**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 build and flash the kernel for Dell Venue10 5050 tablet.

**Prerequisite System Setup**

1. Operating system

Ubuntu 12.04 64bit or higher.

1. Setup android build environment.

<https://source.android.com/source/initializing.html>

1. X86 compiler from AOSP source code

This is required in order to compile the kernel for Venue 10 5050.

For the branch to be pulled, “android-5.0.2\_r1” is suggested. So to get the compiler from AOSP, you can do this,

repo init -u https://android.googlesource.com/platform/manifest -b android-5.0.2\_r1

repo sync prebuilts/gcc/linux-x86/x86/x86\_64-linux-android-4.8

For full AOSP code, please refer to the link below, (optional)

<https://source.android.com/source/downloading.html>

**Enable developer mode**

1. Find the “Build number” section in Settings->About tablet.
2. Tap the “Build number” section continually until the message “***You are now a developer***” pops up. Normally, you need to tap 7 times.
3. Enable USB debugging in Settings->Developer options.
4. Connect your device to your computer over USB.

**Build the kernel image from the kernel sources**

1. In the following instructions, we assume you have “***X86 compiler from AOSP source code***” downloaded to “***dell\_Venue10\_5050***”. This could also be the ***root directory*** of Android source.
2. Download kernel source package “dell\_venue10\_5050\_kernel.0501.tgz”.
3. Extract the kernel source package “dell\_venue10\_5050\_kernel.0501.tgz” in ***dell\_Venue10\_5050***

$ tar -xzvf dell\_venue10\_5050\_kernel.0501.tgz

1. Once done, you should be able to see the “***linux***” directory, ***adb***, ***kernel\_build.sh***, ***Makefile***, ***diffconfig***, in ***dell\_Venue10\_5050***.
2. Run the kernel build script, ***kernel\_build.sh***.

$ ./kernel\_build.sh

1. Kernel image “***boot.img***” will be created in ***out***.

**Flash boot image**

1. Download image package “Venue10\_5050\_droidboot\_opensource.tgz”.
2. Extract the package in ***dell\_Venue10\_5050***

$ tar -xzvf Venue10\_5050\_droidboot\_opensource.tgz

1. Copy the previous built boot.img to the folder, ***Venue10\_5050\_droidboot\_opensource***.

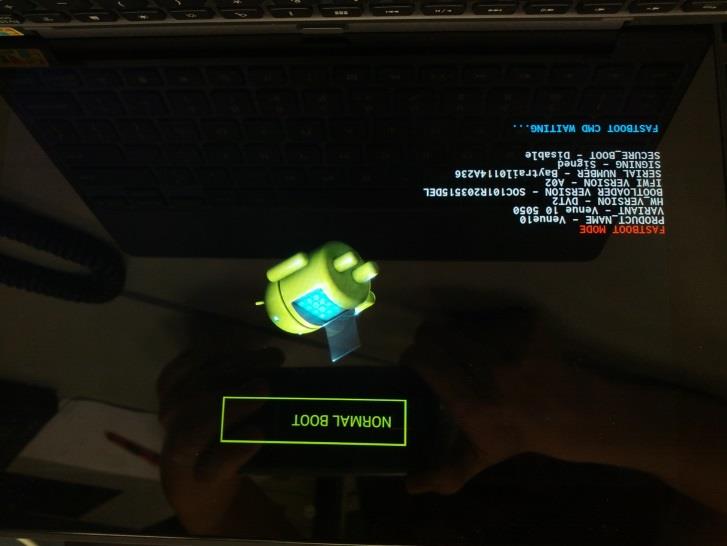
cp out/boot.img Venue10\_5050\_droidboot\_opensource

1. Enter the folder “Venue10\_5050\_droidboot\_opensource”. Then run the script ***boot\_droidboot.sh*** to enter ***Fastboot*** mode. ***Once the script, boot\_droidboot.sh, is executed, “secure boot” will be disabled, and warranty will be voided***.

$ cd Venue10\_5050\_droidboot\_opensource

$ ./ boot\_droidboot.sh

1. If the tablet enters ***Fastboot*** mode correctly, you will see the screen like below.



1. Run these flash commands:

$ fastboot flash boot boot.img

$ fastboot reboot

1. Now the kernel is built, and boot.img is flashed to your device.