Dell Open Source Guide

For Venue7 3740 and Venue8 3840

Version: 1.00

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Dell Tablet Flash Notes

Welcome to the Dell Open Source Guide. Here you'll find the guide that describes on how to download, build and flash the appropriate kernel for Dell Venue7 3740/Venue8 3840 tablet device.

* For Wi-Fi/LTE device on A195

Prerequisite System Setup

1) Operating Systems

   - Windows 7

   - Windows 8.1 desktop mode

2) A micro-SD card of 1GB or higher.

3) All anti-virus software should be disabled when to flash SW into device.

4) Download and install Dell driver and the flashing tool:

   - IntelAndroidDrvSetup1.5.0.exe

   - P708T_Driver_V1.0.0.msi

   - iSocUSB-Driver-Setup-1.0.4.zip

   - xFSTK_downloader_1.5.1.zip

*** You MUST do "Flash A195 image to the tablet" part firstly if your tablet's build number is not "YTP802A119500" or "YTP802A519500". (Build number is here: Settings ->About tablet ->Build number)**

*** WARNING: The data on the tablet device will be LOST when to flash A195 image, please make sure you have already backed up data of device firstly.**

A. Flash A195 image to the tablet

1) Download and extract tar package, for A195 Wi-Fi, is A195/Unbrick/YTP802A119500-2014-07-16-22.tgz; for A195-LTE, is A195/Unbrick/YTD802A519500-2014-07-16-16.tgz.

2) Open Flash Tool "xFSTK-Downloader", and set configuration for each s dection.

3) Select the second "MRD AO/BO + MOOR AO + CRC" tab as the following:
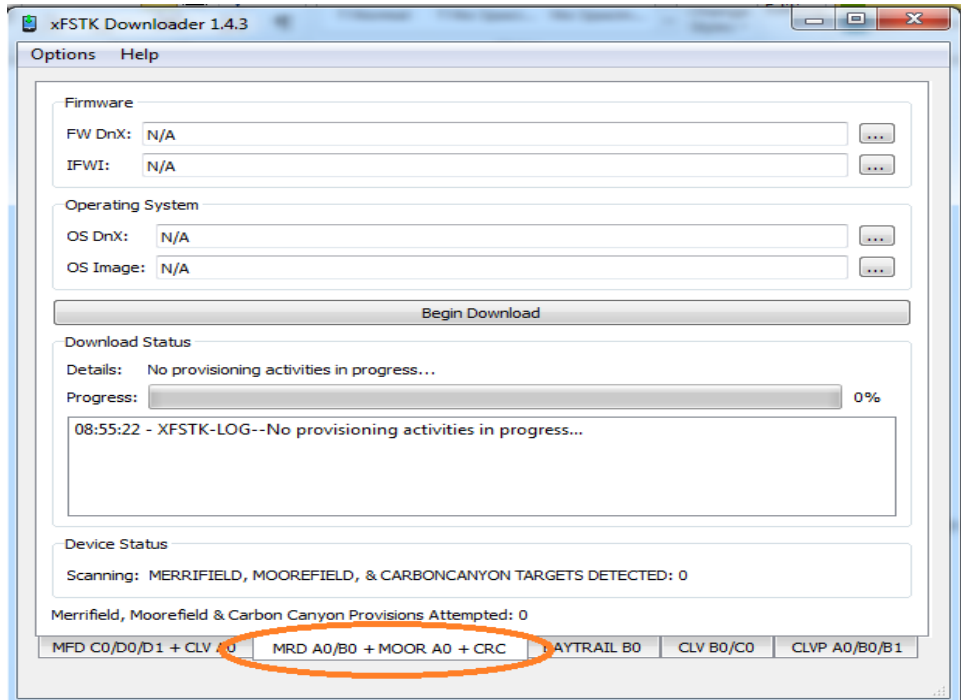
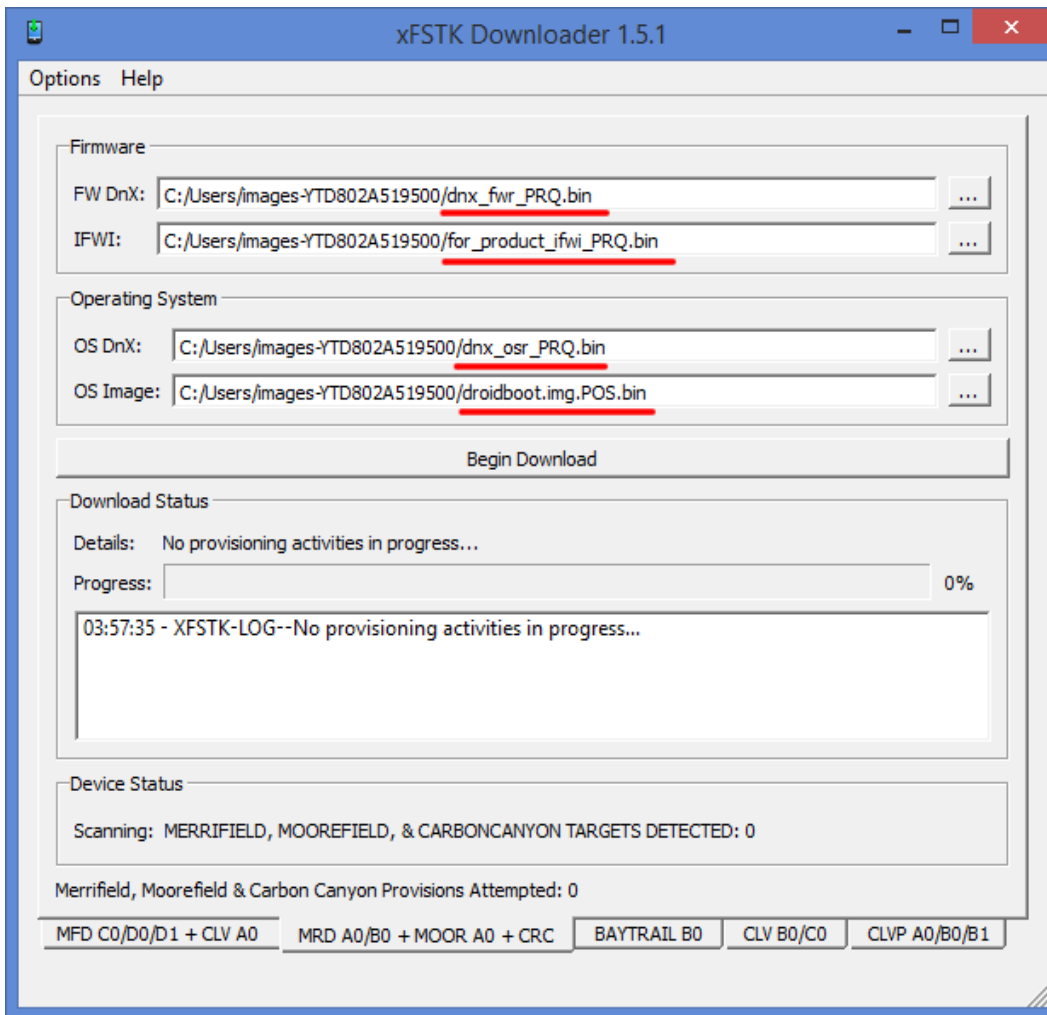4) Set GP Flag to "0x80000007" in "Download Options" tab as below:
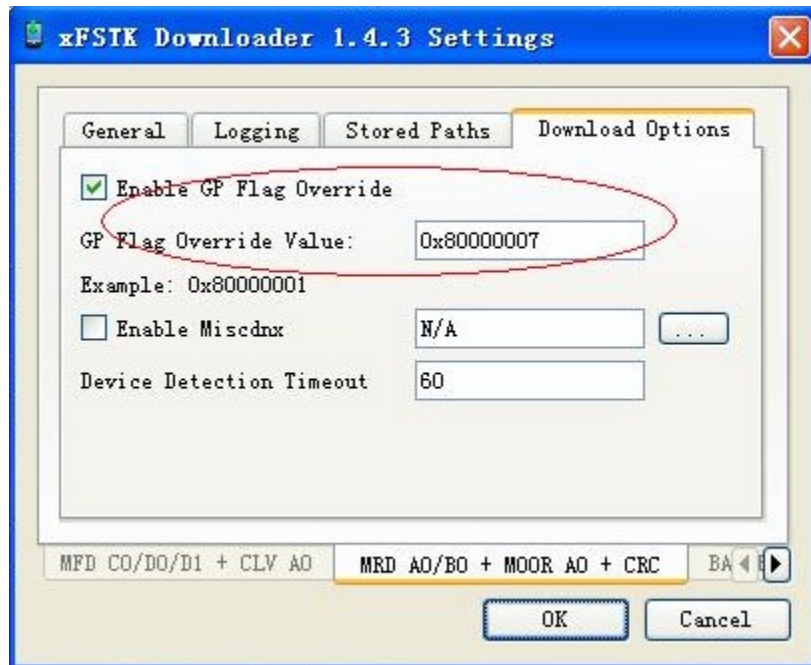
5) Select Firmware files as the following from SW Image directory:

FW DnX= dnx_fwr_PRQ.bin
**IFWI**= for_product_ifwi_PRQ.bin

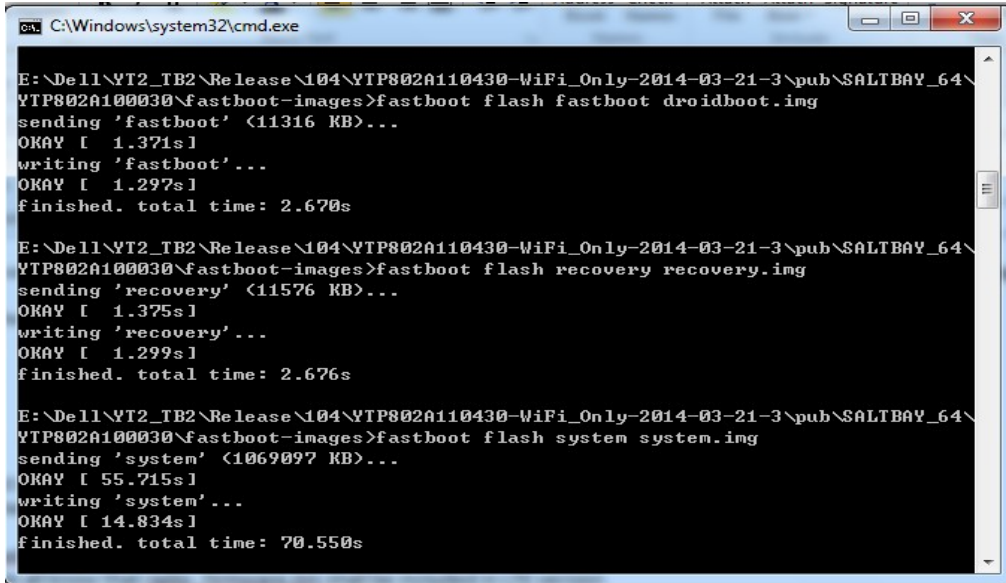**OS DnX**= dnx_osr_PRQ.bin

OS Image= droidboot.img.POS.bin

6) Power off the tablet device (long press power key for more than 15 seconds).

7) Click "Begin Download" in Flash Tool, it will display waiting time is 60 seconds.

8) Long press the volume up button and then plug in the cable.

9) When flash process started, then release the volume up button.

10) When firmware flash is done, Flash Tool will show Success: FW+OS Download Completed!
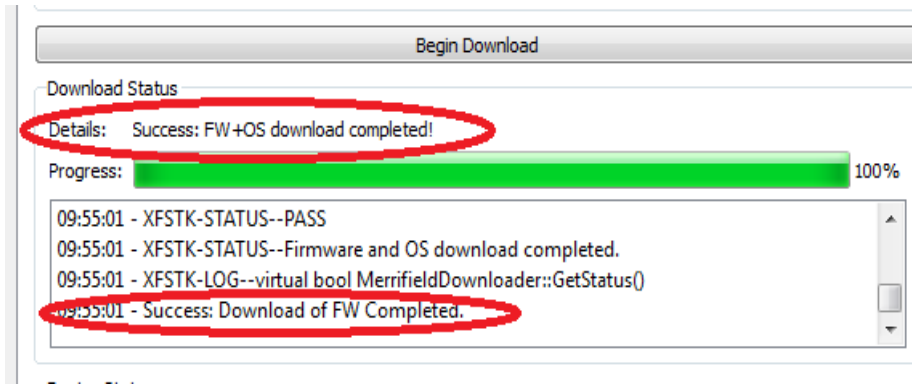
11) After flashing firmware, the tablet device will switch to fastboot mode automatically as the following:
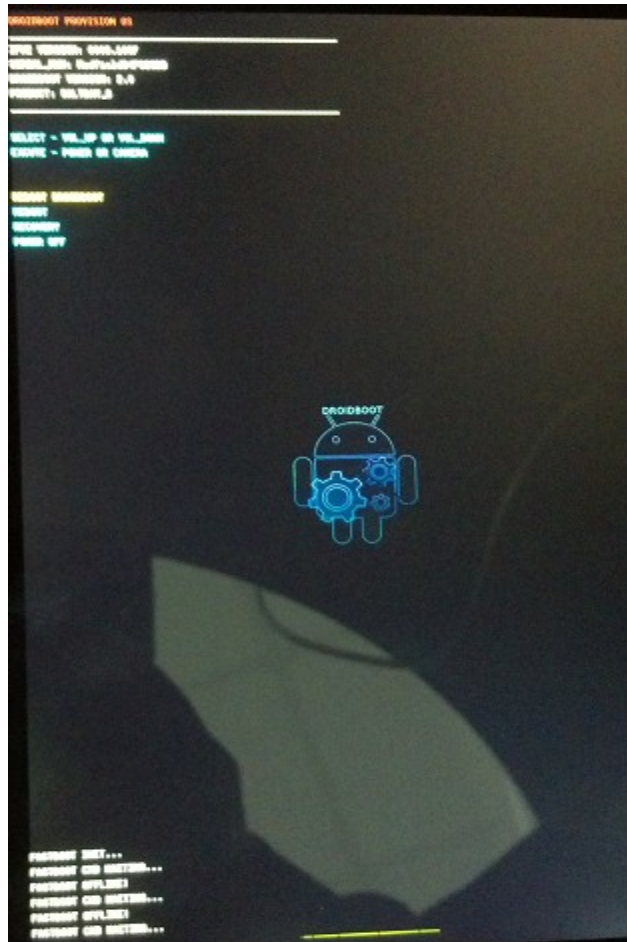
12) Double click file "P802_flash_device_wifi_only.bat" or "P802_flash_device_lte.bat" in SW image folder. The following CMD window will show up, and begin to flash OS system image.

13) After flash is complete, "press any key to continue" will shown in the cmd window. Please click any key, and the device will reboot automatically.

* You can either do part B (B. Rooting and bootloader unlocking process using OTA package) or do part C (C. Build the kernel image from the kernel sources and flash kernel image) to root your tablet.

B. Rooting and bootloader unlocking process using OTA package

* You will no longer receive OTA notification once you have flashed the OTA package with unsigned kernel.

1.   Enable fastboot mode

1) Open "xFSTK Downloader 1.5.1".

2) Select the second "MRD AO/BO + MOOR AO + CRC" tab as the following:
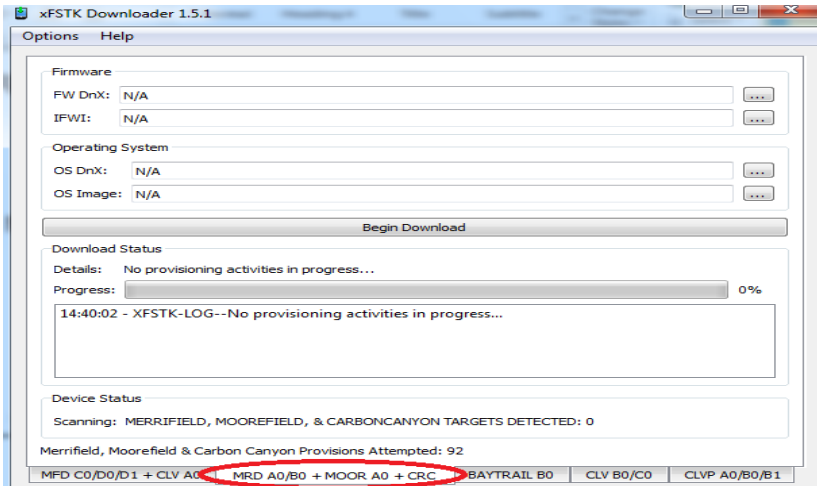
3) Choose "Options"->"Modify Settings", set GP Flag to "0x80000007" in "Download Options" tab as below.
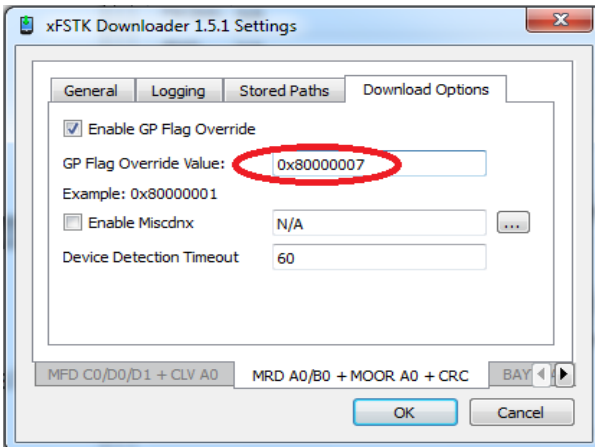
4) Select two Firmware files:

- **FW Dnx**: fwr_dnx_PRQ_ww27_001.bin
- **IFWI**: IFWI_MERR_PRQ_UOS_TH2_YT2_ww27_001.bin

Keep Operating System option "N/A".

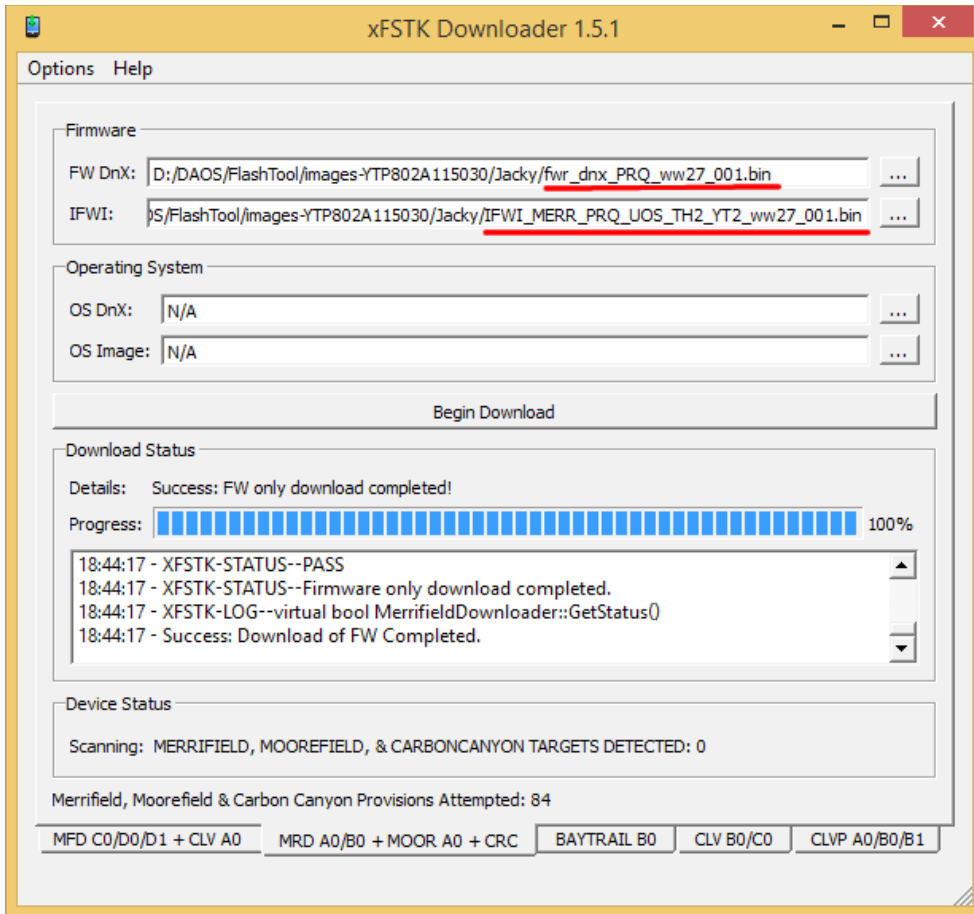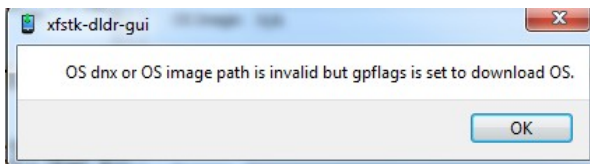5) Turn off the tablet(Venue 7 3740/Venue 8 3840).

6) Click "Begin Download" button.

7) Press the volume up button and then plug in the USB cable.

8) If it's your first time to connect the tablet to PC, it'll need some time to recognize the driver. After driver installation automatically, go to steps 5 again.

9) The flashing tool pops up the dialog as below, press "OK".

10) When firmware flash is done, Flash Tool will show Success: FW+OS Download Completed!
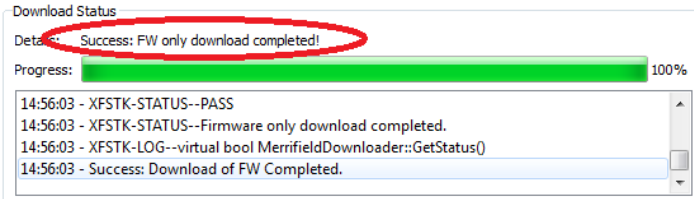
11) Reboot the tablet and press power + volume down button to enter fastboot mode, and fastboot mode is enabled successfully as the following:

2.   Rooting and bootloader unlocking process using OTA package

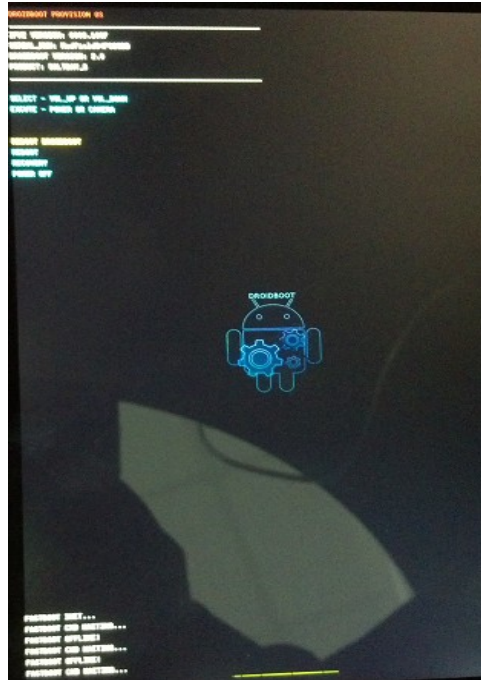1) Download the file, For A195-WifiOnly, download the file "A195/OTA/YTP802A119600-f-2014-07-16-22_OSS.zip"; for A195-LTE, download the file "A195/OTA/YTD802A519600-f-2014-07-16-16_OSS.zip".

2) Copy "YTP802A119600-f-2014-07-16-22_OSS.zip" or "YTD802A519600-f-2014-07-16-16_OSS.zip" to a micro-sd card and insert that card into the micro-sd card slot of dell venue tablet.

3) Power off the tablet.

4) Enter fastboot mode on the tablet (power + volume down button).

5) Select recovery (3rd item from list), and use volume down button to navigate to it and select it by pressing power button.

6) You will see android lying down with an ! Sign.

7) Now hold down the power button and briefly press the volume up button at the same time to get to the recovery menu.

8) Select "apply update from external storage" – second item from top (use vol down to navigate to it) and then press power button to select it.

9) Then select the file you stored on the sdcard (use vol down button to navigate to it) and press power button.

10) You will see a few messages on the screen (like cannot load volume /misc and then some update messages).

11) After a few minutes a menu appears on screen and then select reboot system now (1st item on menu) by pressing power button.

12) Now you are done and the bootloader is unlocked and you have root access.

C. Build the kernel image from the kernel sources and flash kernel image

1. Build the kernel image from the kernel sources

1) Download kernel source package "A195/dell_venue_kernel.tgz".

2) Download Android AOSP 4.4 source codes from android.com. The detailed download instruction is available at https://source.android.com/source/downloading.html.

   \> pwd

   /localdisk3/dell_venue

   \> mkdir aosp

   \> cd aosp

   \> repo init -u https://android.googlesource.com/platform/manifest -b android-4.4_r1.2

   \> repo sync .

3) Download gcc for linux-x86.

   \> git clone https://android.googlesource.com/platform/prebuilts/gcc/linux-x86/x86/x86_64-linux-android-4.7

4) Copy "x86_64-linux-android-4.7/*" directory to "prebuilts/gcc/linux-x86/x86/x86_64-linux-android-4.7/".

5) Extract the kernel source package "dell_venue_kernel.tgz" to the Android source root directory, i.e. aosp directory in this example.

\> pwd

/localdisk3/dell_venue/aosp

\> tar –xzf dell_venue_kernel.tgz

6) Once done, you should be able to see the "linux" directory inside aosp directory.

7) Copy "prebuilts" directory into "linux" directory. Run the kernel build script.

\> cd linux

\> ./kernel_build.sh

8) Check out if the kernel image "boot.img" was created.

\> cd out/target/product/

\> pwd

/localdisk3/dell_venue/aosp/linux/out/target/product

\> ls -al boot.img

-rw-r----- 1 xxx yyy 8540672 Mar 19 14:56 boot.img.

2.   Flash boot.img and droidboot.img

1) make the device enable fastboot mode.

2) Download adb.exe, fastboot.exe, AdbWinApi.dll, AdbWinUsbApi.dll from "FlashTool/fastboot".

3) Configure environment variable as the following. If this variable has been set before, please add this new environment path before old path.
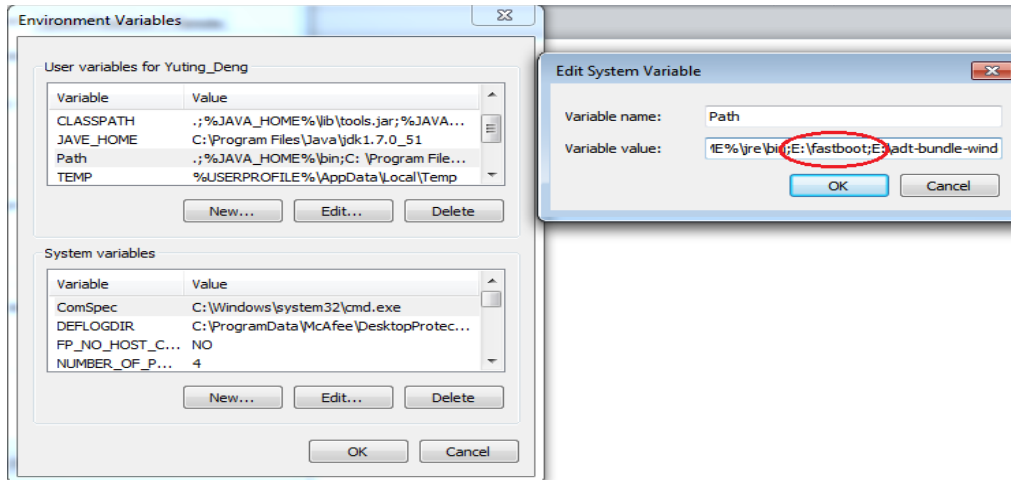
4) In a cmd window, type "fastboot devices" and you should see the screen.
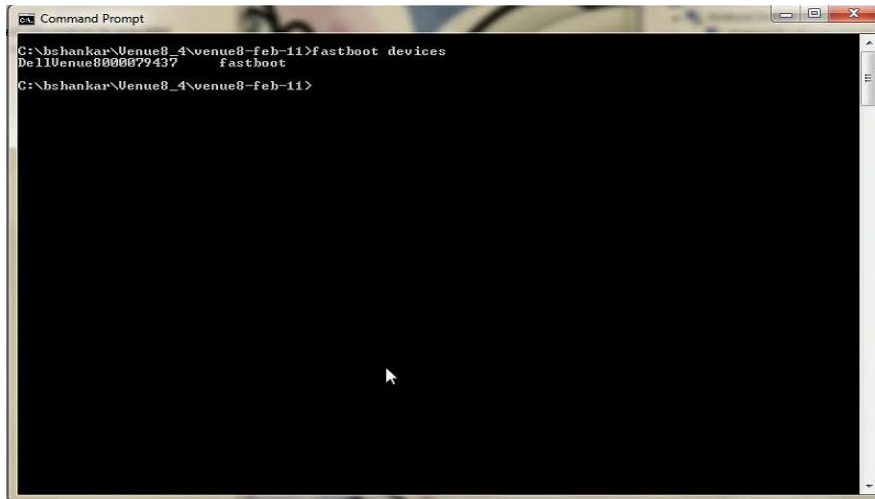
5) Download droidboot.img and A195/boot.img (or you can use boot.img you build), put it in the directory which contains your built boot.img.

6) Go to the directory contains "boot.img" and run these commands.

\> fastboot flash boot boot.img

\> fastboot flash fastboot droidboot.img

\> fastboot reboot

7) After the device is rebooted, confirm if the image is properly flashed. Go to Settings->About tablet and make sure if the information in Kernel version is right.

D. Unbricking Process

If you encounter some issues when doing the OTA or flash new firmware and boot image, please reference section "**Flash A195 image to the tablet**" to unbrick the tablet.