

Drive for better vision



WE2 SDK User Guide V1.1

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Agenda

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Environment Setting

Environment Setting

- PC environment request (minimum-hardware-requirements)


- ❖ HW: x86 64bit
- ❖ OS: Win10 64bit

- Setting GNU by following steps

- ① Download GNU

by following link (gcc-arm-none-eabi-10-2020-q4-major-win32.zip)





(<https://developer.arm.com/-/media/Files/downloads/gnu-rm/10-2020q4/gcc-arm-none-eabi-10-2020-q4-major-win32.zip>)

 gcc-arm-none-eabi-10-2020-q4-major-win32.zip

- ② Unzip the .zip to SDK_root

- ③ **[Must]** Check 1. if the folder exists: “SDK_root/gcc-arm-none-eabi-10-2020-q4-major/” and 2. its content is like the sample below.

↓ Sample: The content of folder: “SDK_root/gcc-arm-none-eabi-10-2020-q4-major/”

SDK_root > gcc-arm-none-eabi-10-2020-q4-major >		
名稱	修改日期	類型
 arm-none-eabi	2023/10/16 下午 01:48	檔案資料夾
 bin	2023/10/16 下午 01:48	檔案資料夾
 lib	2023/10/16 下午 01:48	檔案資料夾
 share	2023/10/16 下午 01:48	檔案資料夾

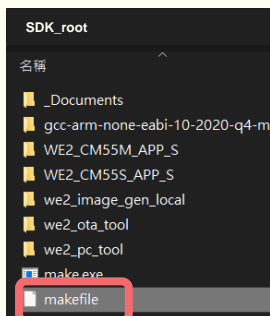
Firmware Image Generation

Firmware Image Generation (1)

- Set the following makefile respectively:

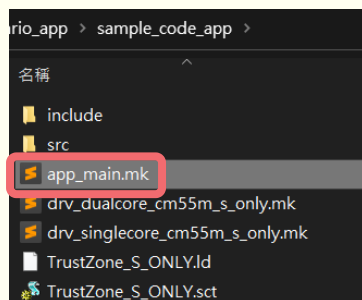
1. **makefile:** (path: `SDK_root/makefile`)

- ① EVK = HX6538_AIoT_EVB_QFN88_V10
- ② CORE_SETTING = DUAL_CORE
- ③ APP_TYPE = sample_code_app



2. **app_main.mk** (path: `SDK_root/WE2_CM55M_APP_S/app/scenario_app/<scenario>/app_main.mk`)
(sample: `SDK_root/WE2_CM55M_APP_S/app/scenario_app/sample_code_app/app_main.mk`)

- ① TFLITE_ALGO = YOLO_FASTEST
- ② CIS = HM0360_MONO
- ③ TRANSMIT_PROTOCOL = SPI_MASTER



Firmware Image Generation (2)

- Execute the following operations step-by-step:

① Launch cmd.exe on PC and cd to SDK_root

② Execute command: **make clean**

③ Execute command: **make all**

- Make sure there are NO ERROR(s) at output message.

- If the compilation is completed, these files should be generated in the path:

path: SDK_root/WE2_CM55M_APP_S/obj_epii_evb_icv30_bdv10/gnu_epii_evb_QFN88/

(file: 1. WE2_CM55M_gnu_epii_evb_QFN88_s.elf

2. WE2_CM55M_gnu_epii_evb_QFN88_s.map)

④ Execute command: **make flash**

- Make sure the .elf and .map has been generated at the last step.

- If the flash is completed, the output.img should be generated at:

path: SDK_root/we2_ota_tool/img/output.img

⑤ Check the output.img has been generated.

1. Sample: cd to *SDK_root*

```
CA 系統管理員: C:\Windows\System32\cmd.exe
D:\workSpace\sdk_package\ SDK_root >
```

2. Sample: output message when “**make clean**” is complete.

```
C:\WINDOWS\system32\cmd.exe /C if exist obj_epii_evb_icv30_bdv10\gnu_epii_evb_QFN88
/S /Q obj_epii_evb_icv30_bdv10\gnu_epii_evb_QFN88
C:\WINDOWS\system32\cmd.exe /C if exist .sc.project C:\
make[1]: Leaving directory 'D:/workSpace/sdk_package/Himax'
clean complete.
```

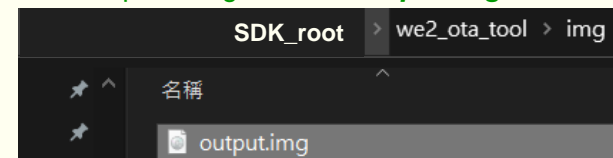
3. Sample: output message when “**make all**” is complete.

```
text      data      bss       dec       hex filename
27695      324      1596     29615     73af obj_epii_evb_icv30_bdv10\gnu_epii_evb_QFN88_s.elf
make[1]: Leaving directory 'D:/workSpace/sdk_package/Himax'
build complete.
```

4. Sample: output message when “**make flash**” is complete.

```
IMAGE GEN DONE
copy we2_image_gen_local\output_case3_secboot_nodiv\output
複製了 1 個檔案。
```

5. Sample: the generated *output.img*.



How to Burn Firmware Image to EVB

- The generated firmware can be burned to the EVB by these method:
 - ❖ **Burn by PC Tool:**
Refer to “2_EVK_and_PCTool_User_Guide_HX6538_AIoT_EVB_QFN88” to find the instructions about how to burn the output.img.
 - ❖ **Upgrade through OTA Tool:**
Refer to “3_OTA_User_Guide” to learn about how to use OTA to do FW upgrade.

HINT

- ❖ If there is no firmware in EVK, it can only be burned through PC Tool.
- ❖ Path of image: SDK_root/we2_ota_tool/img/**output.img**