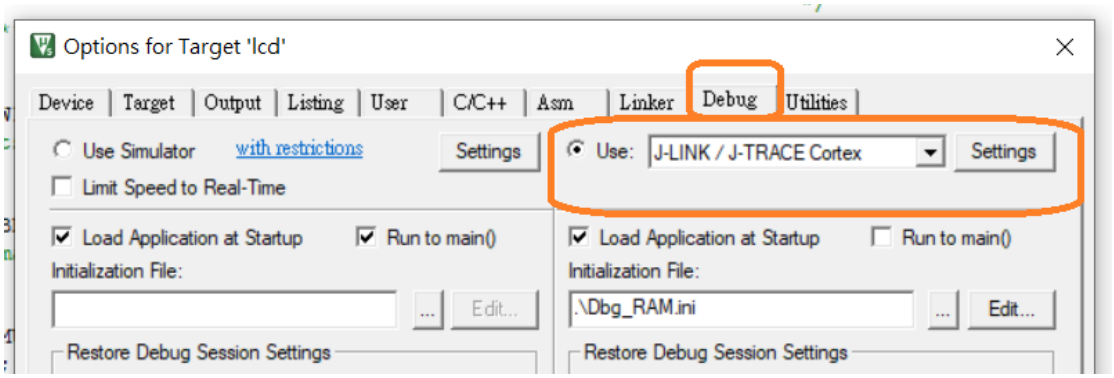
To check MCU : Ambiq AMA4B2KK-KBR



To check ARM Compiler version , as version 5



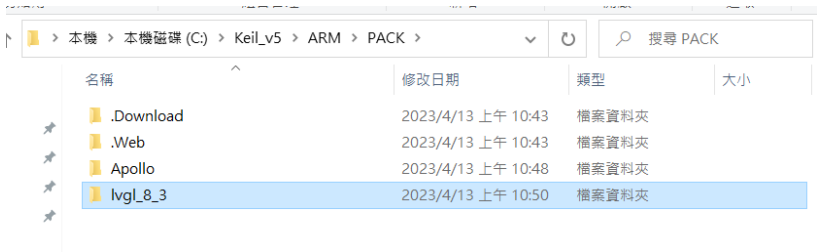
To check J-Link download interface board



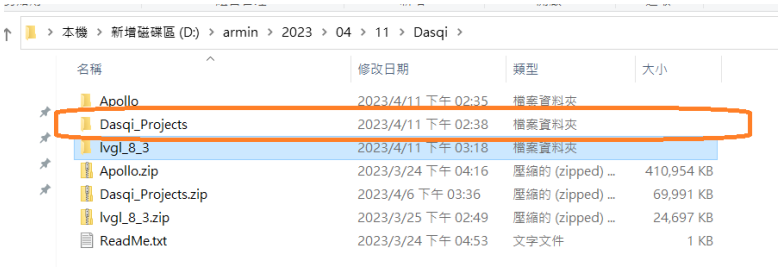
If the above 3 settings as correct , the setup is correct.

004 To copy DASQI developing Software into keil-uvision v5.29 environment

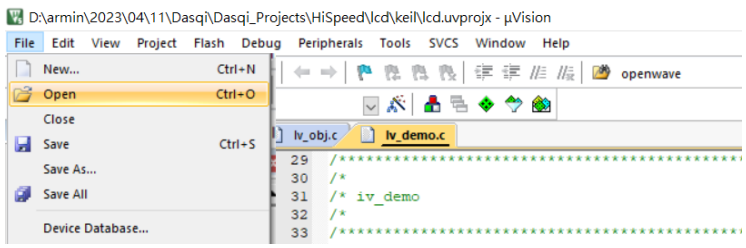
1. 將 Apollo.zip 和 lvgl_8_3.zip 解壓縮之後放在 C:\Keil_v5\ARM\PACK 子目錄之下。As following :

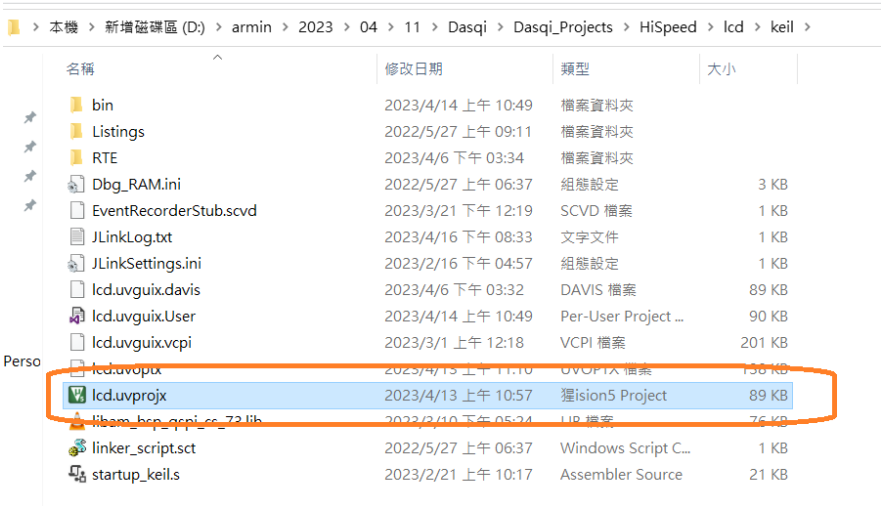


2. 將 Dasqi_Projects.zip 解壓縮到任何可工作的子目錄中。



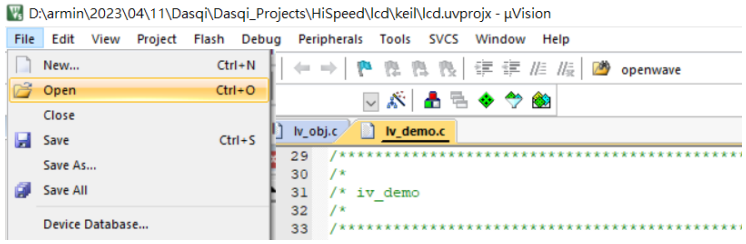
3. Open keil-uvision5 IDE tool , and open lcd project file (lcd.uvprojx) .

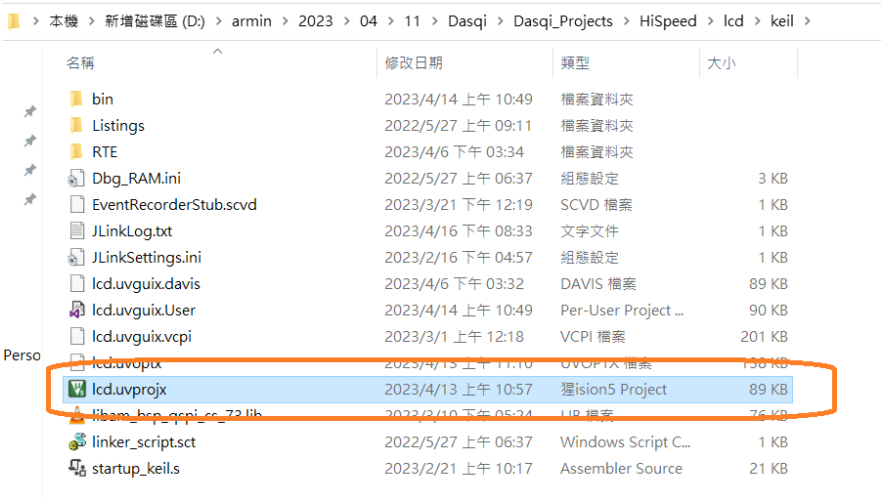




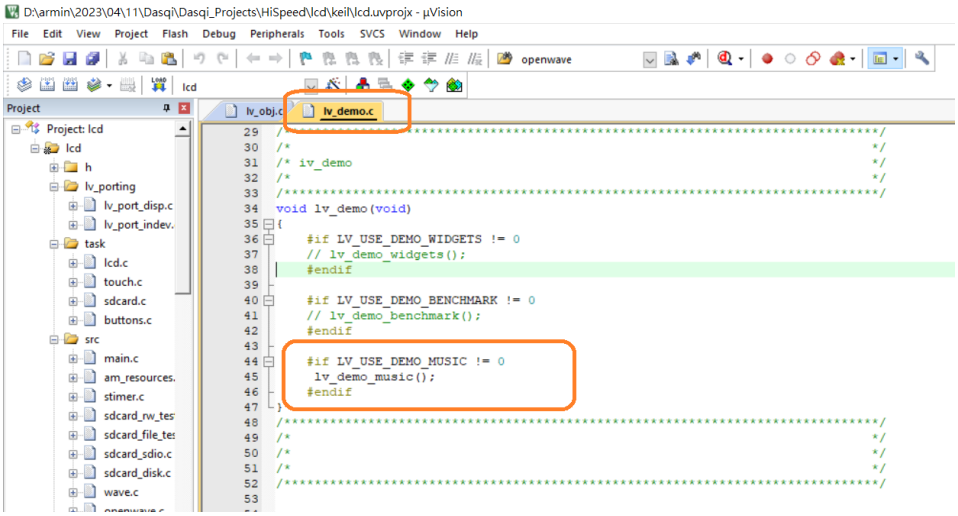
005 To open the lcd project to run lv_music_demo()

1. Open keil-uvision5 IDE tool , and open lcd project file (lcd.uvprojx) .





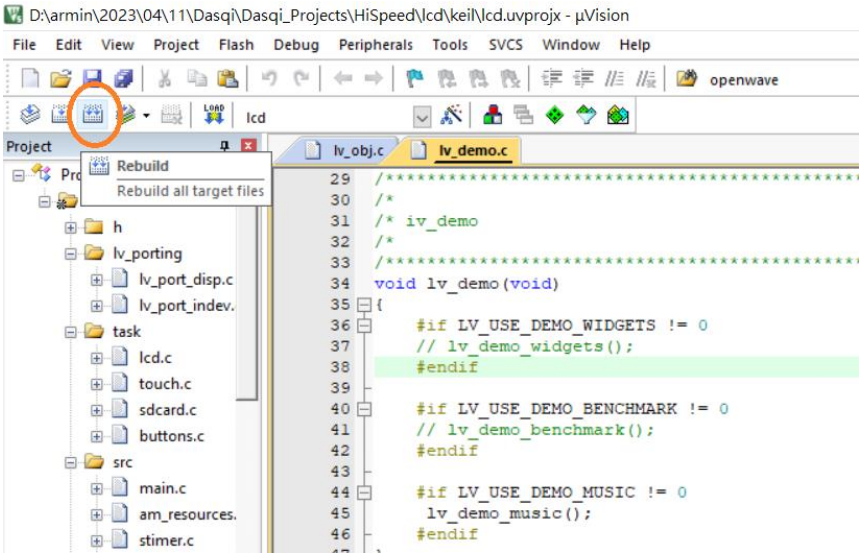
2. Open lv_demo.c file , and check lv_music_demo() as available.



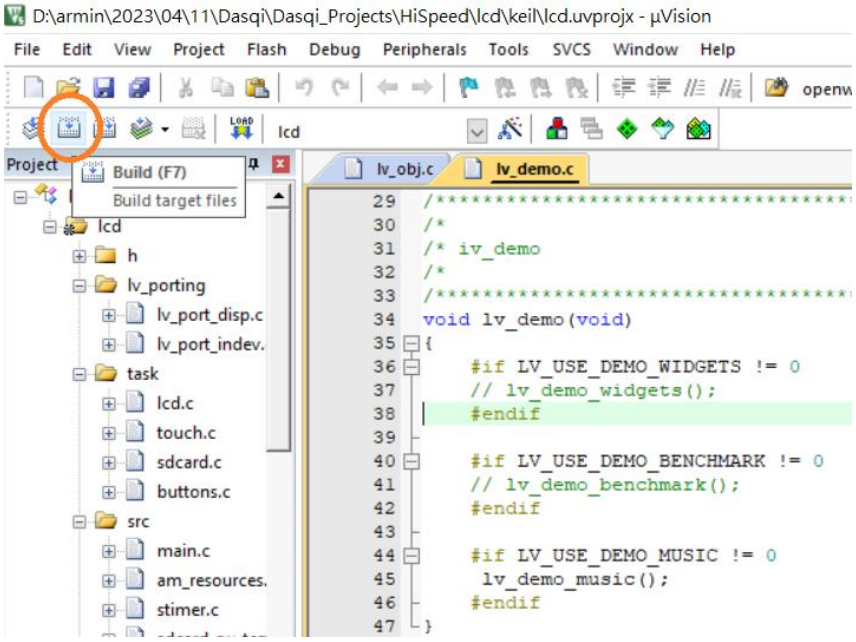
006 To compiler the project in the keil-uvision 5.29

1. Press the compile icon to compile, as following :

The fully compile process :

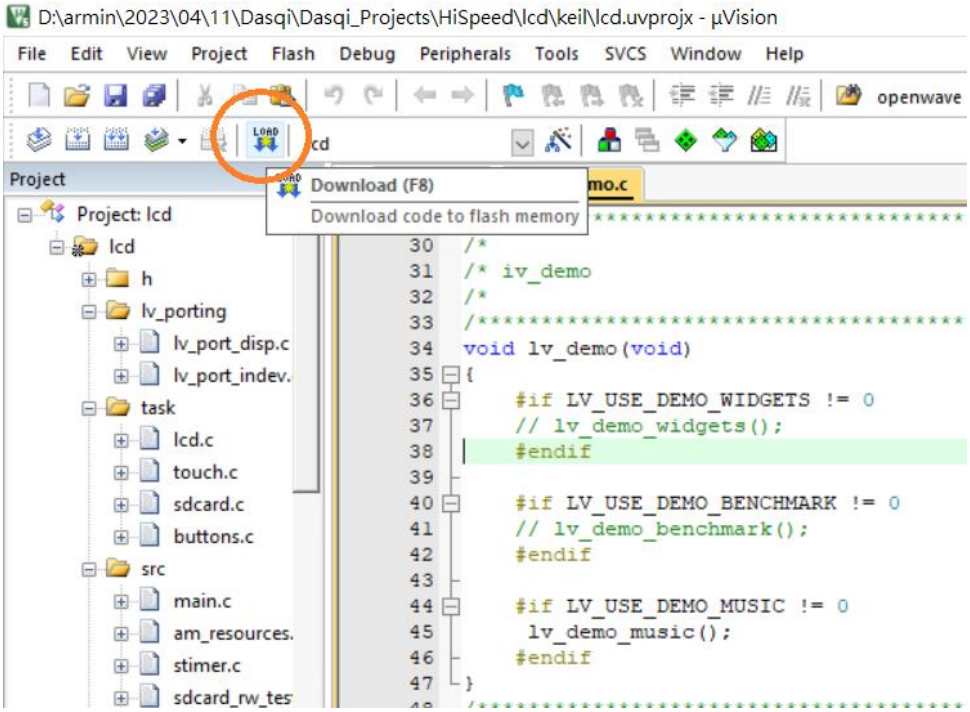


The partial compile process (only new modifies need to re-compile) :



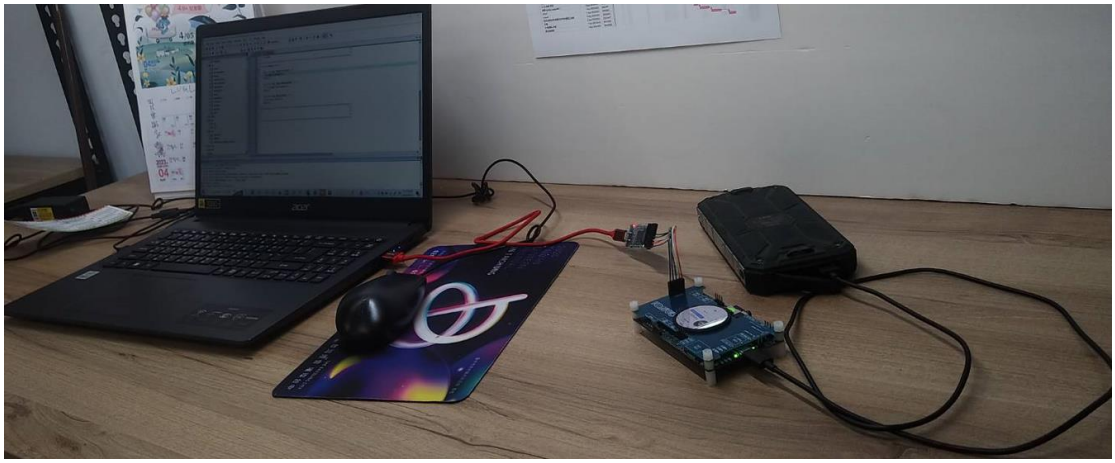
007 To load the project in the keil-uvision 5.29

1. Press the load icon to compile, as following :



008 To setup the hardware test environment of DASQI Apollo4 BLE plus board

1. Check the connection between the computer , J-LINK interface adapter and the Apollo4B plus PCBA board .
2. The notebook to run keil-uvision5 MDK software.
3. USB cable between the notebook and J-LINK interface adapter.
4. The J-LINK interface adapter.
5. The flat cable between J-LINK interface adapter and the Apollo4B plus PCBA board.
6. The Apollo4B plus PCBA board.
7. The Type-C USB cable between the Apollo4B plus PCBA board and the Power bank.
8. The chart as following :

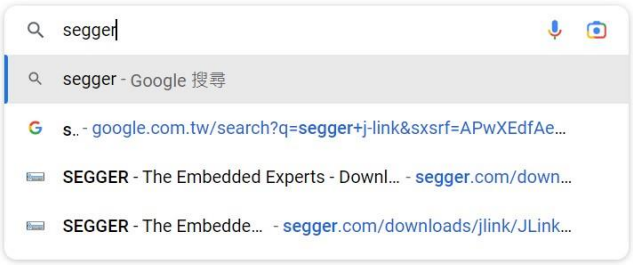


009 To run lv_music_demo() in the DASQI Apollo4 BLE plus board

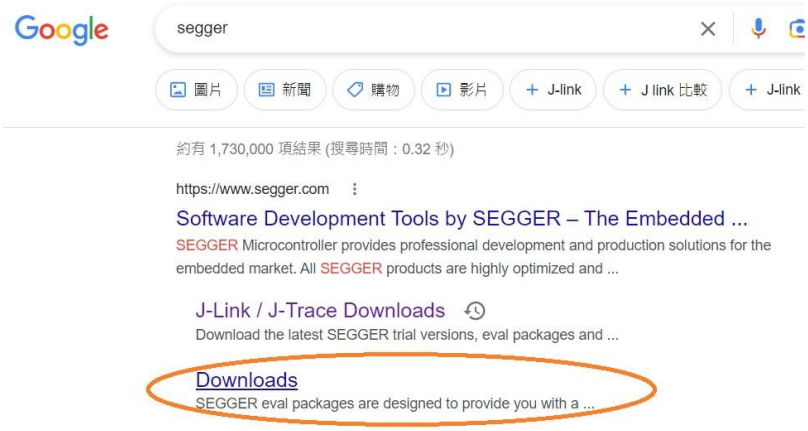
1. After loaded the binary code into the Apollo4B plus PCBA board , To connect the USB power bank (+5V) , with type-C USB cable , to the Apollo4B plus PCBA board , then the LVGL music demo shows in the display , as following :

010 flash the binary code by using SEGGER J-Flash Lite V7.86h

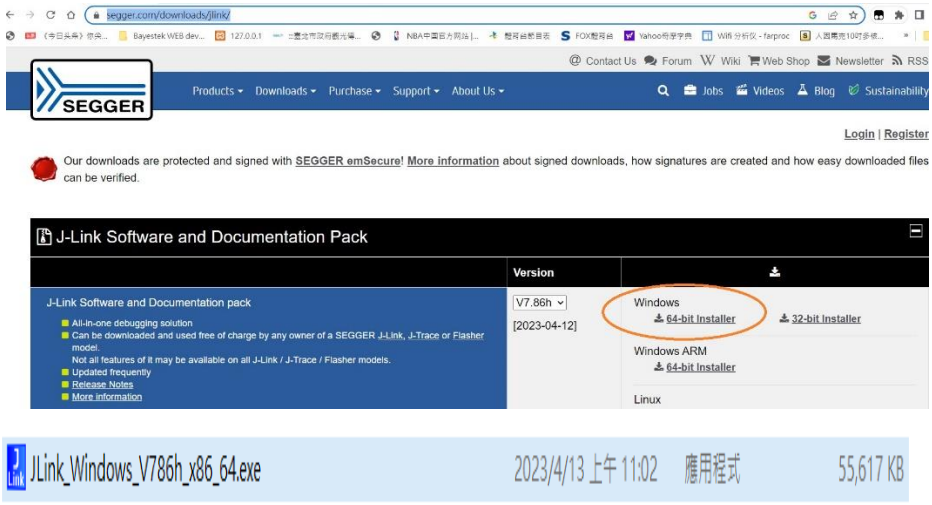
1. Prepare the binary file to flash into the Apollo4 BLE PCBA board
   The lv_music_demo() LVGL binary file is located in D:\armin\2023\04\11\Dasqi\Dasqi_Projects\HiSpeed\lcd\keil\bin , the binary file name is lcd.hex .
2. Try to download JLINK flash tool, first to search “segger” from google search web site, as following :



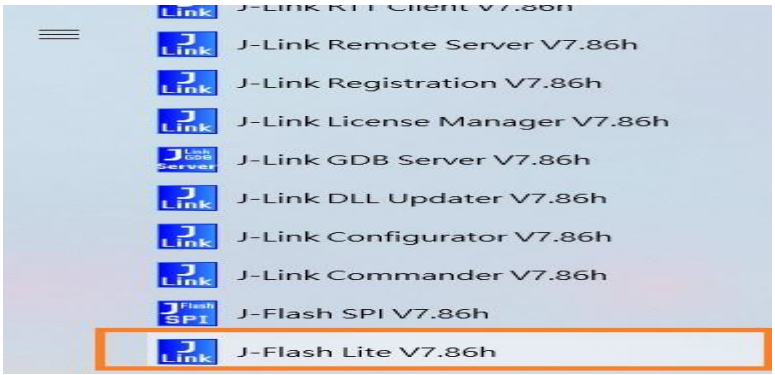
3. Find out the JLINK flash tool web site : segger.com/downloads/jlink

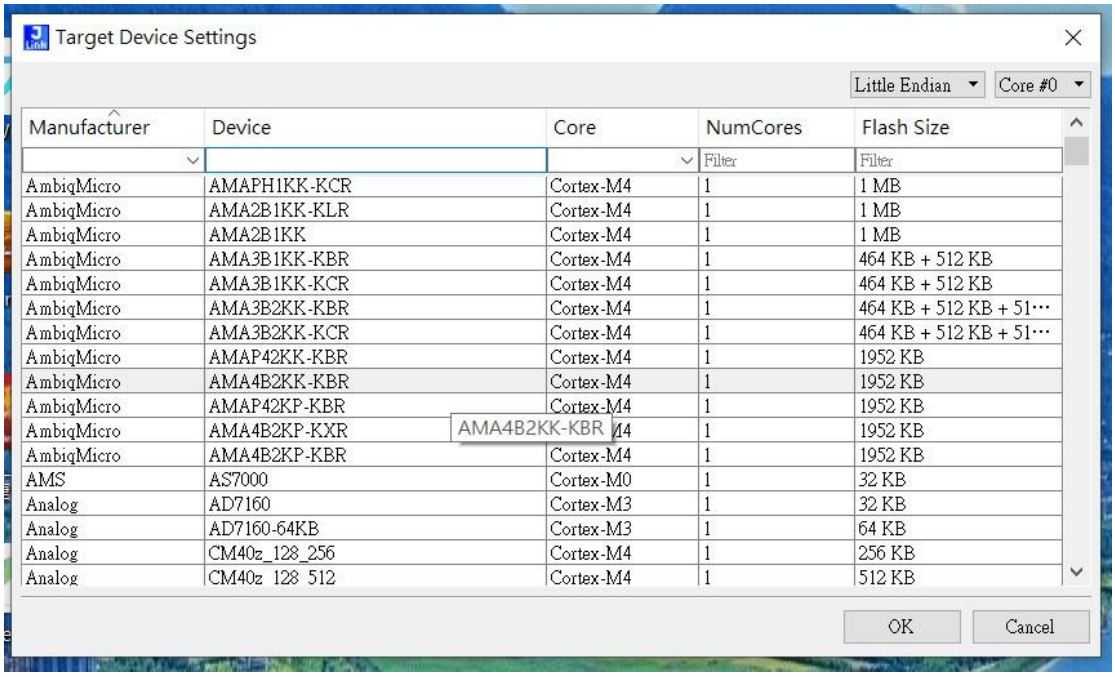


4. From the web site : segger.com/downloads/jlink, to download windows version JLINK tool. And install JLINK_Windows_V786h_x86_64.exe into Windows .

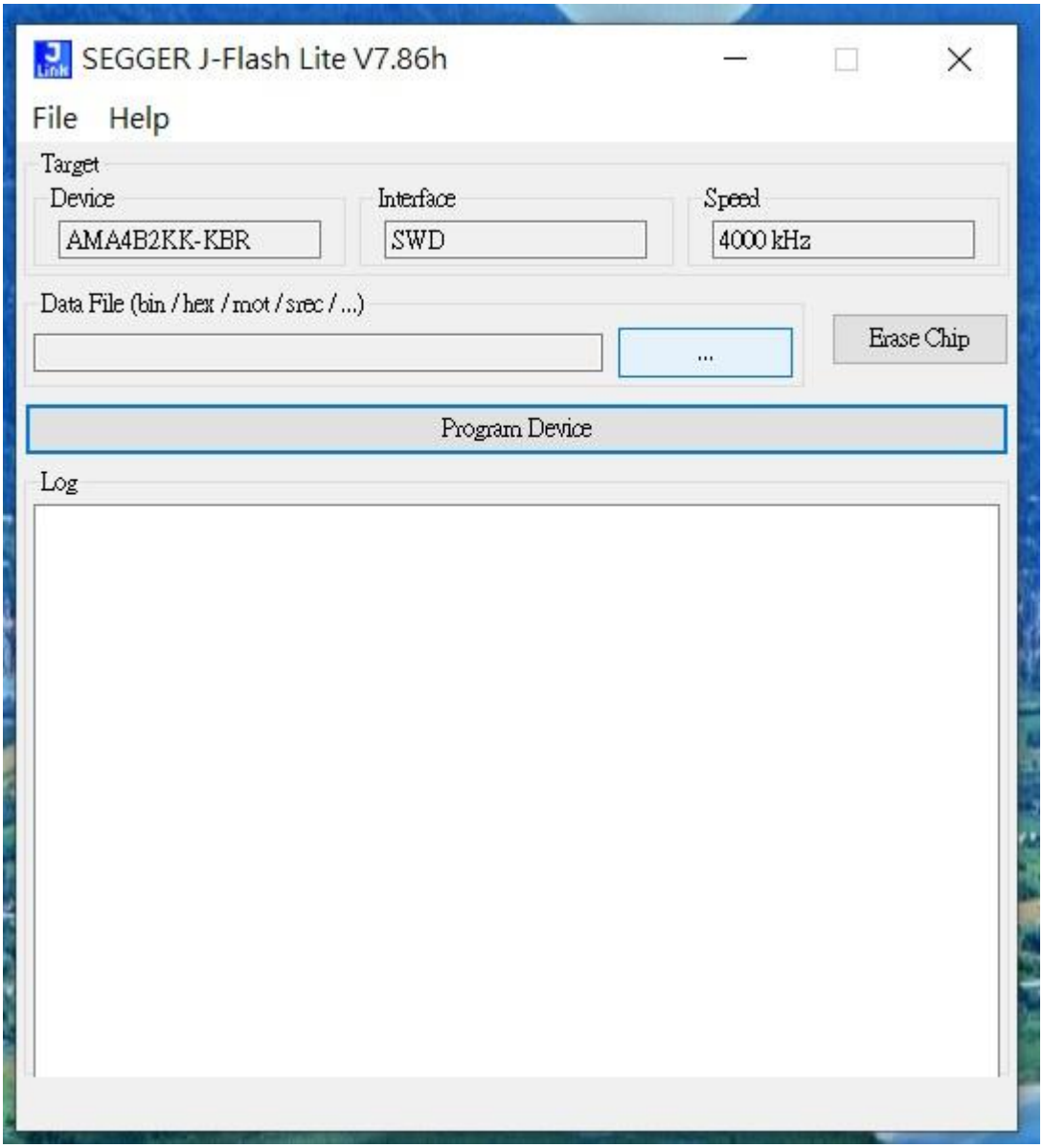


5. Run J-Flash Lite V7.86h , as following :

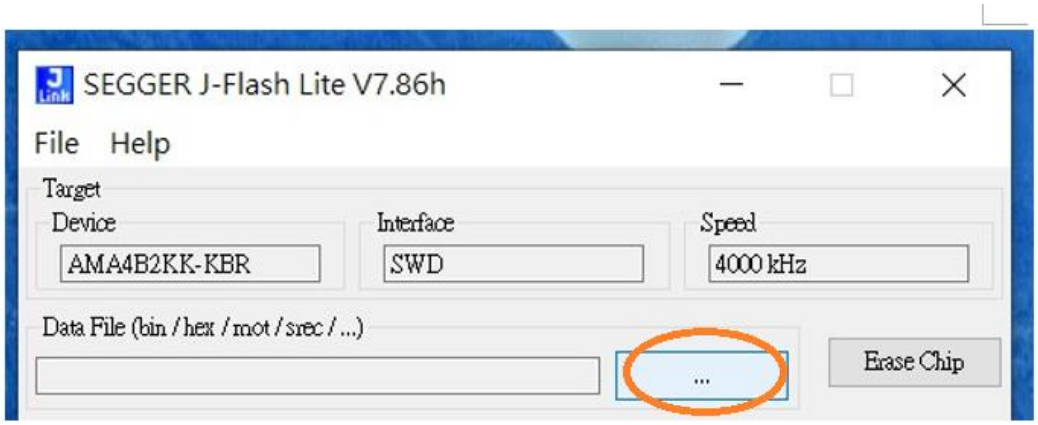


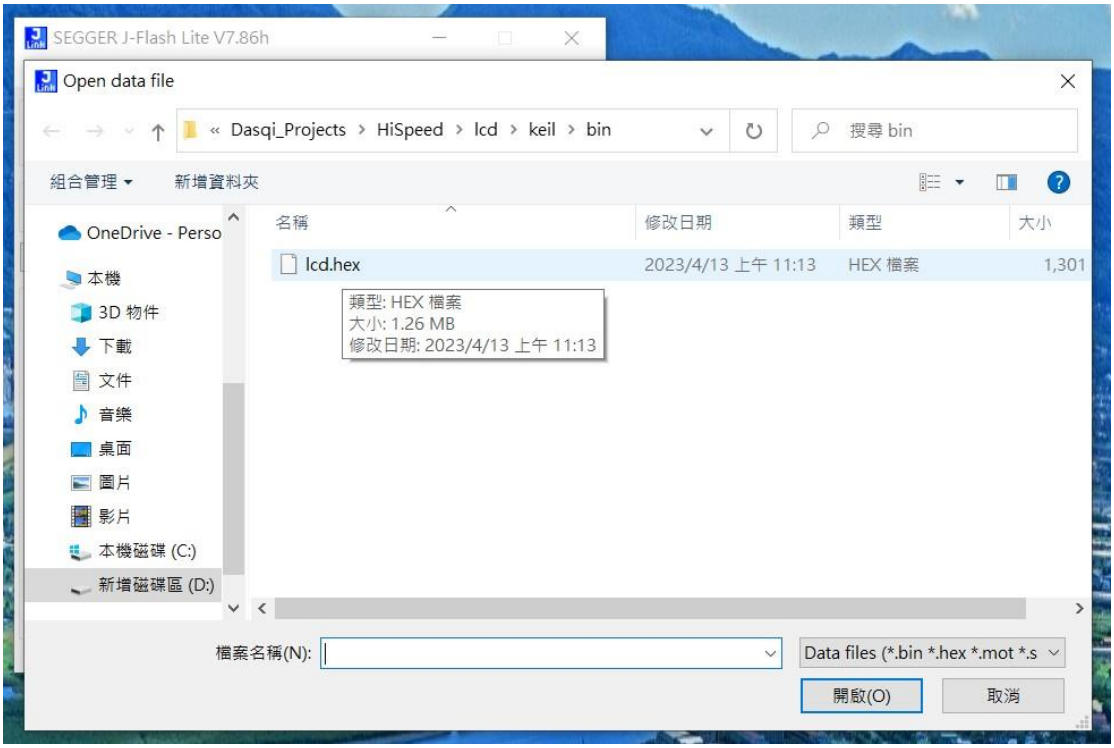


To select the MCU code : AmbiqMicro AMA4B2KK-KBR (Cortex-M4)

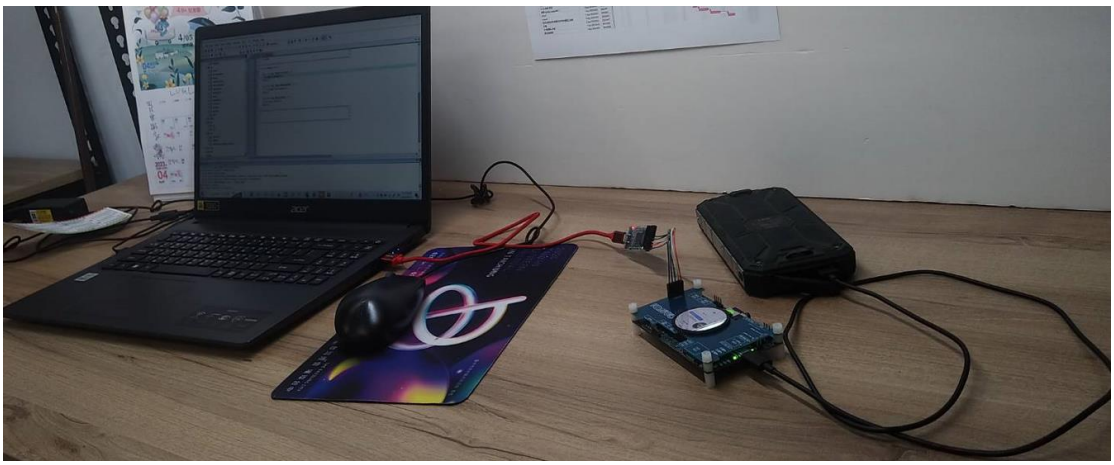


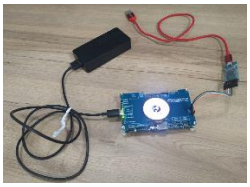
To select the binary file : lcd.hex



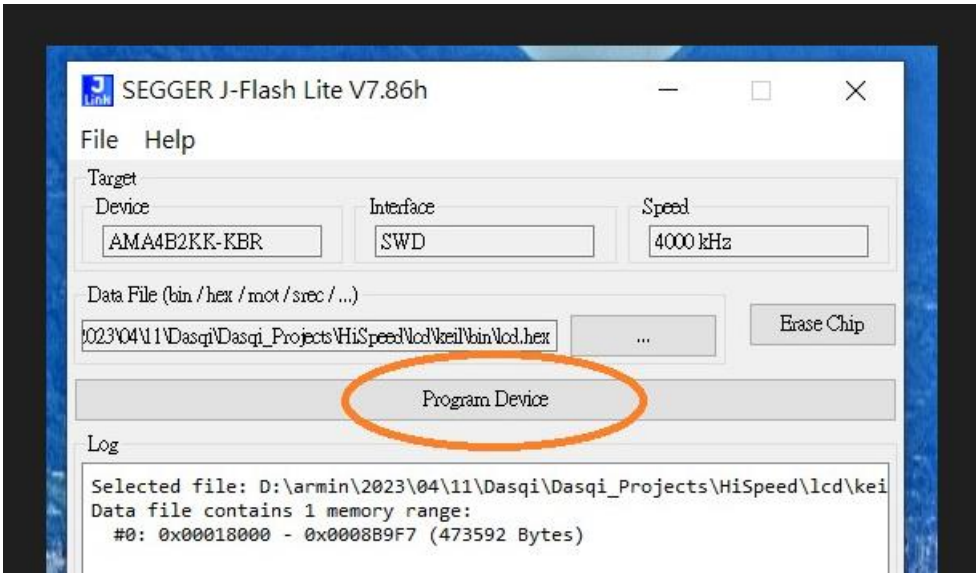


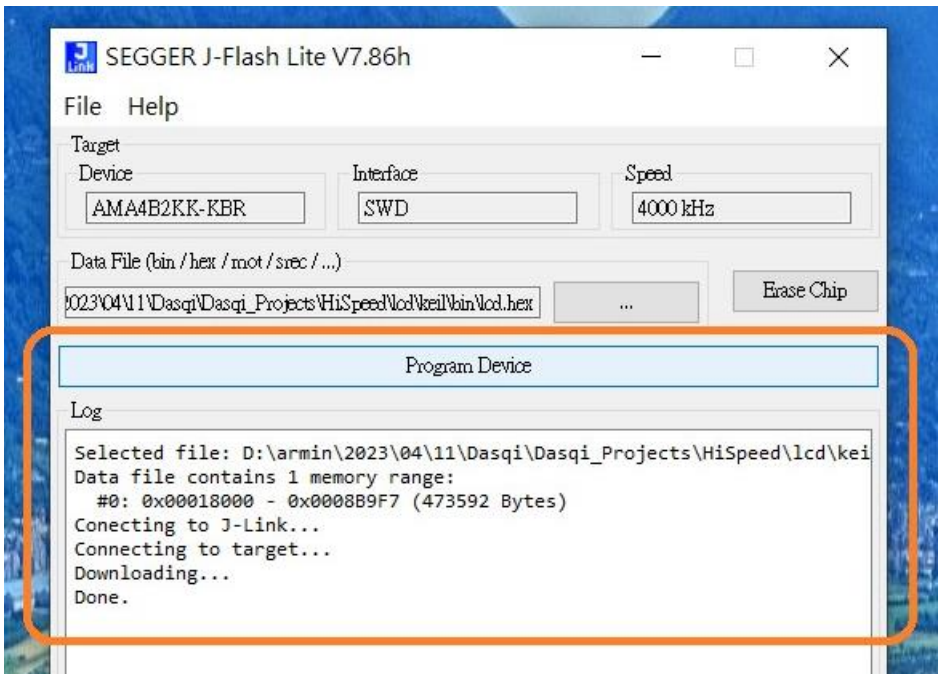
To check the notebook – JTAG interface – PCBA connection.





Press the Program Device button to flash binary into PCBA .





After flashing completed , Apollo4B PCBA board runs lv_music_demo() .

RTK
GPS
I2S1
GPIO
I2S0
LPADC
GPIO
I2C0
SDIF
MIPI
LED 0
LED 1
LED 2
3.3V PWR LED
USB
Type-C
5V PWR LED
5V PWR INPUT
3.3V PWR INPUT
I2C1
GPIO 69-72
UART3
UART1
UART2
UART0
JTAG