MT7623 Flashtool
Quick Start

Revision History

| Revision	Date	Author	Description
v1	2015/01/26	Landen	Initial Version
v2	2015/01/27	Landen	(P6.) Add USB driver download information
v3	2015/01/30	Landen	(P12. P25.) The location of preloader image must be set.
v4	2015/02/26	Landen	(P6.) Add file path.
v5	2015/05/05	Landen	Correct the product name.

Agenda

- Initialization SOP of Flashtool download.
  - Environment setup.
  - Format the flash.
  - Download images.
- FAQ
  1. How to download a image after SOP done.
  2. How to get debug logs when something wrong of Flashtool.
  3. How to verify the USB driver is installed successfully.

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Setup DUT Environment

- At least 1 un-used USB port on PC/NB are required for downloading images by flashtool.

- It is recommended to use another USB port or 4-pin UART-Lite cable for console log.

12V 1Aup Power Source

Console Board. (Recommended)

Micro-USB used to connect PC and DUT
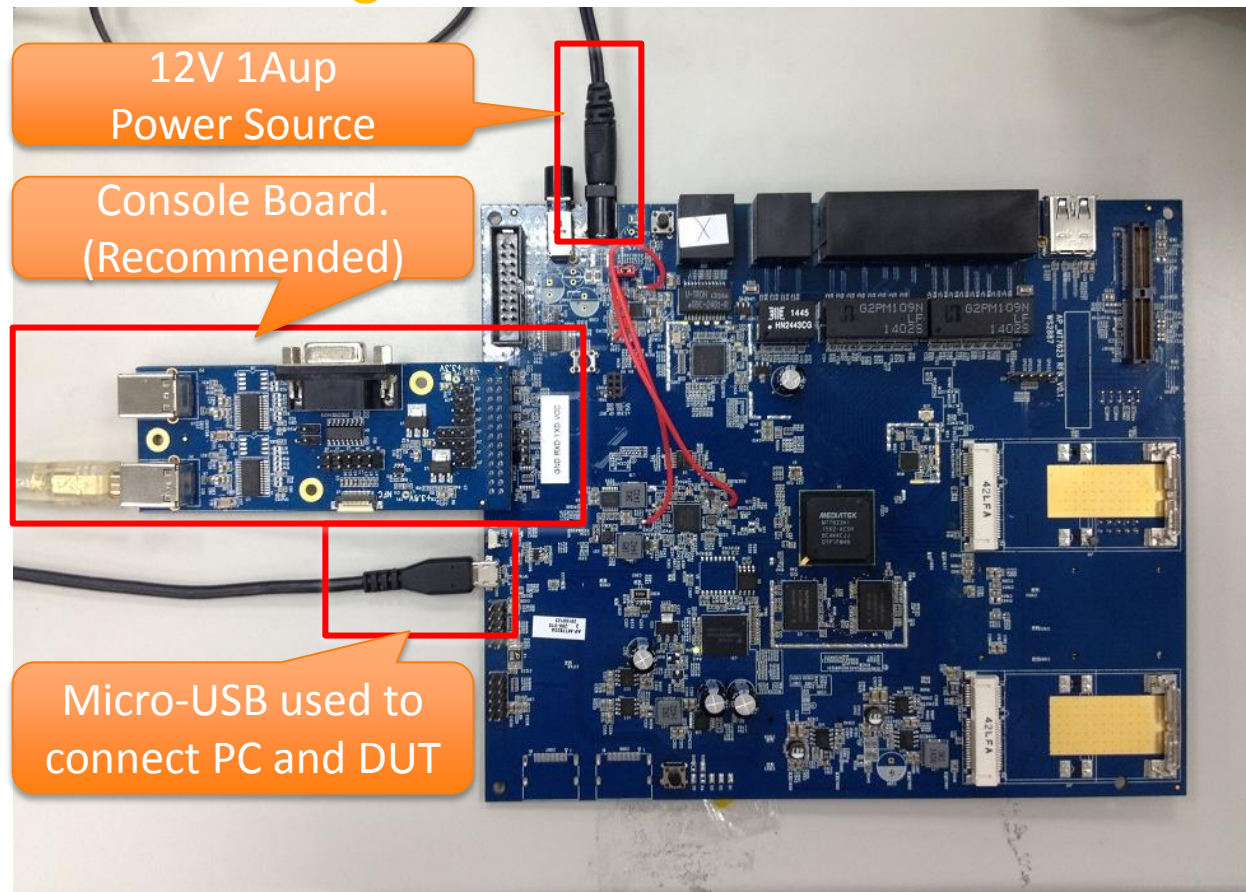
Setup DUT Console

- You can choose either a normal 4-pin UART-Lite cable or a *daughter board (DTB)* for console connection.

- Log console is UART-Lite#2.

- Baudrate is 115200.
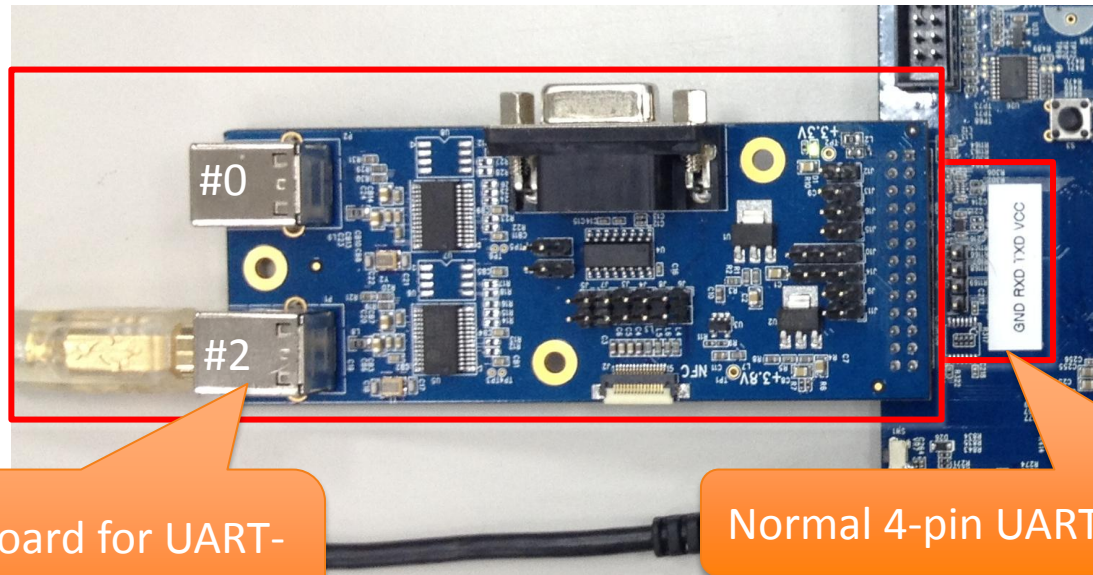
Daughter board for UART-Lite#0 and UART-Lite#2

Normal 4-pin UART-Lite port

Install USB Driver

1) Extract "*Driver_auto_Installer_v5.1341.02.rar*"
2) Double click "*DriverInstall.exe*"
3) Press "Next" button until finish installation.
4) Note that if you encounter USB detection problem, please refer to the FAQ 3 for USB debugging.
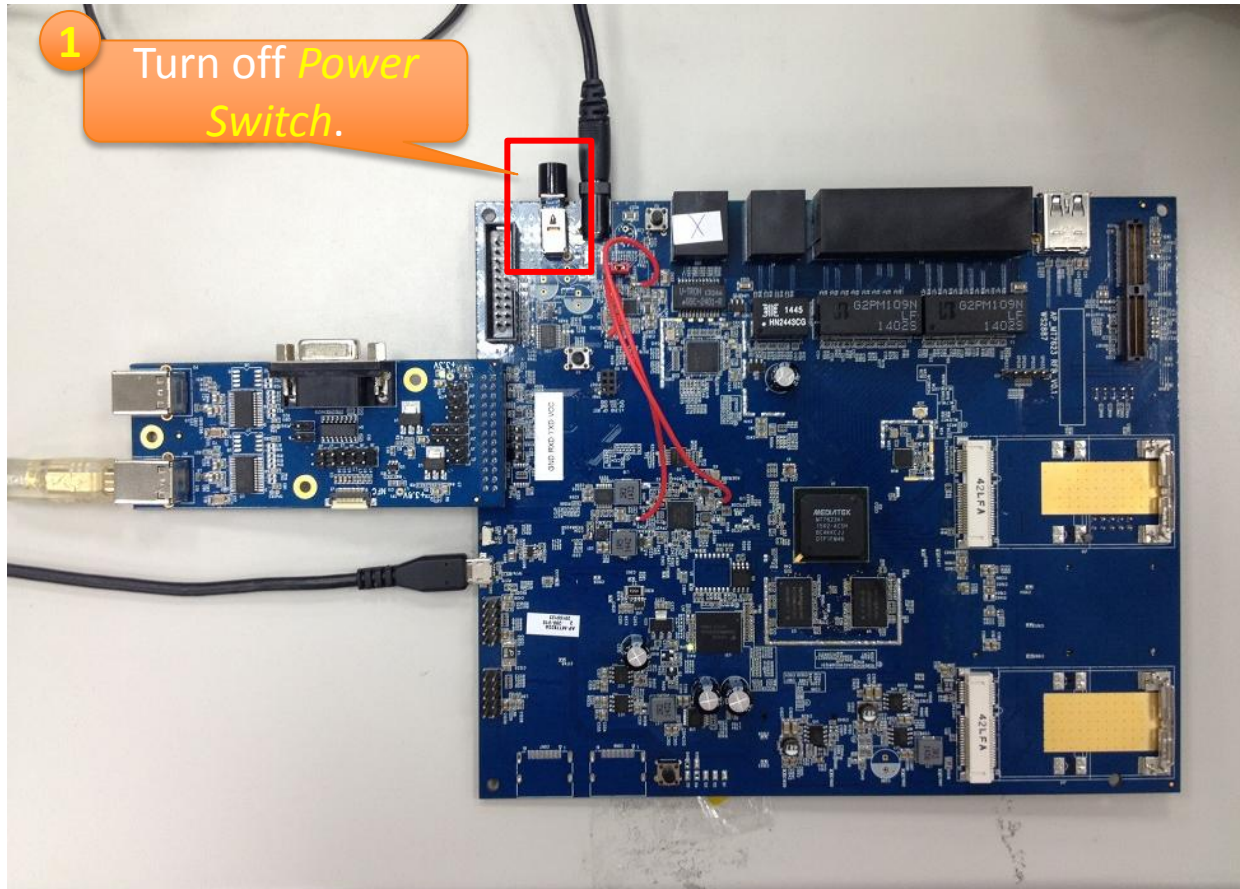
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- **Initialization SOP of Flashtool download.**
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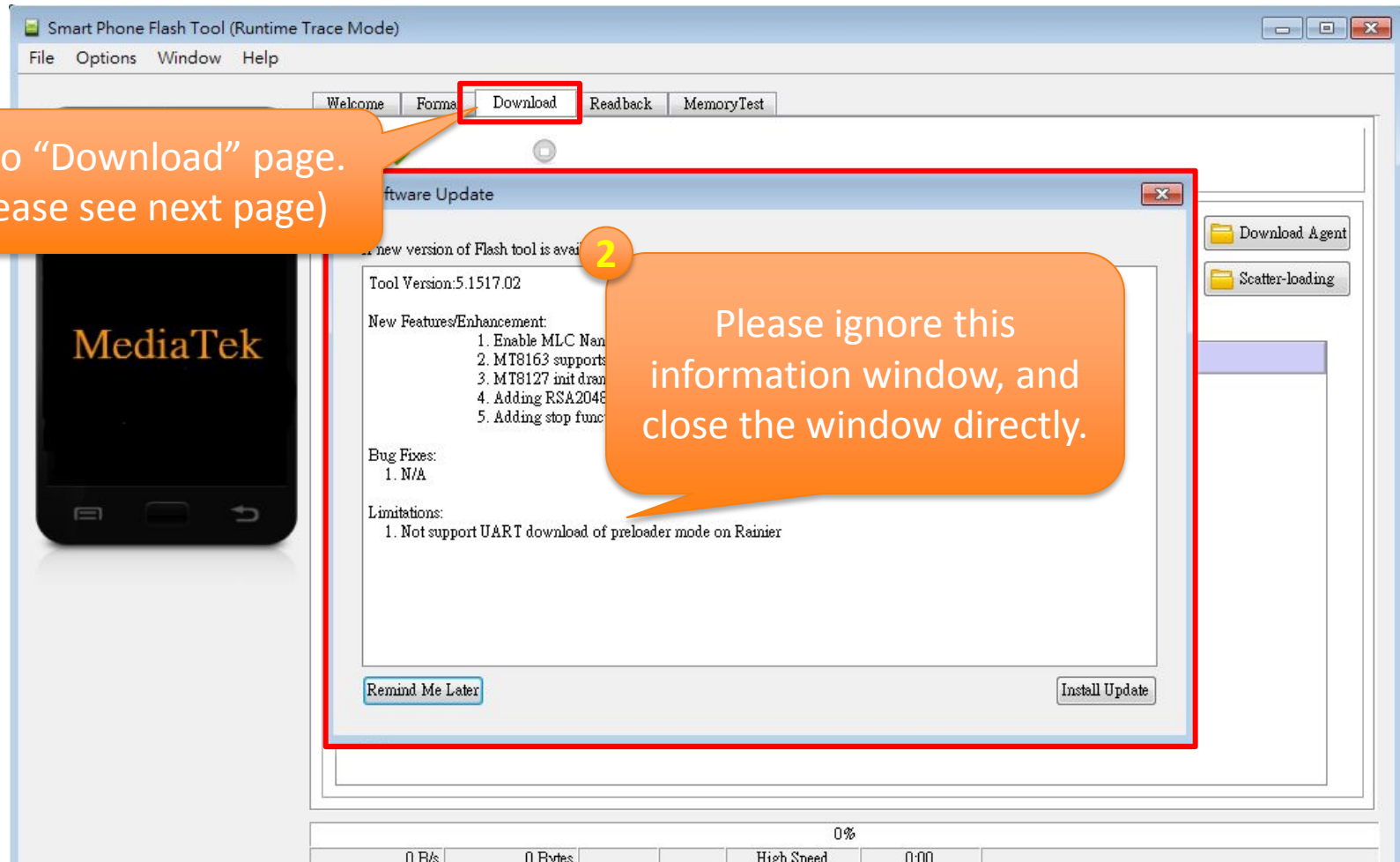 3. How to verify the USB driver is installed successfully.

2015-08-10

- Power off DUT by power switch.

Run Flashtool on PC/NB (2/8)

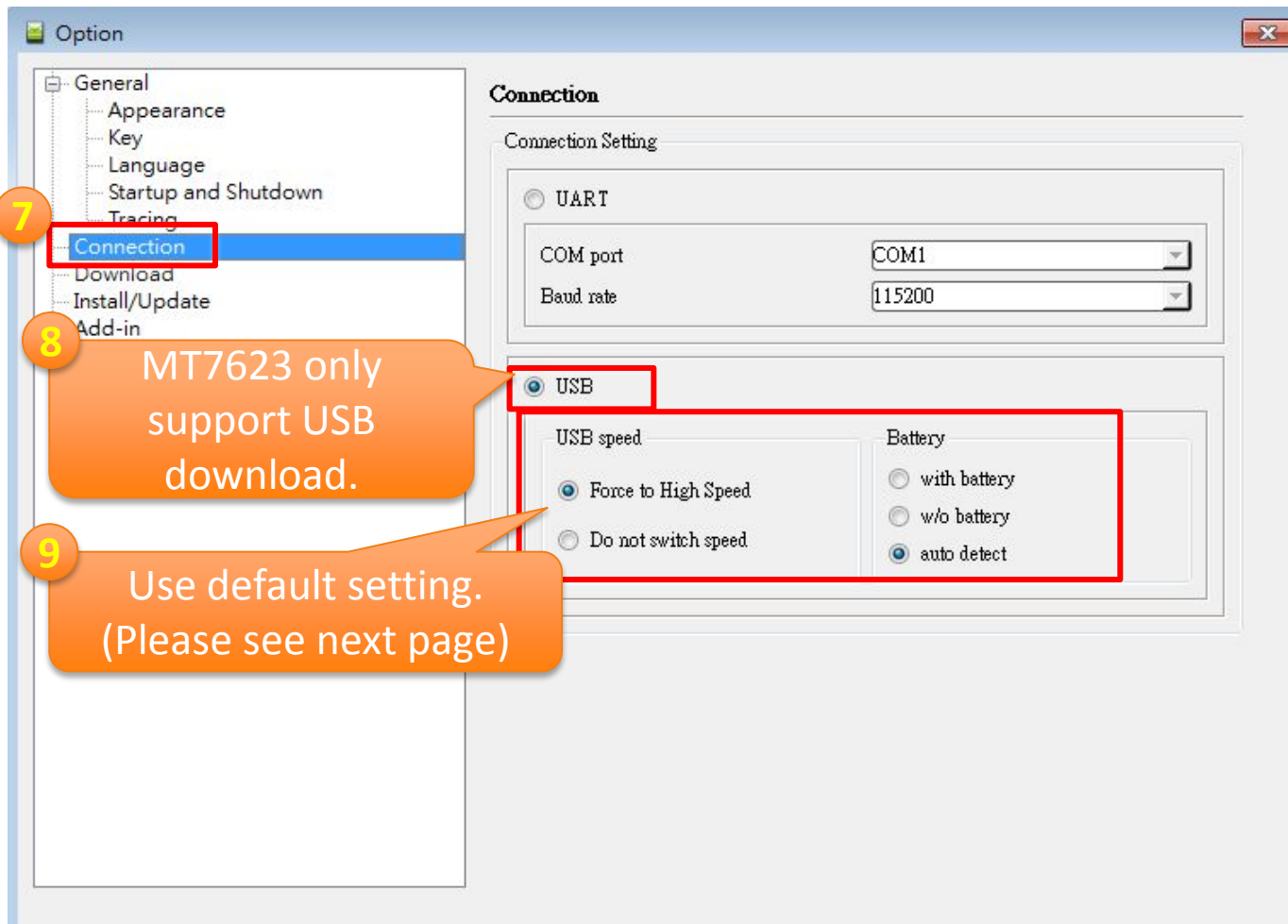- Go to "FlashTool_win32" folder.
- Run the 📁 flash_tool.exe

3 Go to "Download" page. (Please see next page)

2 Please ignore this information window, and close the window directly.

Run Flashtool on PC/NB (3/8)

- Choose DA and Scatter file.

6 Setup download port type. (Please see next page)

Smart Phone Flash Tool

File Options

Welcome | Format | **Download** | Readback | MemoryTest

Download   Stop

- Qt assistant.exe
- auth_sv5.auth
- Authentication.dll
- brom.ini
- BromAdapterTool.ini
- console_mode.xsd
- CustPT.ini
- download_scene.ini
- flash_tool.exe
- flashtool.qch
- flashtool.qhc
- **4** hToolLib.dll
- Fl
- hi
- K
- msvcp90
- msvcr~.dll
- **MTK_AllInOne_DA.bin**
- option.ini

Download-Agent h_MT7623_MT7683_Images\FlashTool_MT7623_MT7683_emmc_nand_v5.1\MTK_AllInOne_DA_MT7623.bin   Download Agent

Scatter-loading File   ▼   Scatter-loading

Download Only ▼

☑ Name	Begin Address	End Address	Location

5 Select MT7623 *Scatter file* .

Select *Download Agent(DA)*

- boot.img
- lk.bin
- preloader.bin
- **MT7623_Android_scatter.txt**
- EBR1
- EBR2
- MBR

0%

| 0 B/s | 0 Bytes | | High Speed | 0:00 | |

Setup Download Port (4/8)

- The flashtool communicates with DUT by Micro-USB.

Option

General
- Appearance
- Key
- Language
- Startup and Shutdown
- Tracing

7 Connection
- Download
- Install/Update
- Add-in

8 MT7623 only support USB download.

9 Use default setting. (Please see next page)

Connection

Connection Setting

○ UART

| COM port | COM1 |
| Baud rate | 115200 |

◉ USB

USB speed
- ◉ Force to High Speed
- ○ Do not switch speed

Battery
- ○ with battery
- ○ w/o battery
- ◉ auto detect

Select Preloader Image (5/8)

- The preloader image must be selected for necessary device information.

10 Select partition of preloader images for downloading

11 Click "Location" field of the row to select correct image. Flashtool will search proper images in the same folder of the *Scatter file.*
(Please see next page)

Format Whole Flash (6/8)

- Format flash when first time use DUT or when change the preloader image.

INTERNAL USE · 2015-08-10
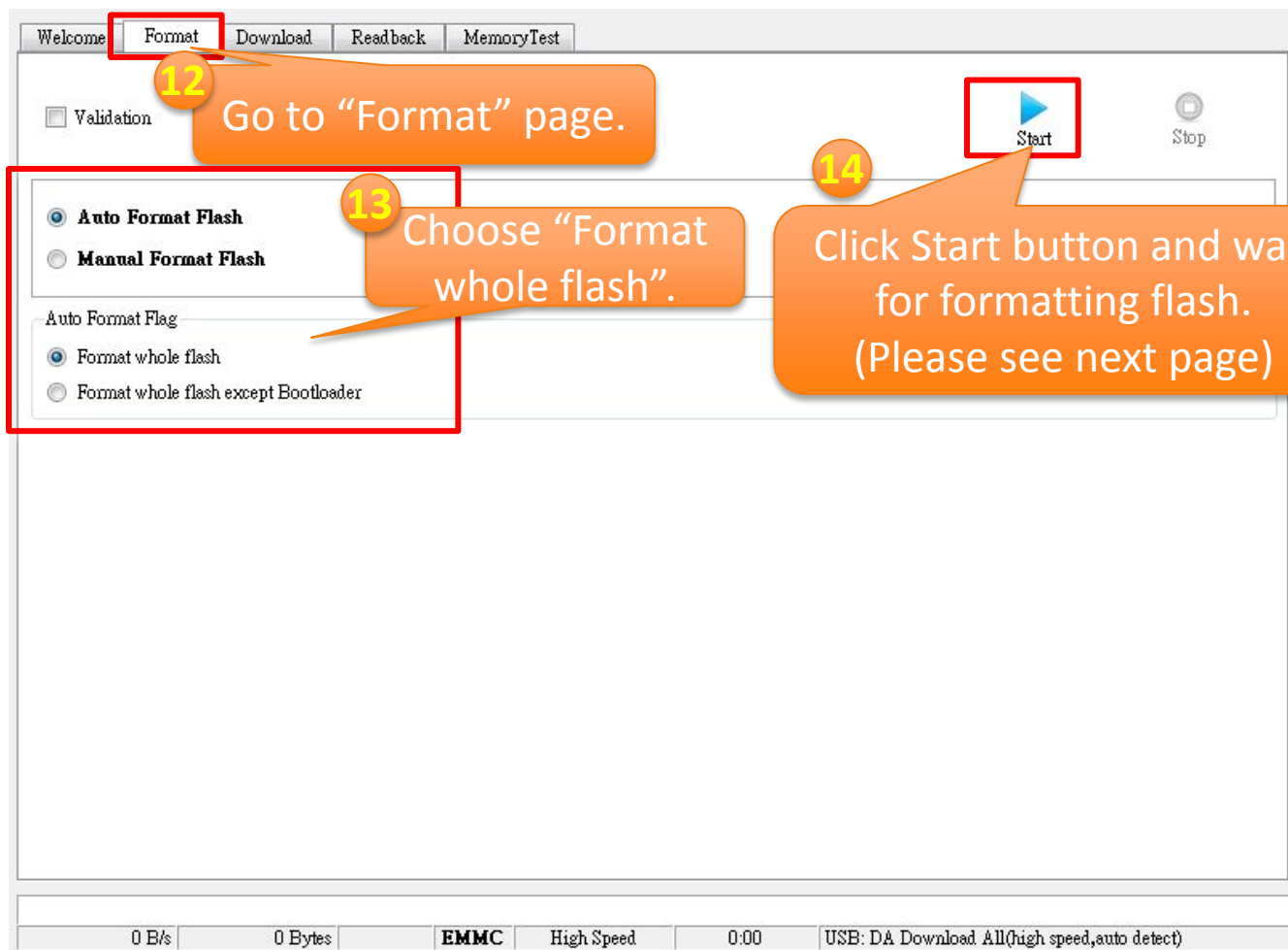
Power On DUT to Start Format (7/8)

- Make sure that Micro-USB cable connects DUT and the PC.

15 After power on the DUT, the format process starts.
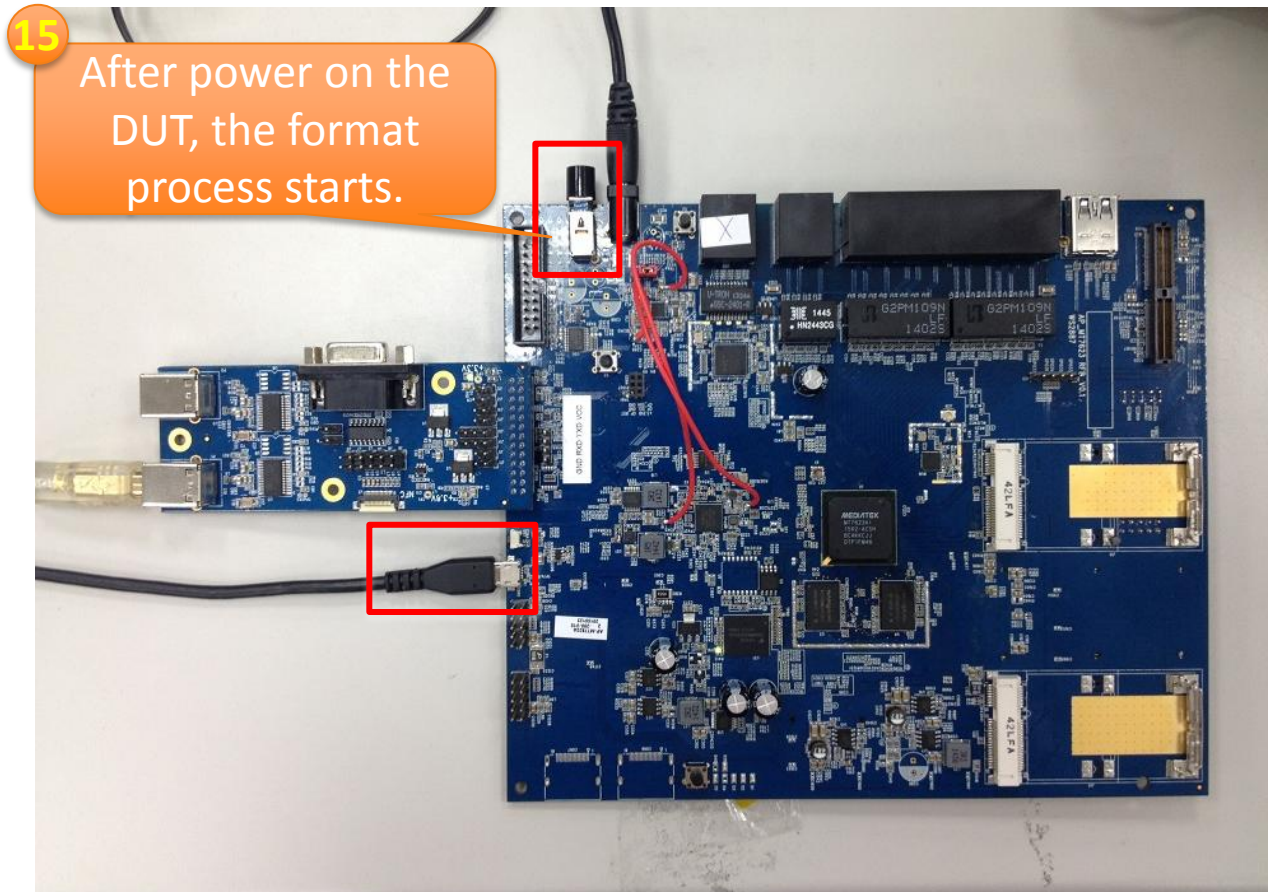
Format Successfully (8/8)

- After a while, the window will pop-up to show the process finished. If NG, please refer to following FAQ for debugging.
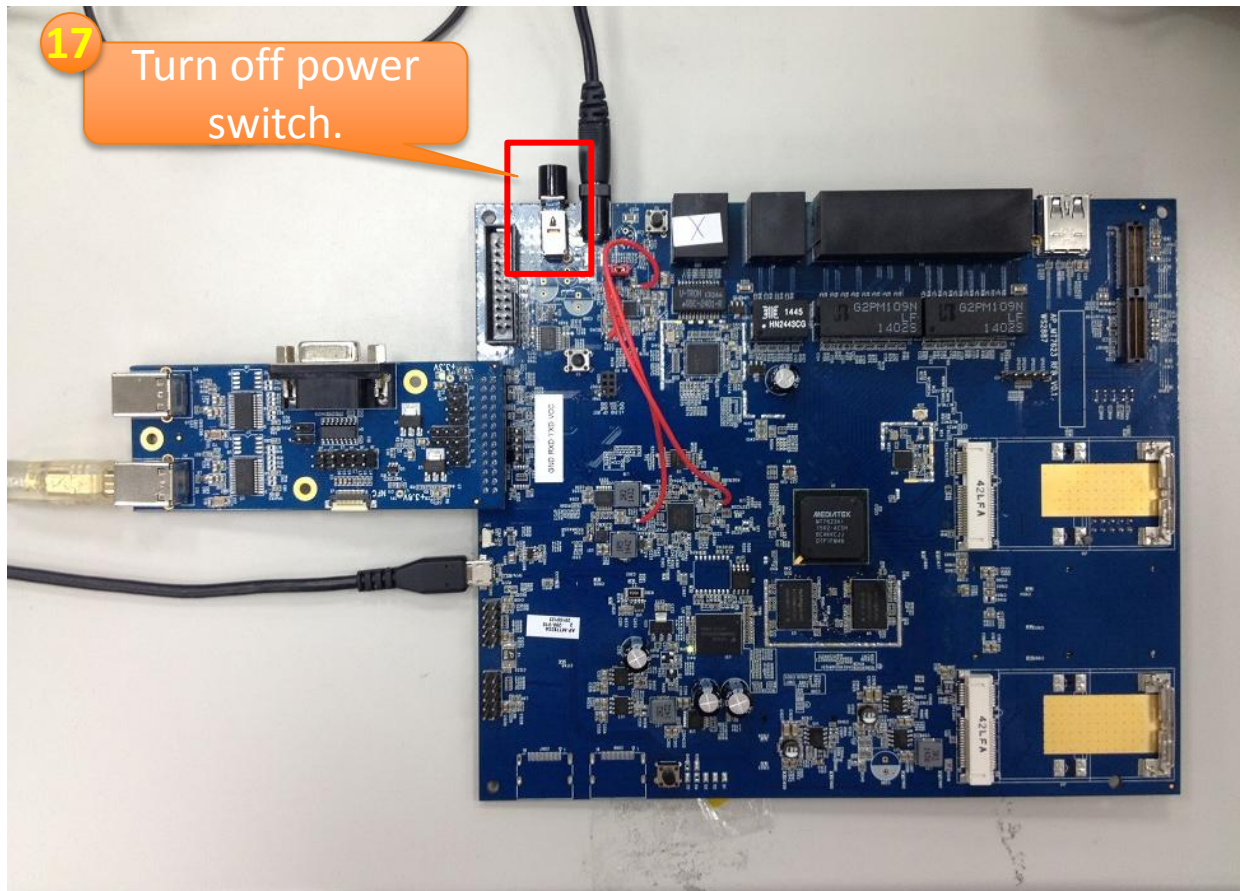
[FAQ 3] for process not start.

[FAQ 2] for process failed.
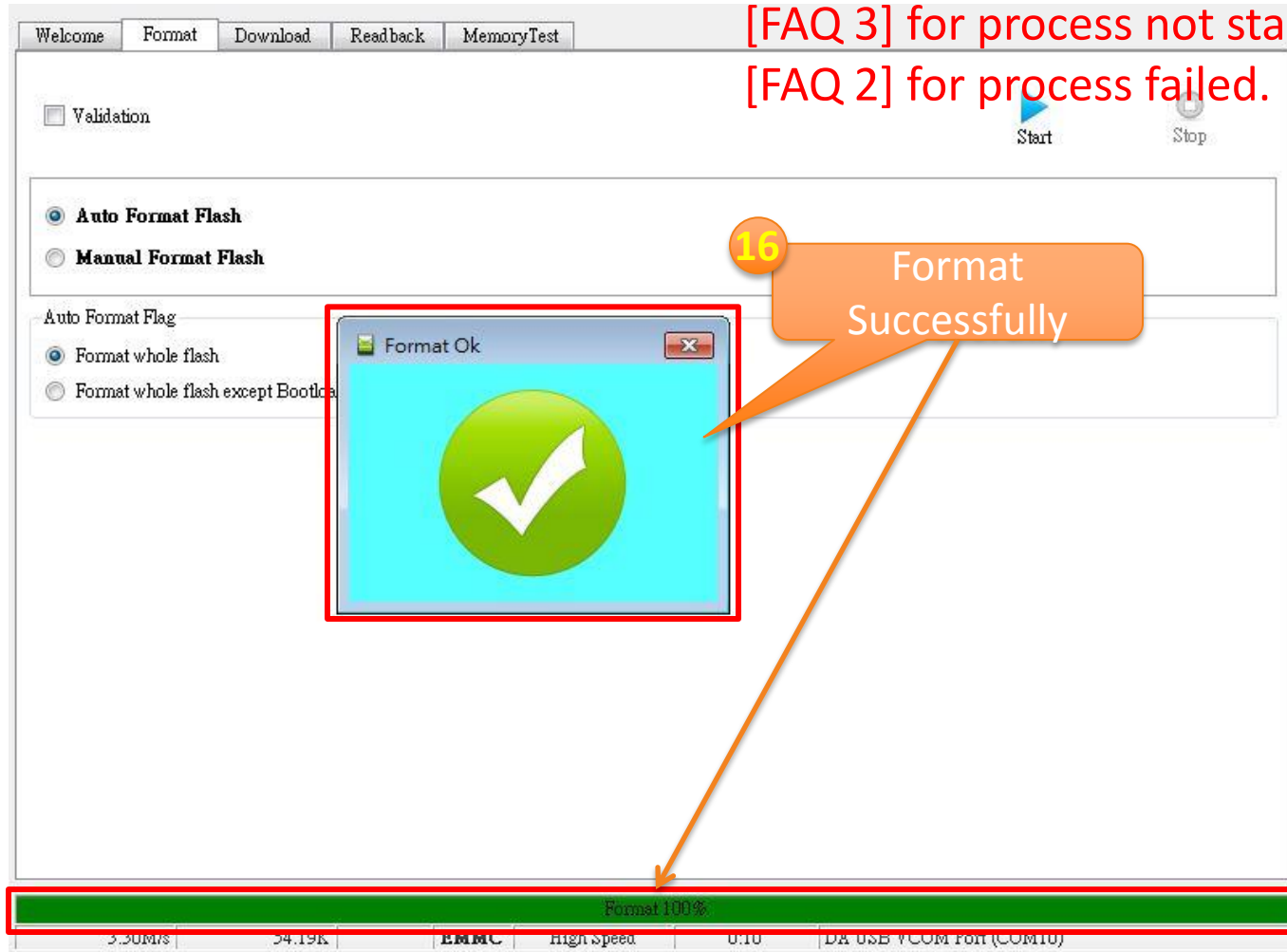
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Power off DUT Again (1/5)

- Power off DUT by power switch.

17 Turn off power switch.

Select Images (2/5)

Prepare to Download Images (3/5)

- Make sure the DUT is in power-off state before this step.

20 Press "Download" button to enter download state.

	Name	Begin Address	End Address	Region	Location
☑	PRELOADER	0x0000000000000000	0x0000000000015543	EMMC_BOOT_1	C:\Users\mtk06339\Desktop\SDK_5000_au...
☑	MBR	0x0000000000000000	0x00000000000001ff	EMMC_USER	C:\Users\mtk06339\Desktop\SDK_5000_au...
☑	EBR1	0x0000000000080000	0x00000000000801ff	EMMC_USER	C:\Users\mtk06339\Desktop\SDK_5000_au...
☑	UBOOT	0x0000000001d20000	0x0000000001d53aab	EMMC_USER	C:\Users\mtk06339\Desktop\SDK_5000_au...
☑	BOOTIMG	0x0000000001d80000	0x00000000020aefff	EMMC_USER	C:\Users\mtk06339\Desktop\SDK_5000_au...
☐	RECOVERY	0x0000000002d80000	0x0000000000000000	EMMC_USER	
☐	SEC_RO	0x0000000003d80000	0x0000000000000000	EMMC_USER	
☐	LOGO	0x0000000004400000	0x0000000000000000	EMMC_USER	
☑	EBR2	0x0000000004700000	0x00000000047001ff	EMMC_USER	C:\Users\mtk06339\Desktop\SDK_5000_au...
☐	TEE1	0x0000000015180000	0x0000000000000000	EMMC_USER	
☐	TEE2	0x0000000015680000	0x0000000000000000	EMMC_USER	
☐	ANDROID	0x0000000015d80000	0x0000000000000000	EMMC_USER	
☐	CACHE	0x0000000055d80000	0x0000000000000000	EMMC_USER	

Start Download Process (4/5)

- Make sure that Micro-USB cable connects DUT and the PC.

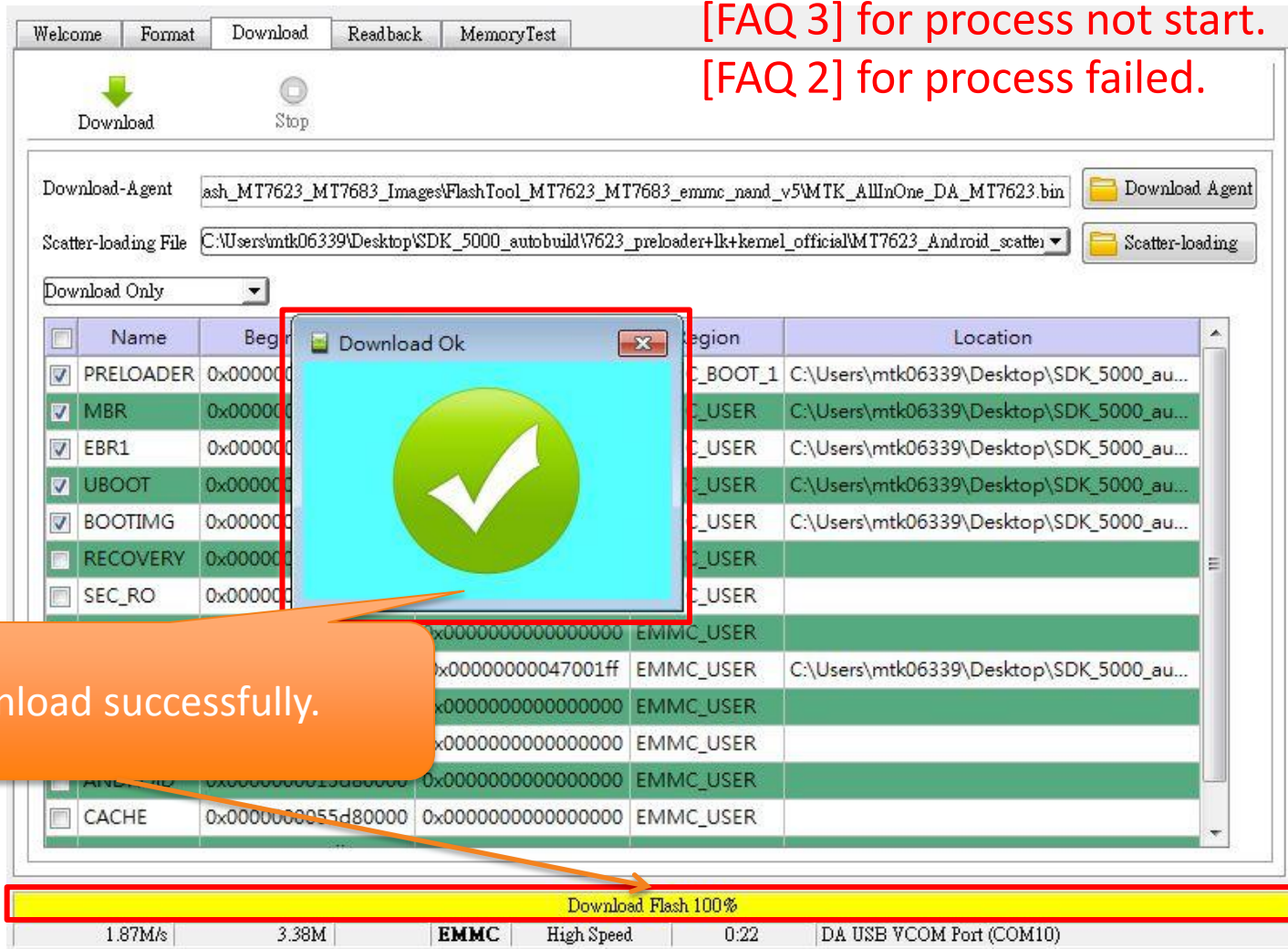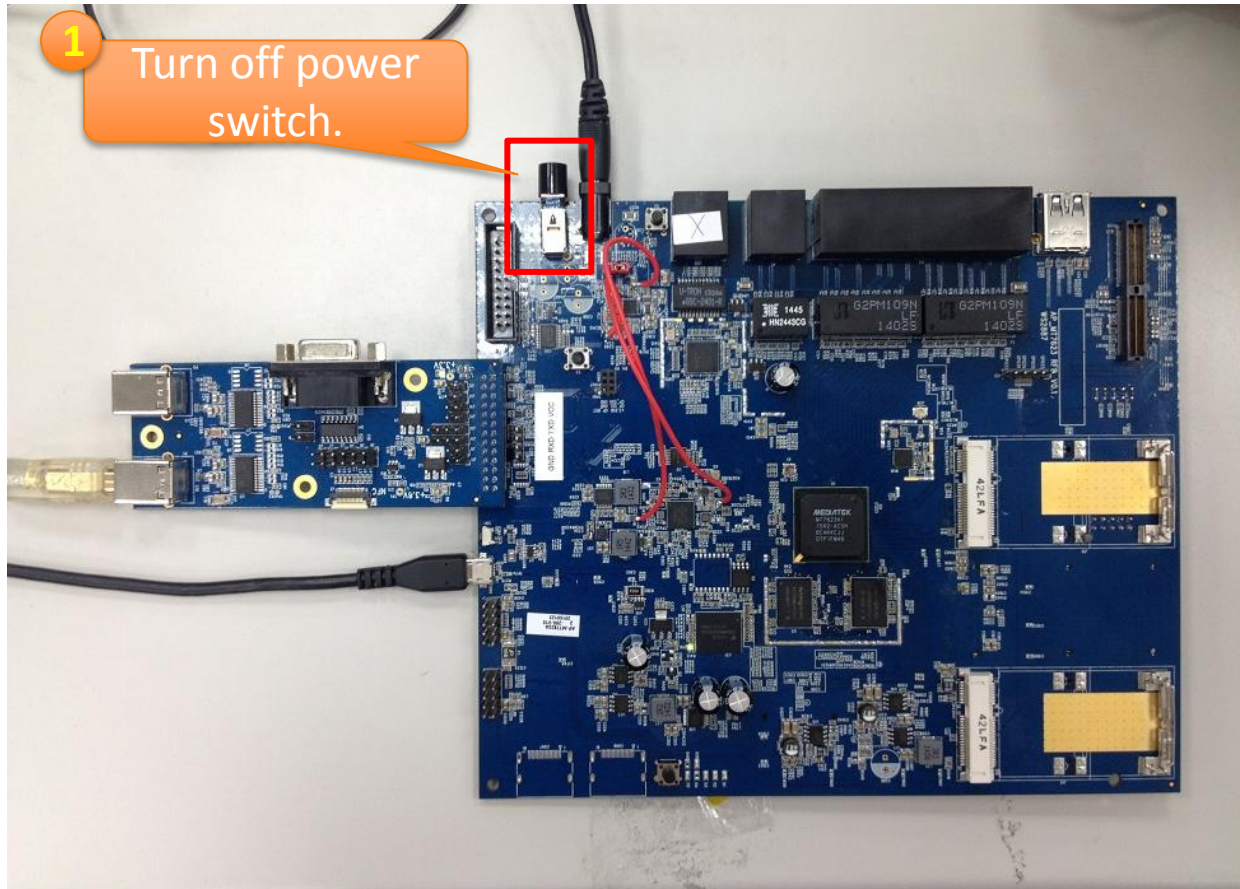**21** After power on the DUT, the download process starts.
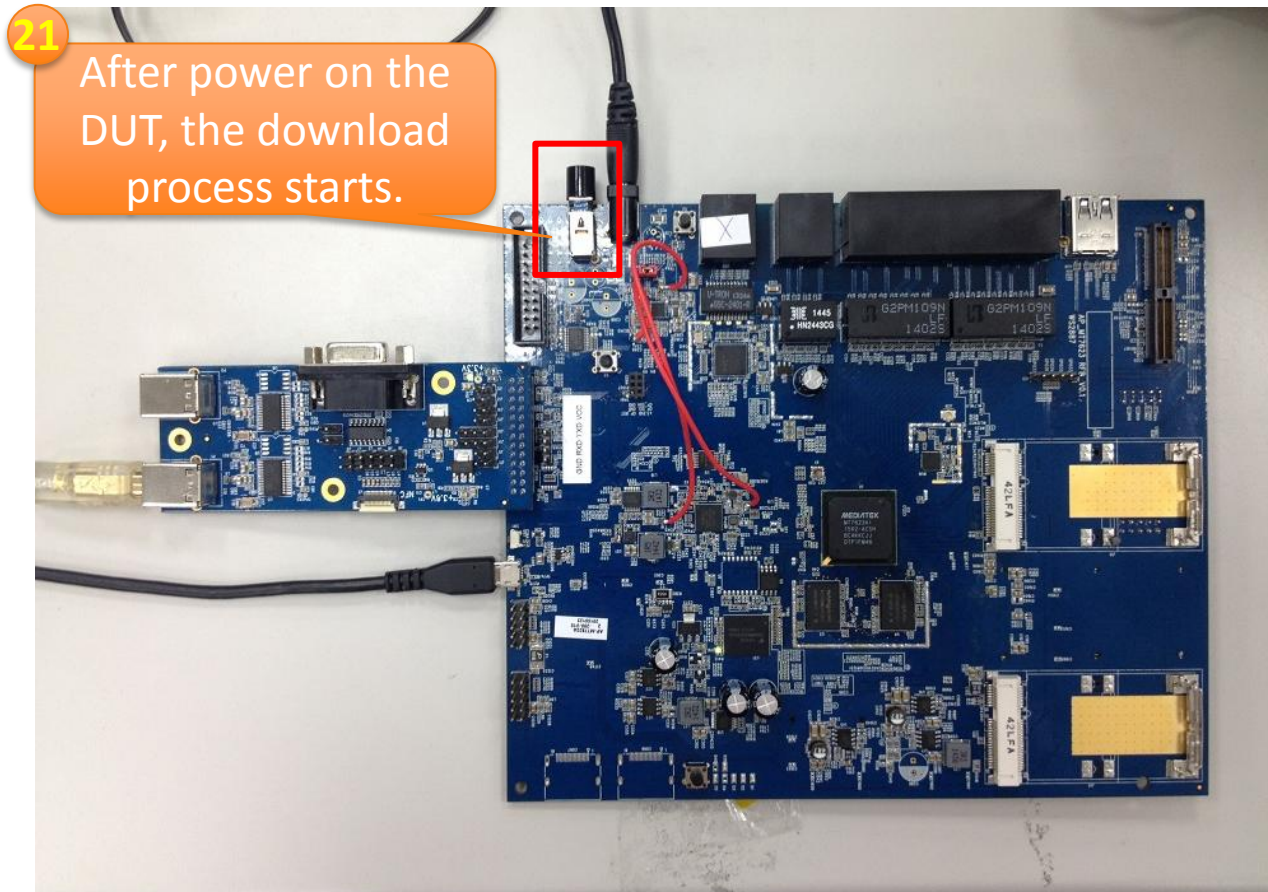
Download Successfully (5/5)

- After a while, the window will pop-up to show the process finished. If NG, please refer to following FAQ for debugging.

[FAQ 3] for process not start.

[FAQ 2] for process failed.

22

Download successfully.

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Conditions

- Has Finished the SOP already.

- There is a preloader image in the flash.
  - Note that bad preloader images will cause booting fail.

- Only want to update some images.

Power off DUT (1/3)

- Power off DUT by power switch.

1 Turn off power switch.

Select Images (2/3)

Start Download Process (3/3)

- Make sure that Micro-USB cable connects DUT and the PC.
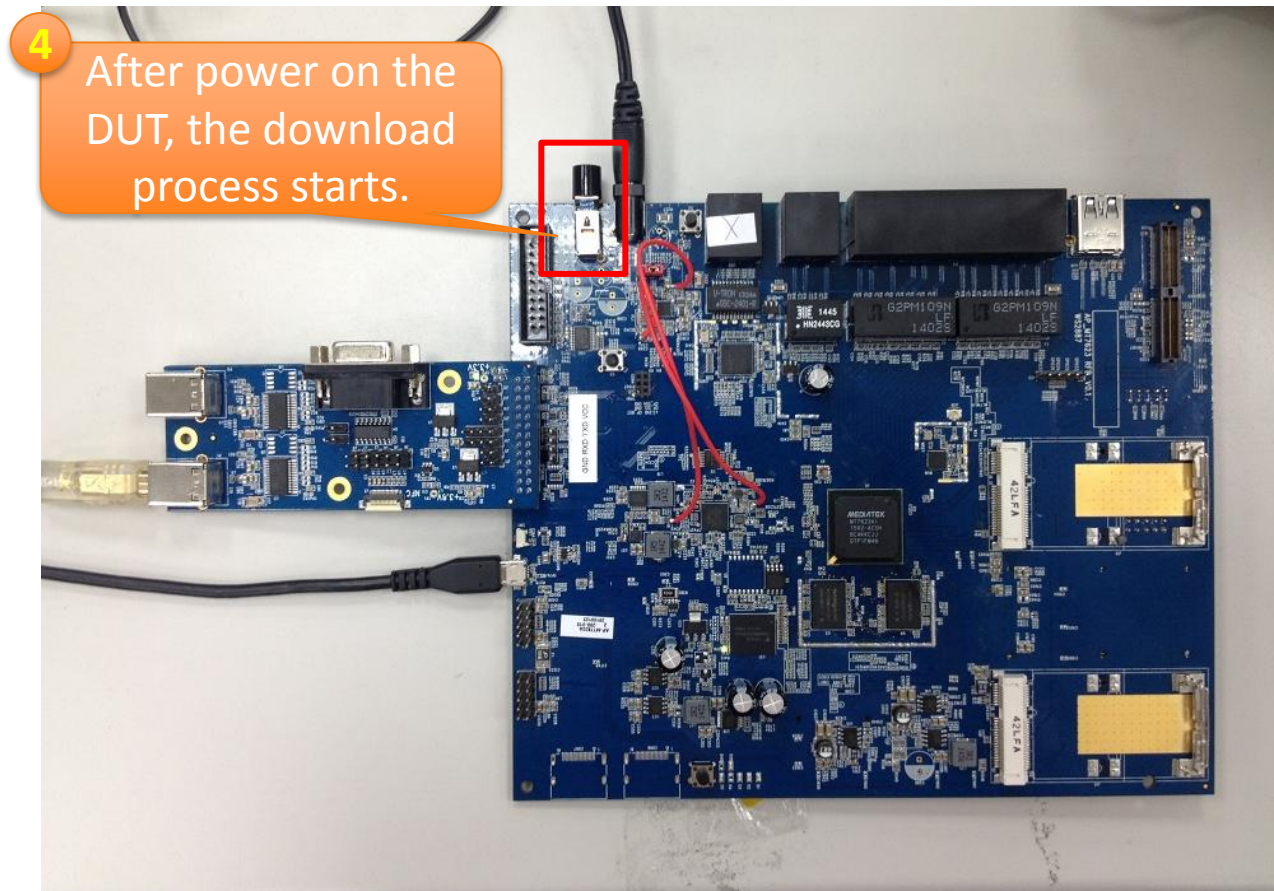
4 After power on the DUT, the download process starts.

     2015-08-10

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Screen Capture the Error Message

- For example, this message means flash partitions described in the images is different from the current flash partitions.
- Please format the flash first, and download images again.
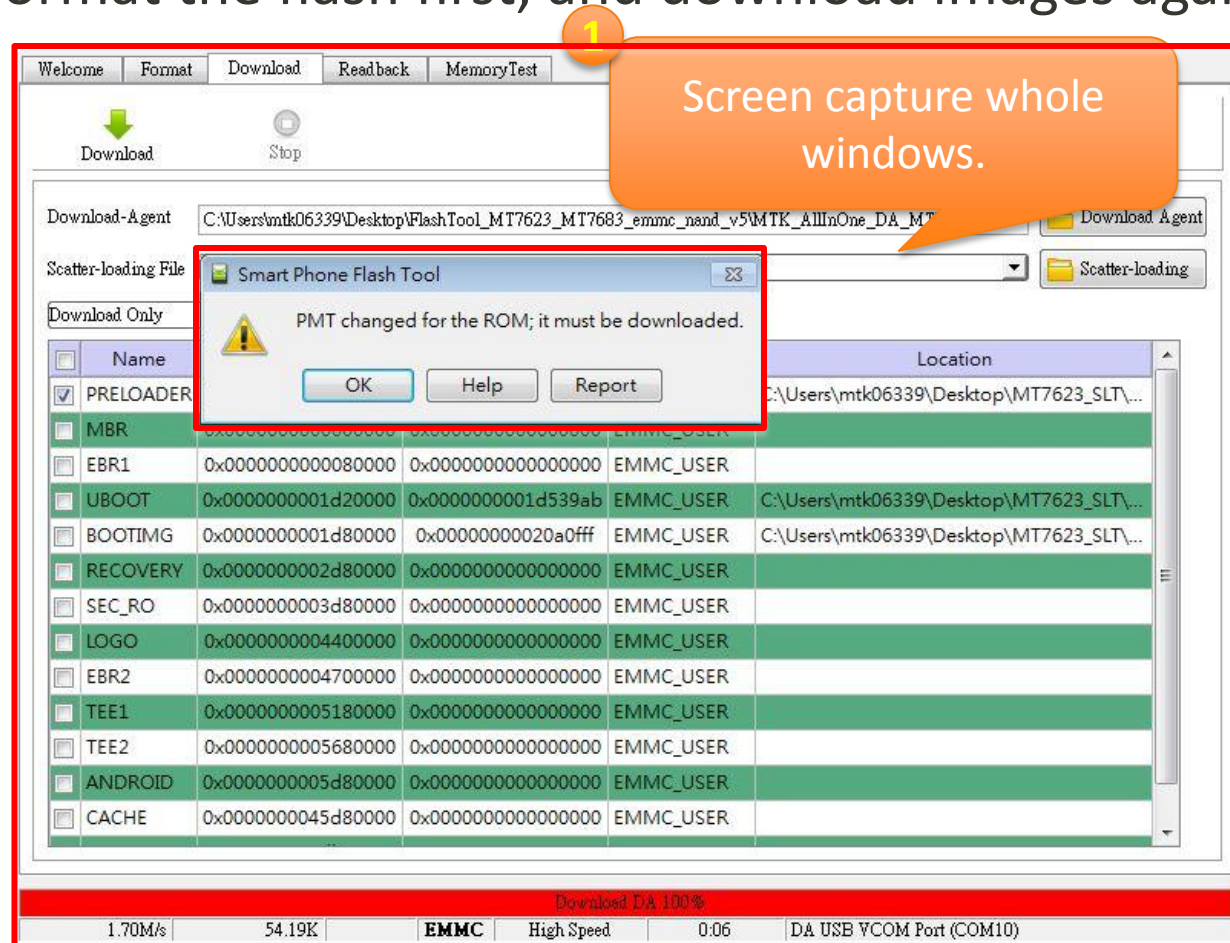
Collect Debug Logs

- Make sure the DUT is in power-off state before this step.

Provide the **latest log** of flashtool to Flashtool owner for debug.

Note that the complete **console log** of DUT when downloading images is also required.

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USB Driver Verification

- If the USB driver is successfully installed. It will show in the device list of PC as DUT power up.

  - Note that this COM port is used to communicate with PC tools in early boot up process, so it will be disabled in a short time if PC tools are not detected.

- If you do not see the "MTK USB Port" device in the device list, please check the following steps.

  - Try other USB port of PC.

  - Search unknown USB device in the device list, and install USB driver again manually.

  - Try reboot the PC.

  - Try another PC.

  - Try another DUT if above steps are NG.