Dell Tablet open source notes

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Welcome to the Dell Open source guide. Here you'll find the guide that describes how to download, build and flash the appropriate kernel for Dell Venue8 7840 tablet.
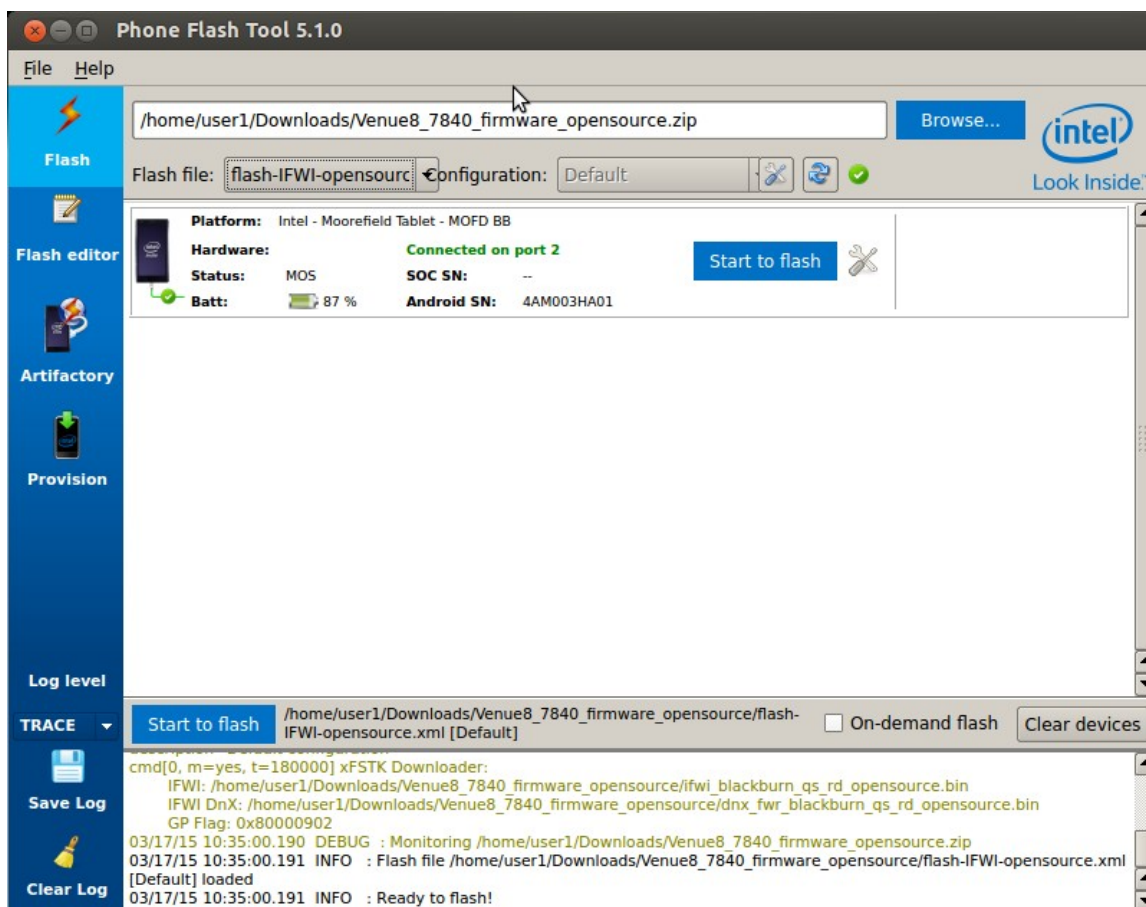
Prerequisite System Setup

1) Operating Systems

   - Ubuntu 64bit 12.04 or higher

2) Download and install phone flash tool

   - PhoneFlashTool_5.1.0.0_linux_x86_64.deb

   - Fastboot

   - adb

Rooting and boot loader unlocking process using OTA package

1.   Flash Intel firmwares for open source

1) Run Intel Phone Flash Tool 5.1.0.

2) Connect tablet with PC use USB-Cable, boot tablet to android.

3) In Phone Flash Tool, Click "Browse..." button and select Venue8_7840_firmware_opensource.zip file.

4) Download Venue8_7840_firmware_opensource.zip.

5) Click "Start to flash" button on the top.

6) Finish and auto reboot.

2. Rooting and boot loader unlocking process using OTA package

1) Download the file "BBP803A138500DEL-user-2015-01-23-fota-45-OSS.zip".

2) Power down the tablet.

3) Get to boot loader on the tablet (power+vol down button).

4) Select recovery (3 item from list). Use vol down to navigate to it and select it by pressing power button.

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

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

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

8) In Ubuntu terminal, goto the directory included BBP803A138500DEL-user-2015-01-23-fota-45-OSS.zip , press "adb sideload BBP803A138500DEL-user-2015-01-23-fota-45-OSS.zip"

9) You will see "sending: 'BBP803A138500DEL-user-2015-01-23-fota-45-OSS.zip' ...%"

10) Then You will see a few messages on the tablet screen.

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 boot loader is unlocked and you have root access.

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

1.   Build the kernel image from the kernel sources

1) Setup the android build environment. e.g, source root directory name is "dell_Venue8_7840".

   The detailed instruction is available at https://source.android.com/source/downloading.html.

2) Download kernel source package "dell_Venue8_7840_kernel.tgz".

3) Extract the kernel source package "dell_Venue8_7840_kernel.tgz" to the Android source root directory.

   $ pwd

   /localdisk/dell_Venue8_7840/

   $ tar –xzf dell_Venue8_7840_kernel.tgz

4) Once done, you should be able to see the "linux" directory inside dell_Venue8_7840 directory

5) Copy "iconic_diffconfig", "Makefile_kernel", "kernel_build.sh" from "linux" directory to dell_Venue8_7840/. Run the kernel build script.

   $ cd dell_Venue8_7840

   $ ./kernel_build.sh

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

   $ cd out/target/product/iconic

$ pwd

/localdisk/dell_Venue8_7840/aosp/out/target/product/iconic

$ ls -al boot.img
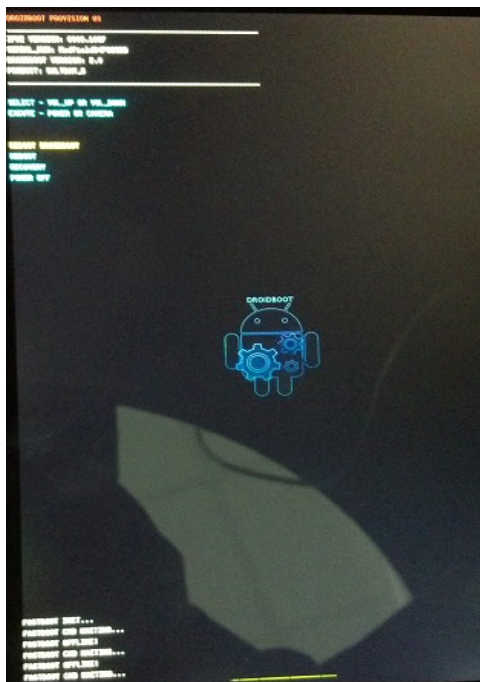
-rw-r----- 1 xxx yyy 9704960 Mar 3 14:56 boot.img.

2.   Flash boot.img

1) Flash Intel firmwares for open source (Please reference "Rooting and boot loader unlocking process using OTA package -> 1. Flash Intel firmwares for open source").

2) Make the device enable fastboot mode.

   $ adb reboot bootloader

   $ fastboot devices

3) Goto the directory contains "boot.img" (you built or downloaded), run these flash commands:

   $ fastboot flash boot boot.img

   $ fastboot reboot

4) Now you are done and the boot loader is unlocked and you have root access.