

Drive for better vision



# OTA User Guide V1.1

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# Agenda

- **Check Before Starting OTA**
- **OTA Upgrade Operations**

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# Check Before Starting OTA

# Check Before Starting OTA

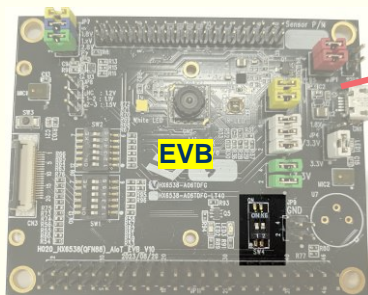
## 1. Does the EVB already been burned with any firmware?


- ❖ If do, the EVB can upgrade firmware through OTA.
- ❖ If not, the EVB **CANNOT** upgrade firmware through OTA.  
To use OTA, there must be any firmware on the EVB so that it can boot up correctly.

To learn more about burning firmware with PC tool,  
please refer to “[2\\_EVK\\_and\\_PCTool\\_User\\_Guide\\_HX6538\\_AIoT\\_EVB\\_QFN88](#)”.

## 2. Do the EVB and debug board already set to the normal mode?

- ❖ If not, two steps to set normal mode:
  - ① Turn off the EVB power.
  - ② Set the switches on EVB: **SWITCH [1, 2] = [OFF, ON]**



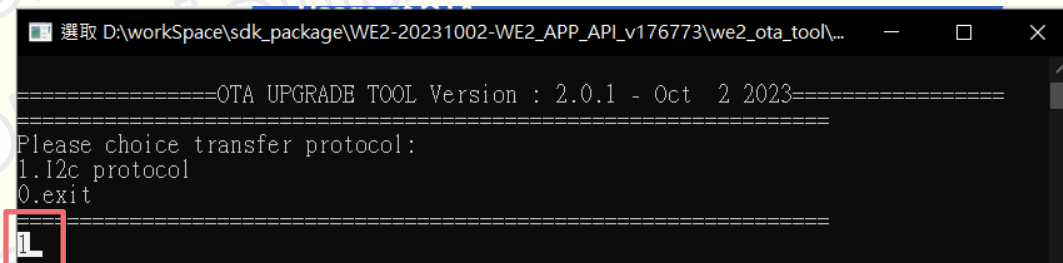
SWITCH SETTING	MODE
 1 2 [OFF, ON]	EVB: Normal mode

# OTA Upgrade Operations

# OTA Upgrade Operations (1/5)

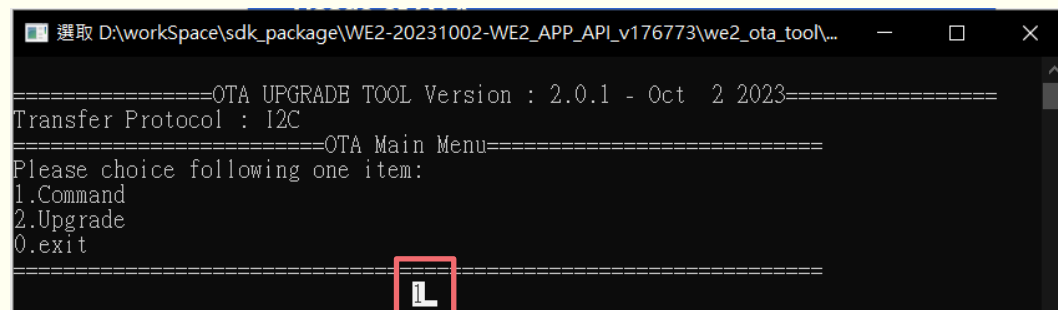
- Turn on the power of EVB
- Launch OTA tool  
(path: SDK\_root/we2\_ota\_tool/ota.exe)
- Operate by following steps:

① Key in “1” (1. I2c protocol)



```
=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Please choice transfer protocol:
1.I2c protocol
0.exit
```

② Key in “1” (1. Command)



```
=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Transfer Protocol : I2C
=====OTA Main Menu=====
Please choice following one item:
1.Command
2.Upgrade
0.exit
```

# OTA Upgrade Operations (2/5)

## ③ Key in “22” (22. NO\_BUSY\_PIN)

```
=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Transfer Protocol : I2C
=====OTA Main Menu=====
Please choice following one item:
1.Command
2.Upgrade
0.exit

=====
1
===== Menu:Busy Pin menu =====
00. PA0          01. PA1          02. PA2
03. PA3          04. PB2          05. PB3
06. PB4          07. PB5          08. PB6
09. PB7          10. PB8          11. PB9
12. PB10         13. PB11         14. SEN_TRIG
15. SEN_FAE      16. SEN_CSW0     17. SEN_CSW1
18. SEN_INT      19. SEN_GPIO    20. SEN_I2CM_SDA
21. SEN_I2CM_SCL 22. NO_BUSY_PIN

22
```

## ④ Key in “8” (8. Intoupg)

```
=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Transfer Protocol : I2C
=====OTA Command Menu=====
Please choice following one item:
1.Get OTA Loader Version.....[OTA LOADER]
2.Read WE2 Chip id.....[OTA LOADER]
3.Getstatus (Get WE-11 current status).....[OTA LOADER]
4.ReBoot WE11.....[OTA LOADER]
5.Busy pin select.....[OTA LOADER]
6.Read busy pin select.....[OTA LOADER]
7.Reserved.....[NONE]
8.Intoupg.....[APPLICATION]
0.exit/back

8
```

Hint: If you also start a log monitor, the console of log monitor will show that:

```
COM5:115200baud - Tera Term VT
File Edit Setup Control Window Help
[MSG] cmd_id: 0x8
[MSG] payload_len: 0x0
hx_lib_i2ccomm_validate_checksum
Payload len:0x0000, CRC val: 0x10f5, CRC cal:0x10f5
===I2CCOMM_CMD_OTA_JUMP2UPG===
1st BL Build DATE=Aug  1 2023, 0x00010001
jump_addr=0x3401f000
Compiler Version: ARM CLANG, Clang 12.0.0 (ssh://ds-germit/armcompile
571dc92e0d3fb7b4e2)
set_IP_secure done
[WE2 OTA FIRMWARE(Sep 28 2023, 16:02:51)] Daemon Process
Event Handler
```

# OTA Upgrade Operations (3/5)

## ⑤ Press any key

```
D:\workSpace\sdk_package\WE2-20231002-WE2_APP_API_v176773\we2_ota_tool\ota.exe

=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Transfer Protocol : I2C
=====OTA Command Menu=====
Please choice following one item:
1.Get OTA Loader Version.....[OTA LOADER]
2.Read WE2 Chip id.....[OTA LOADER]
3.Getstatus (Get WE-II current status).....[OTA LOADER]
4.ReBoot WEII.....[OTA LOADER]
5.Busy pin select.....[OTA LOADER]
6.Read busy pin select.....[OTA LOADER]
7.Reserved.....[NONE]
8.Intoupg.....[APPLICATION]
0.exit/back

=====
8
Intoupg
WE2_OTA_BUSY_PIN_SELECT
pinmux_gpio = 22
Press Enter key to continue..._
```

## ⑥ Key in “0” (0. exit/back)

```
選擇 D:\workSpace\sdk_package\WE2-20231002-WE2_APP_API_v176773\we2_ota_tool\o...

=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Transfer Protocol : I2C
=====OTA Command Menu=====
Please choice following one item:
1.Get OTA Loader Version.....[OTA LOADER]
2.Read WE2 Chip id.....[OTA LOADER]
3.Getstatus (Get WE-II current status).....[OTA LOADER]
4.ReBoot WEII.....[OTA LOADER]
5.Busy pin select.....[OTA LOADER]
6.Read busy pin select.....[OTA LOADER]
7.Reserved.....[NONE]
8.Intoupg.....[APPLICATION]
0.exit/back

=====
0
```



# OTA Upgrade Operations (4/5)

## ⑦ Key in “2” (2. Upgrade)

```
=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Transfer Protocol : I2C
=====OTA Main Menu=====
Please choice following one item:
1.Command
2.Upgrade
0.exit
=====
2
```

## ⑧ Key in “1” (1. UPGRADE ALL IMAGE(Upgrade all image file))

```
=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Transfer Protocol : I2C
=====OTA Upgrade Menu=====
Please choice following one item:
1.UPGRADE ALL IMAGE(Upgrade all image file)
2.UPGRADE All APPLICATIONs
3.UPGRADE NS APPLICATIONs
0.exit/back
=====
1
```

# OTA Upgrade Operations (5/5)

## ⑧ Wait the OTA upgrade...

```
D:\workspace\sdh_package\HimaxWE2_SDK_0.7_20231003\we2_ota_tool\ota.exe --
=====OTA UPGRADE TOOL Version : 2.0.1 - Oct  2 2023=====
Transfer Protocol : I2C
Please choice following one item:
1.UPGRADE ALL IMAGE(Upgrade all image file)
2.UPGRADE ALL APPLICATIONS
3.UPGRADE NS APPLICATIONS
0.exit/back

1
Upgrade Image Upgrade Started
img_file = img_output.img
cstm_layout_file = img/cstm_layout.bin
Getstatus
status = 0x00050000
====>OTA_STATUS_OTA_CMD_BUSY_PIN_SELECT
status = 0x00050000
====>OTA_STATUS_OTA_CMD_BUSY_PIN_SELECT
hx_img_upgrade
hx_memdsp->info.num_sbs = 0x8
part_idx = 0 pat_type = 0
start cmd : 0x0, 0x4ac0001, 0x14000, 0x14000, 0xfab3
-count_length = 0x0
Getstatus
status = 0x00130000
```

## ⑨ OTA upgrade finished

```
D:\workspace\sdh_package\HimaxWE2_SDK_0.7_20231003\we2_ota_tool\ota.exe --
status = 0x00120000
====>OTA_STATUS_OTA_RECEIVE_UPGRADE_DATA_DONE
Burn flash successs
Getstatus
status = 0x000c0000
====>OTA_STATUS_OTA_LOADER_IDLE
status = 0x000c0000
====>OTA_STATUS_OTA_LOADER_IDLE
Getstatus
status = 0x000c0000
====>OTA_STATUS_OTA_LOADER_IDLE
status = 0x000c0000
====>OTA_STATUS_OTA_LOADER_IDLE
ReBoot WE2 Upgrade Finished
upgrade success
Press Enter key to continue...
```