# Dell Tablet Flash notes

*Version 1.0, May 09, 2014*

**Are you using a Dell Venue 7? If so, STOP and do not proceed. Using the binaries in this package will cause the tablet to brick.**

## Prerequisite System Setup

1) Google ANDROID SDK with the Google USB driver
    a. adb.exe must be executable from a command shell
2) Download the file "Dell_Venue8.zip"
3) Have a micro-SD card of 1GB or higher.

## Rooting and bootloader unlocking process using OTA package

1. **Make sure you can connect dell tablet to your linux/windows machine and can see it through adb (if you cannot see your tablet on windows then see the section titled "Install the USB driver for adb mode").**
2. **Unplug the usb cable**
3. **Extract the file "venue8_version-1.22-ota-signed_full_rooted.zip" from Dell_Venue8.zip" on to a micro-sd card and insert that card into the micro-sd card slot of dell venue8 tablet.**

   **Note: Do not unzip the venue8_version-1.22-ota-signed_full_rooted.zip when putting on sdcard.**

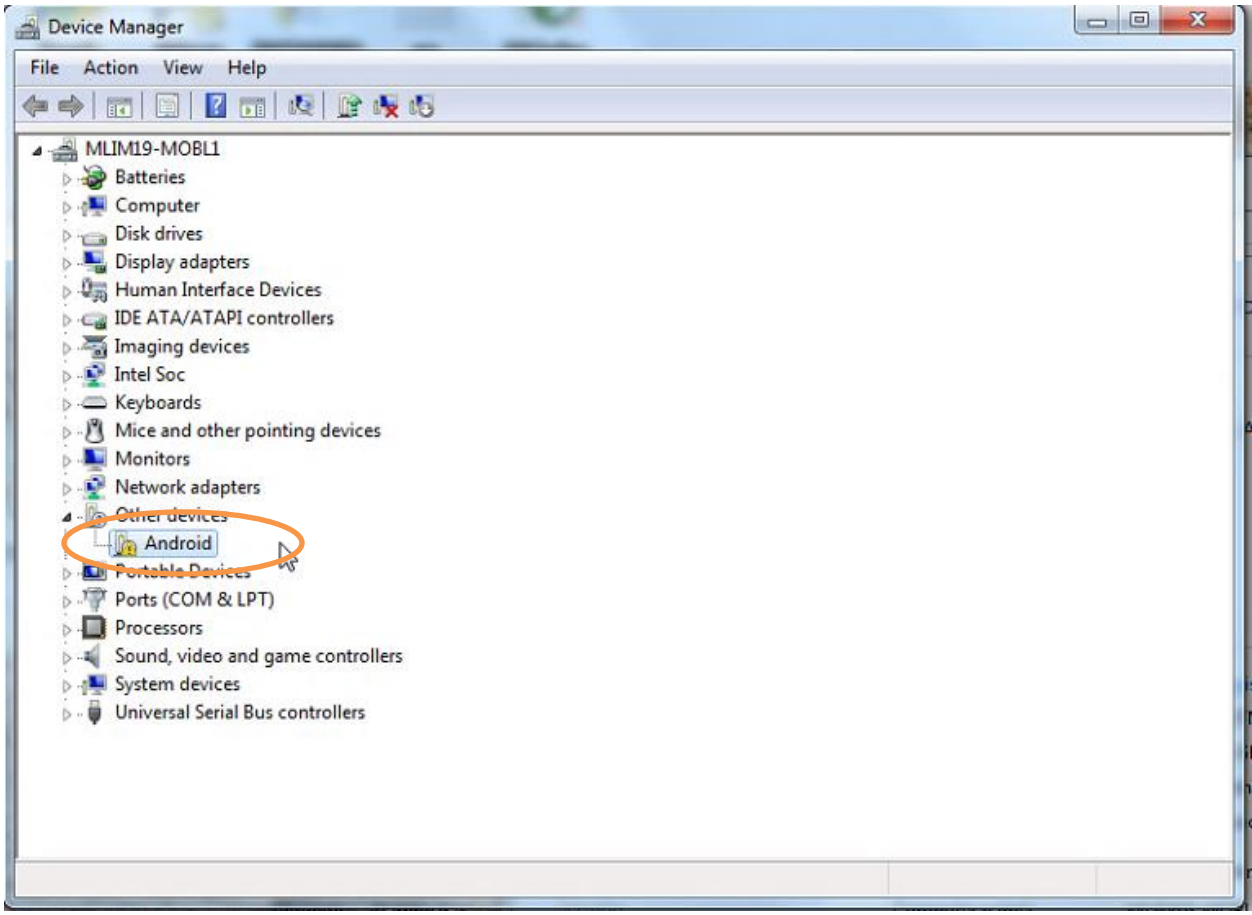
4. **Power down the tablet.**
5. **Get to bootloader on the tablet (power+vol down button).**
6. **Select recovery (3 item from list). Use vol down to navigate to it and select it by pressing power button.**
7. **You will see android lying down with an ! sign.**
8. **Now hold down the power button and briefly press the volume up button at the same time to get to the recovery menu.**
9. **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.**
10. **Then select the file you stored on the sdcard (use vol down button to navigate to it) and press power button.**

11. **You will see a few messages on the screen (like cannot load volume /misc and then some update messages).**
12. **After a few minutes a menu appears on screen and then select reboot system now (1st item on menu) by pressing power button.**
13. **Now you are done and the bootloader is unlocked and you have root access. If you want to build your own OS image then see the section "How to build kernel image from kernel sources" at the end of this document.**

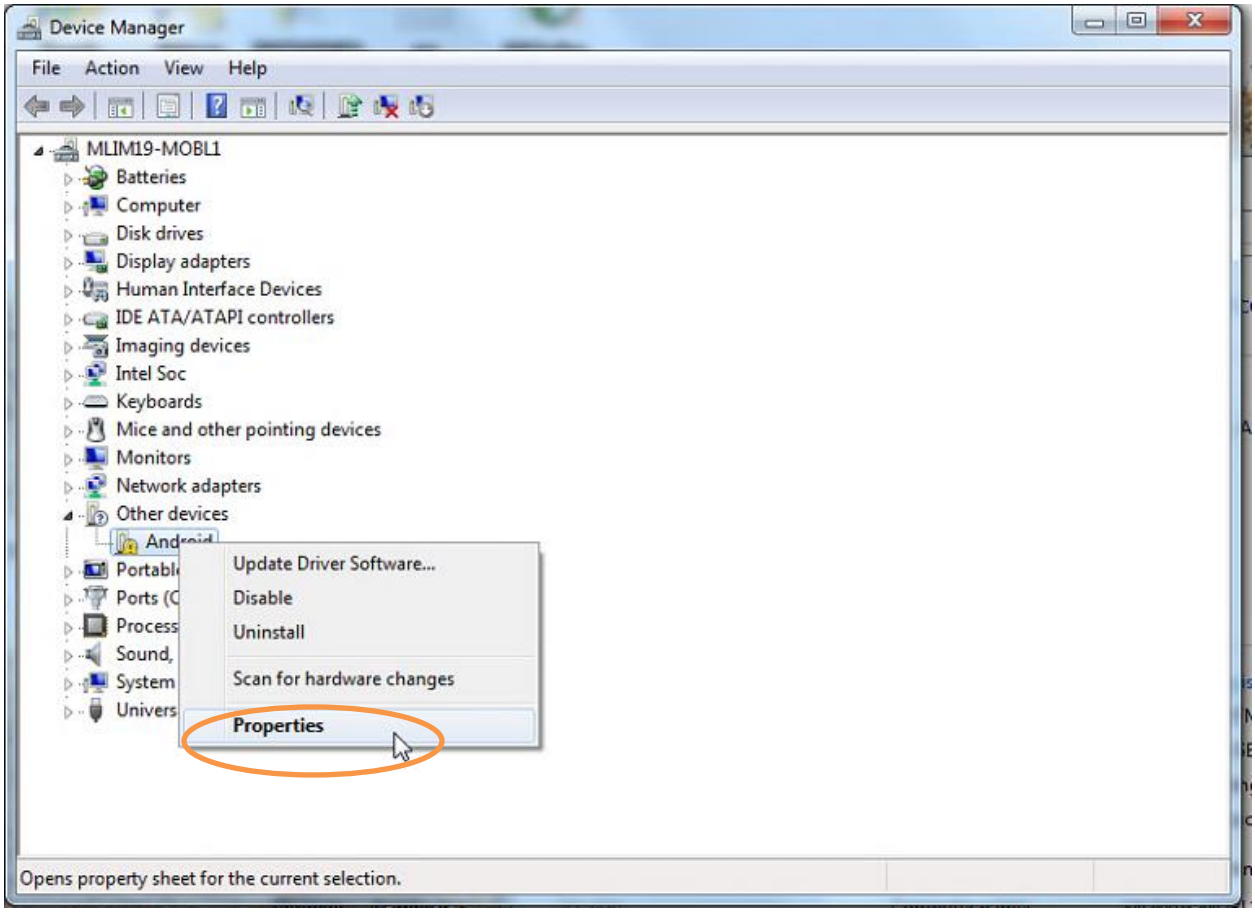
## Install the USB driver for adb mode

1) Enable Developer Mode on the Dell Tablet
    a. Open the Settings menu
    b. Go down to the "System" sub-section of menu at the bottom
    c. Hit "About Tablet"
    d. Near the bottom of the screen you will see "Build Number"
    e. Hit the "Build Number" area about 10 times, and the "Developer Options" menu will appear
    f. Hit the "Developer Options" sub-menu
    g. Turn on "USB debugging"
    h. Turn off "Verify apps over USB"
2) Connect the Tablet to your workstation

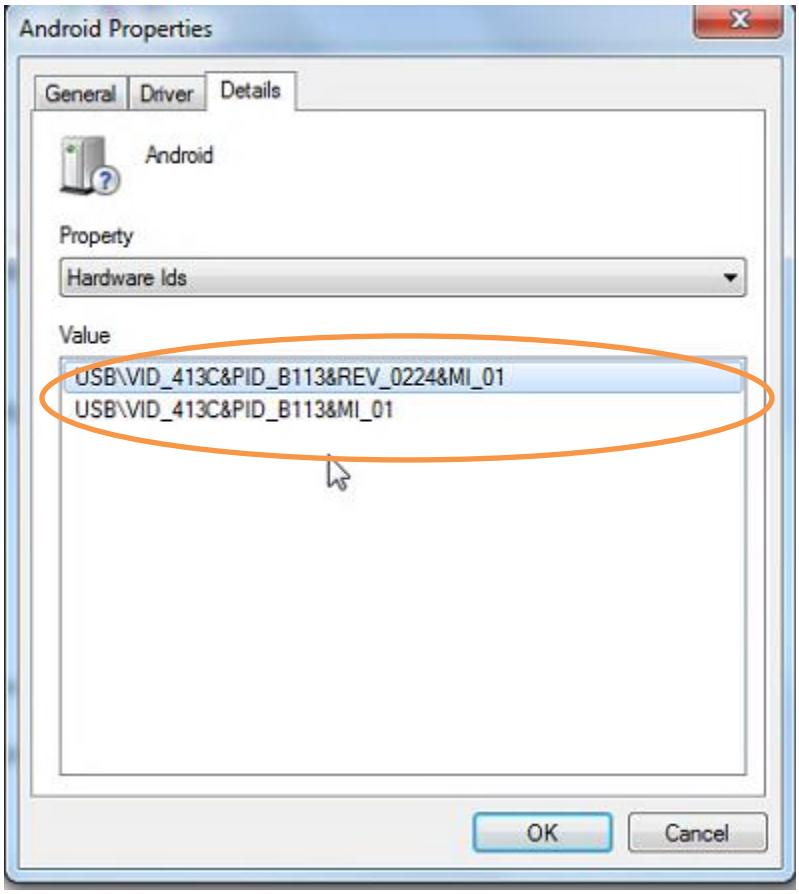
3) Install the USB driver for adb mode
    a. Open the device manager (Control Panel -> System and Security -> Device Manager)



b. Right Click on “Other Device / Android”



c. Click on “Properties” and select the “Details” tab then choose “Hardware Ids” from the drop down list




d. Copy the two values from the window

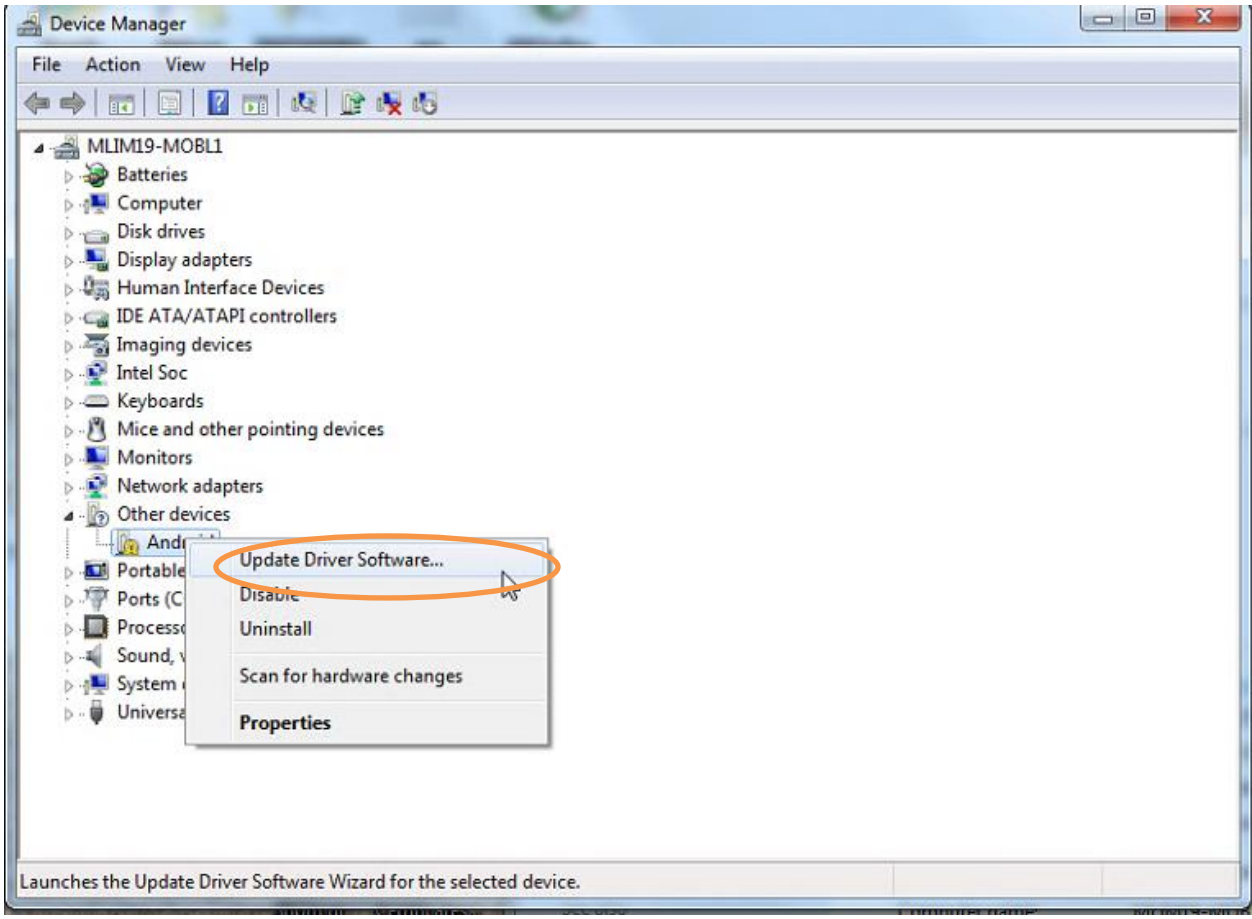
e. Navigate to the location of the “Google SDK for Android”

f. Edit the file sdk->extras->google->usb_driver->android_winusb.inf file
Add in the ID’s that you copied into the file as show below and save the file
Make sure that you add the entries to both the 32-bit section ([Google.NTx86]) and the 64-bit section ([Google.NTamd64]) of the file

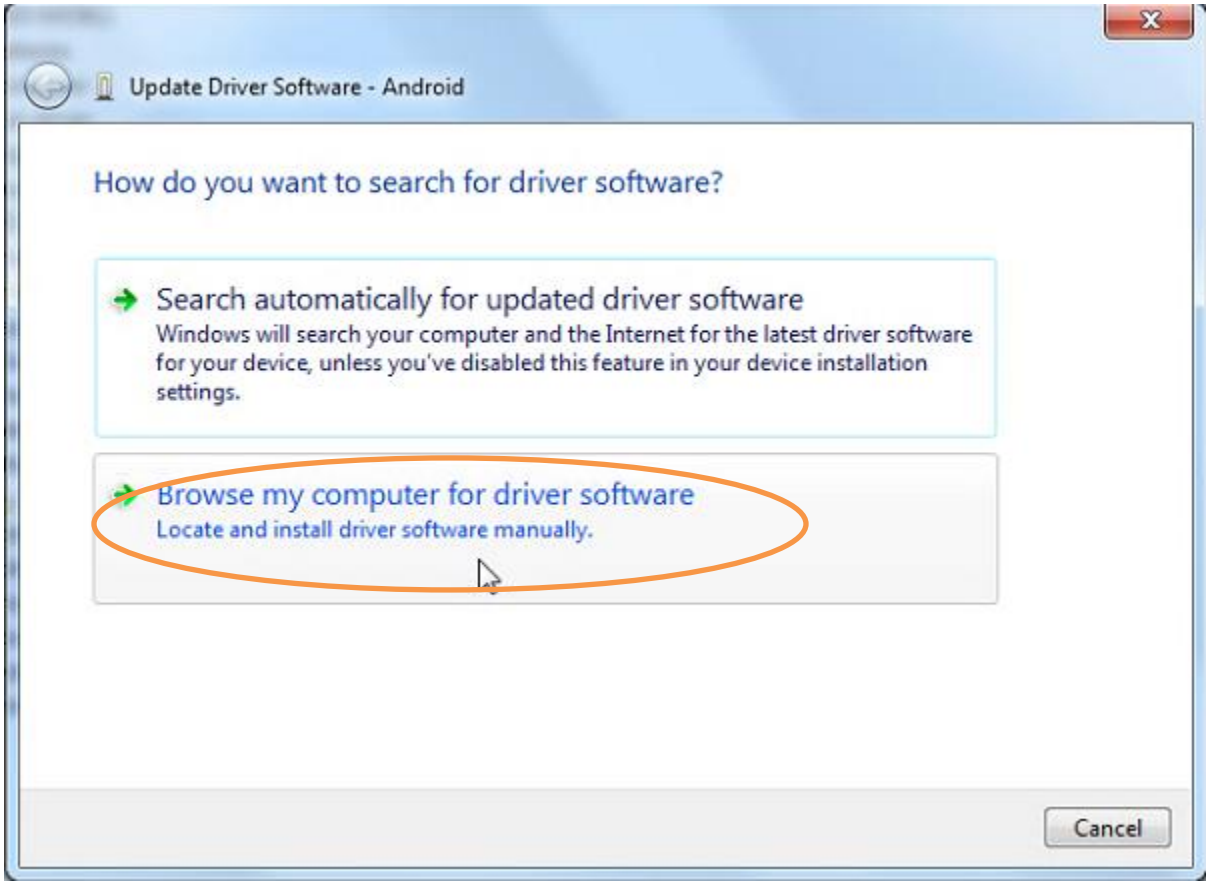
```
;Google Nexus (generic)
%SingleBootLoaderInterface% = USB_Install, USB\VID_18D1&PID_4EE0
%CompositeAdbInterface%     = USB_Install, USB\VID_18D1&PID_4EE2&MI_01
%CompositeAdbInterface%     = USB_Install, USB\VID_18D1&PID_4EE4&MI_02
%CompositeAdbInterface%     = USB_Install, USB\VID_18D1&PID_4EE6&MI_01

;Dell Venue8
%SingleBootLoaderInterface% = USB_Install, USB\VID_413C&PID_B113&REV_0224&MI_01
%CompositeAdbInterface%     = USB_Install, USB\VID_413C&PID_B113&MI_01
```

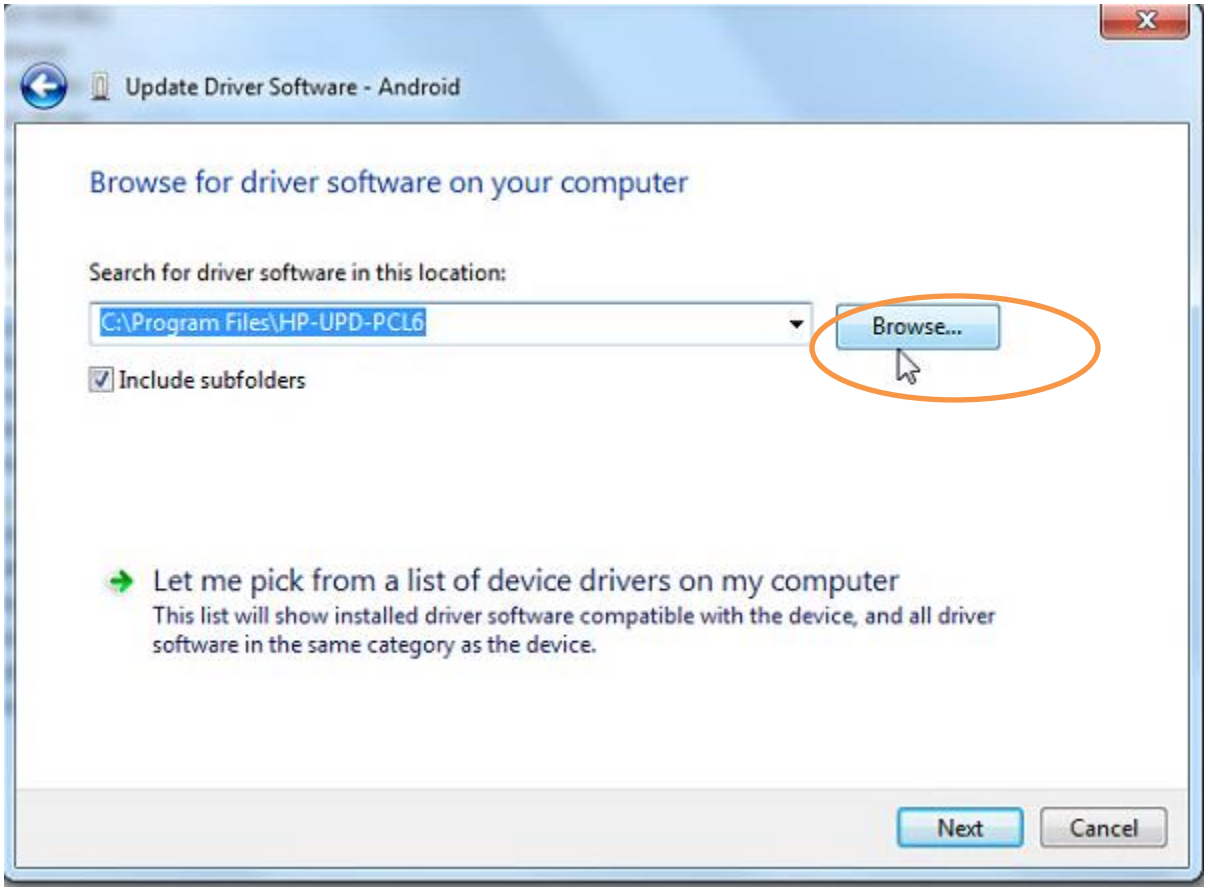
4) Back to the “Device Manager” Window
    a. Right Click on “Android” and select “Update Driver Software”



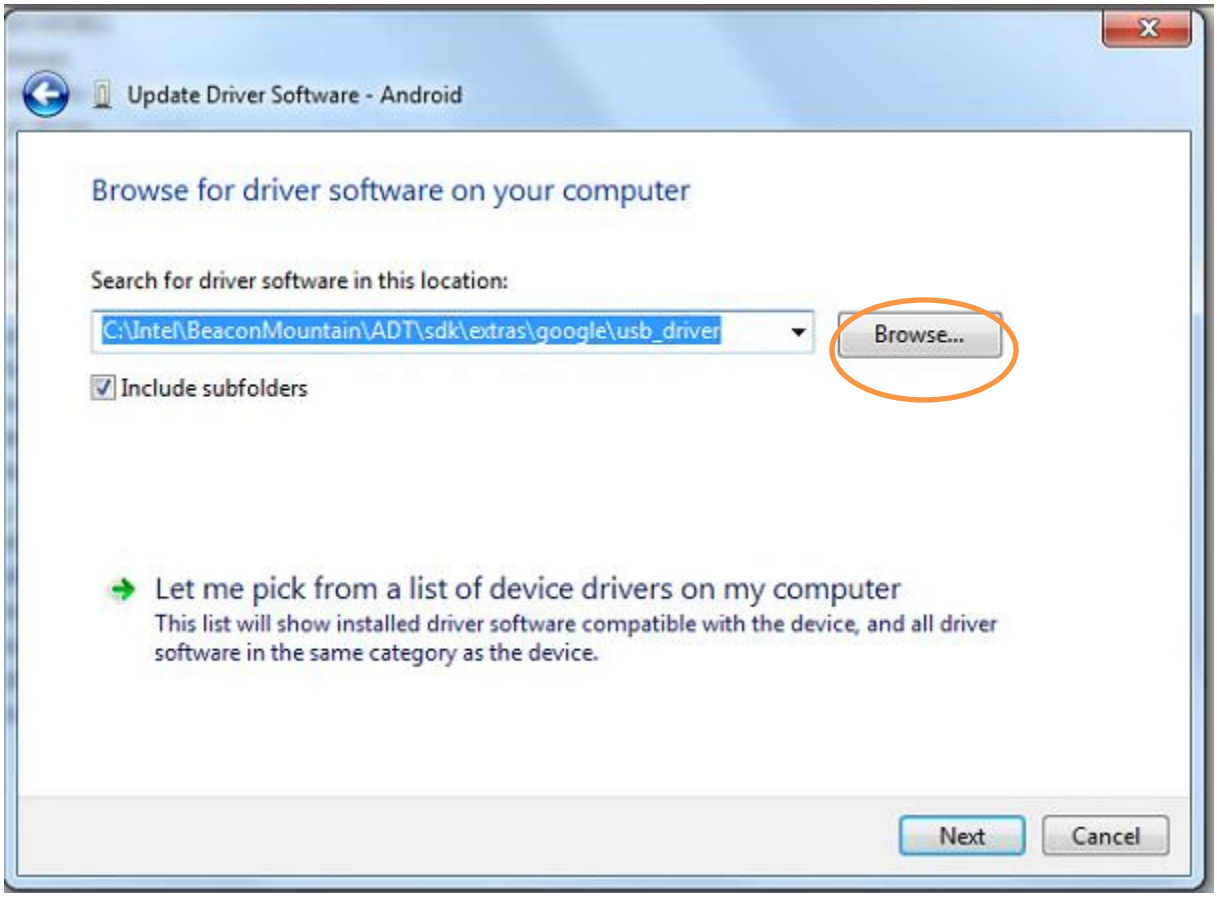
b. Select “Browse my computer for Driver software”



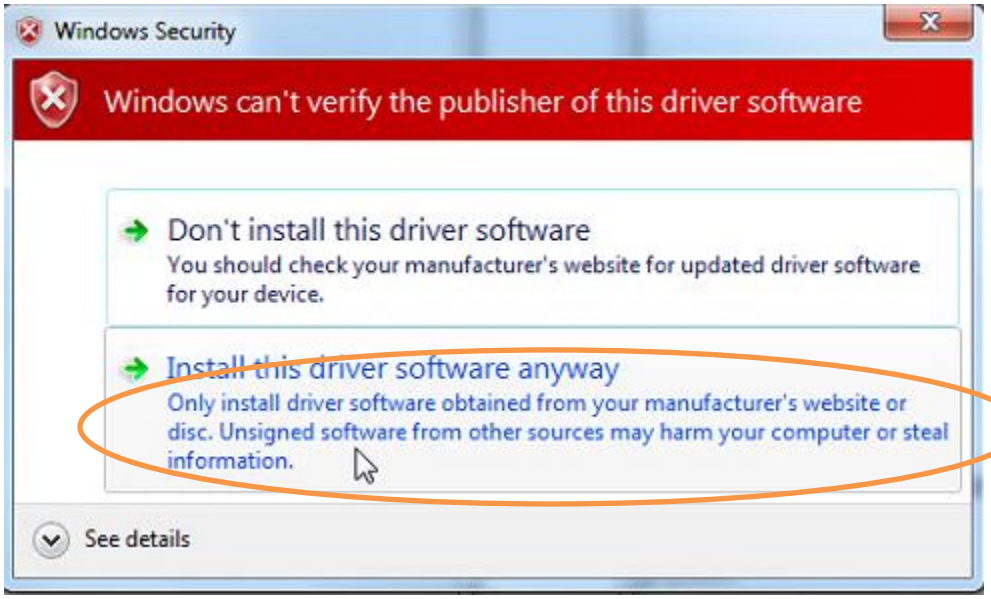
c. Click the “Browse” button



d. Browse to the location of the “sdk->extras->google->usb_driver” in the Google SDK

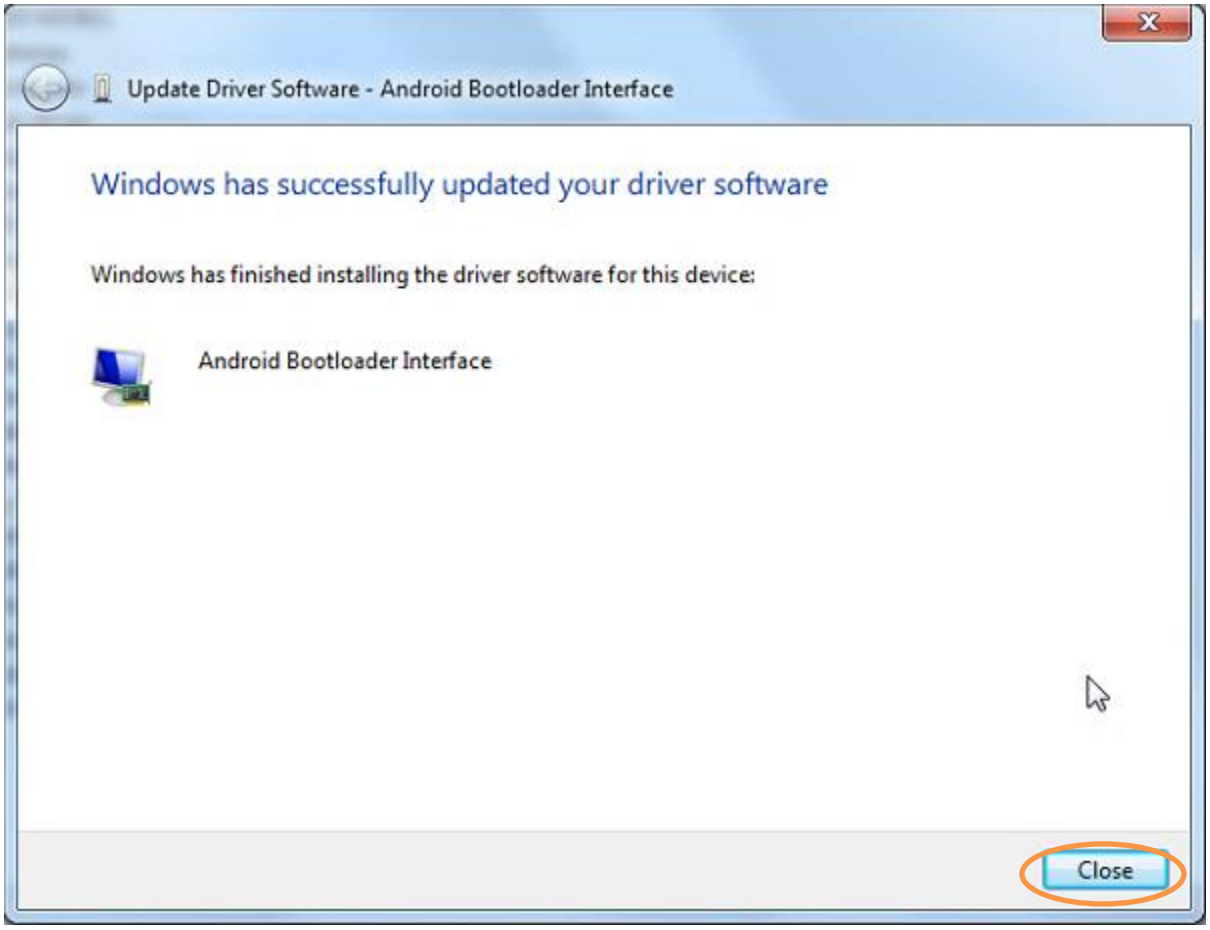


e. Select “Next” and you will see this screen

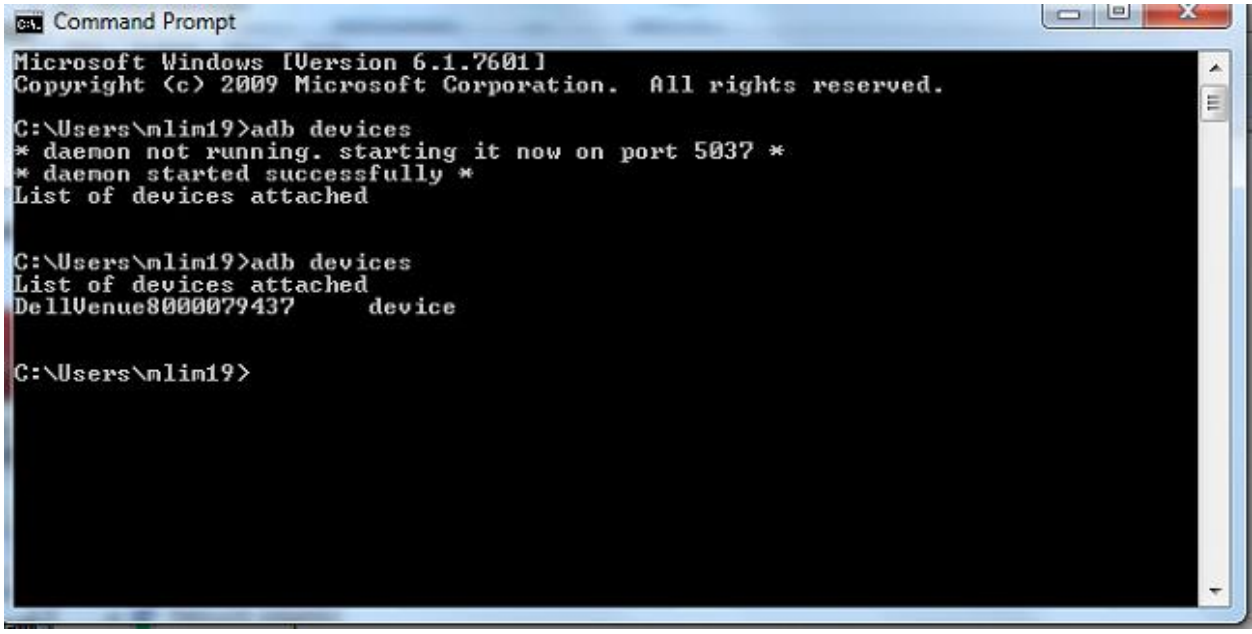



f. Select “Install this driver software anyway”

g. The success screen will be displayed, click “Close”



h. Run “adb shell” from a window with “adb.exe” in the PATH

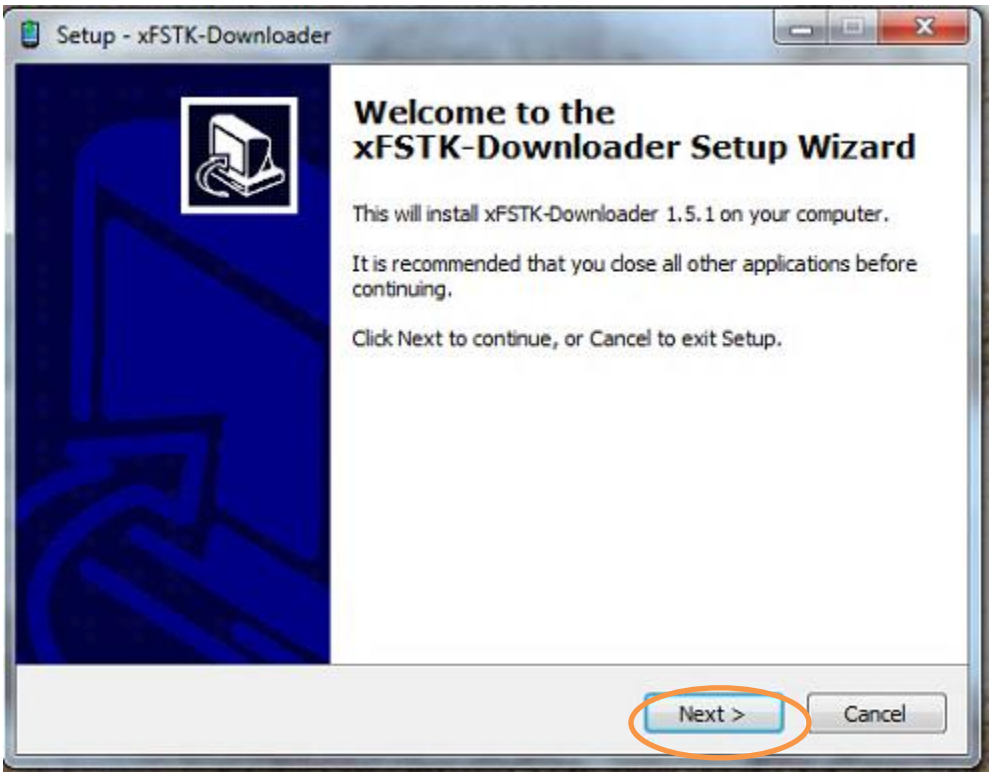


# Unbricking Process

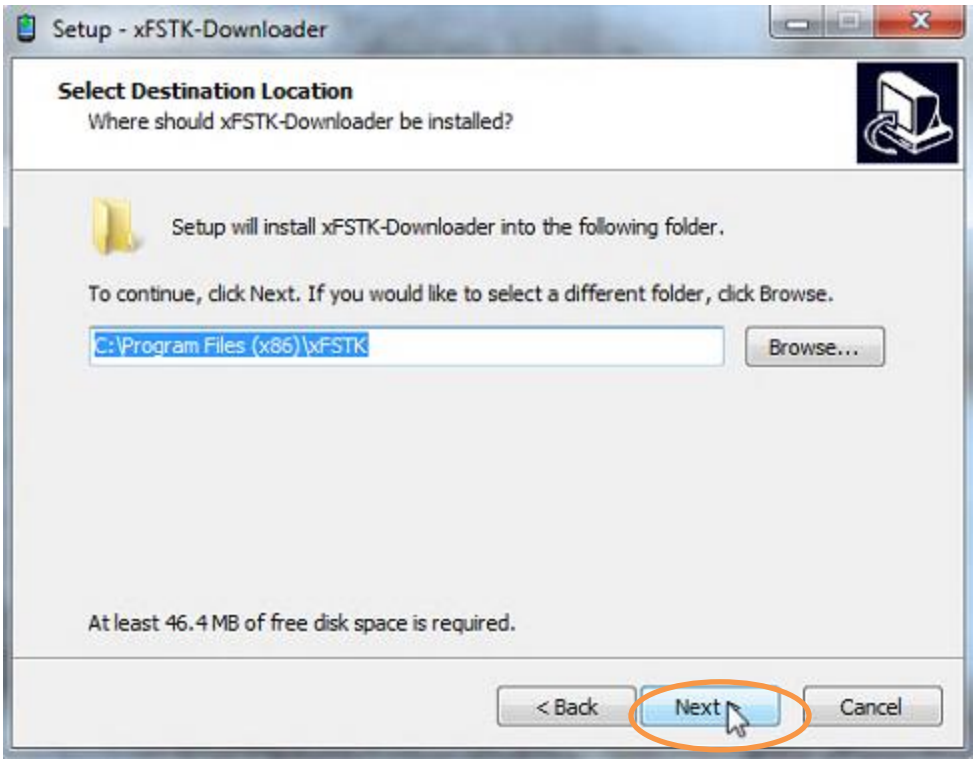
## Install iSoc and xfstk onto a windows 64 system

If for some reason your tablet is bricked then use the following process to unbrick it using windows.

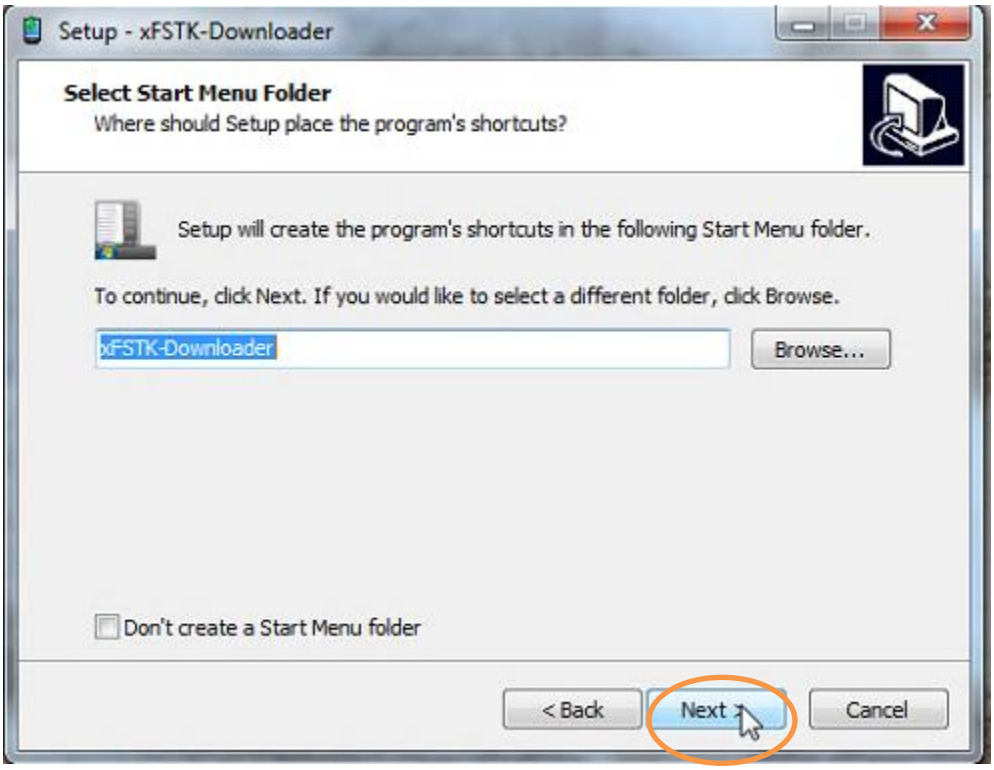
1) Run the “iSocUSB-Driver-Setup-1.2.0.exe” installer
2) Open the “xfstk-downloader-setup-1.5.1.exe”

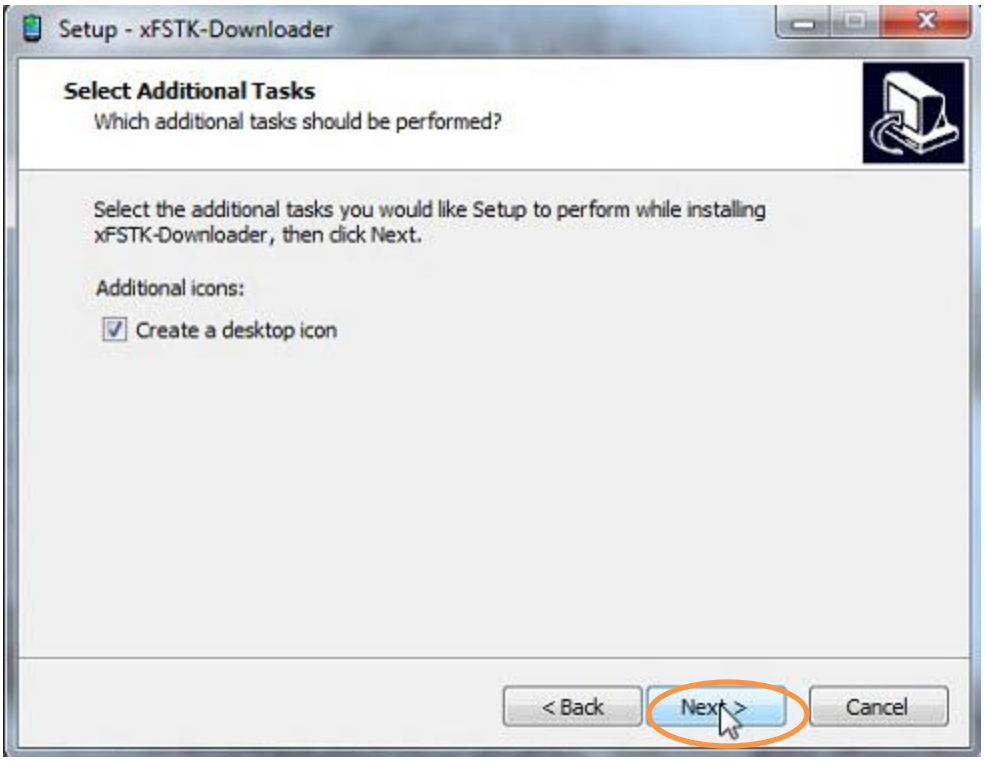



3) Select “Next” ; Accept the agreement ; select “Next” until you see window below

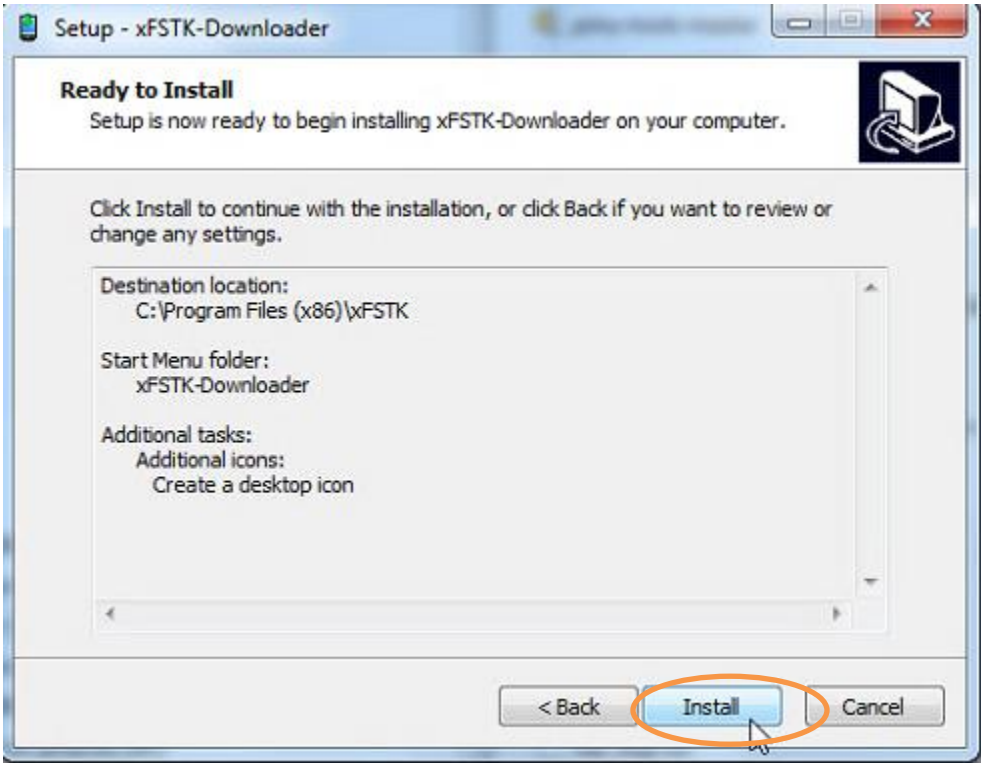



4) Select Next

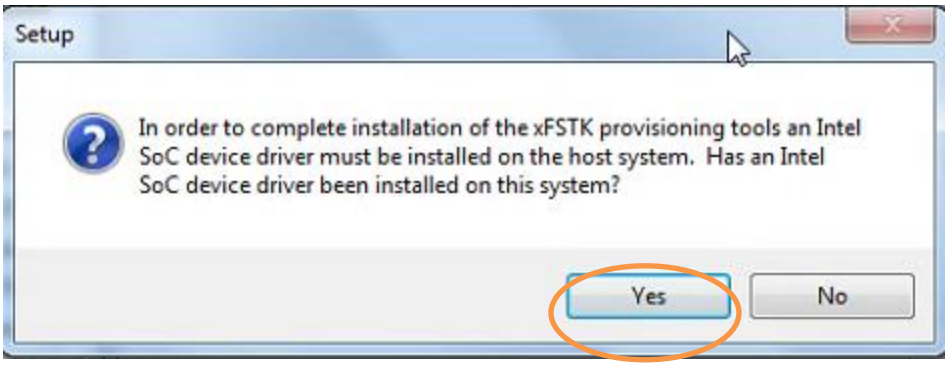




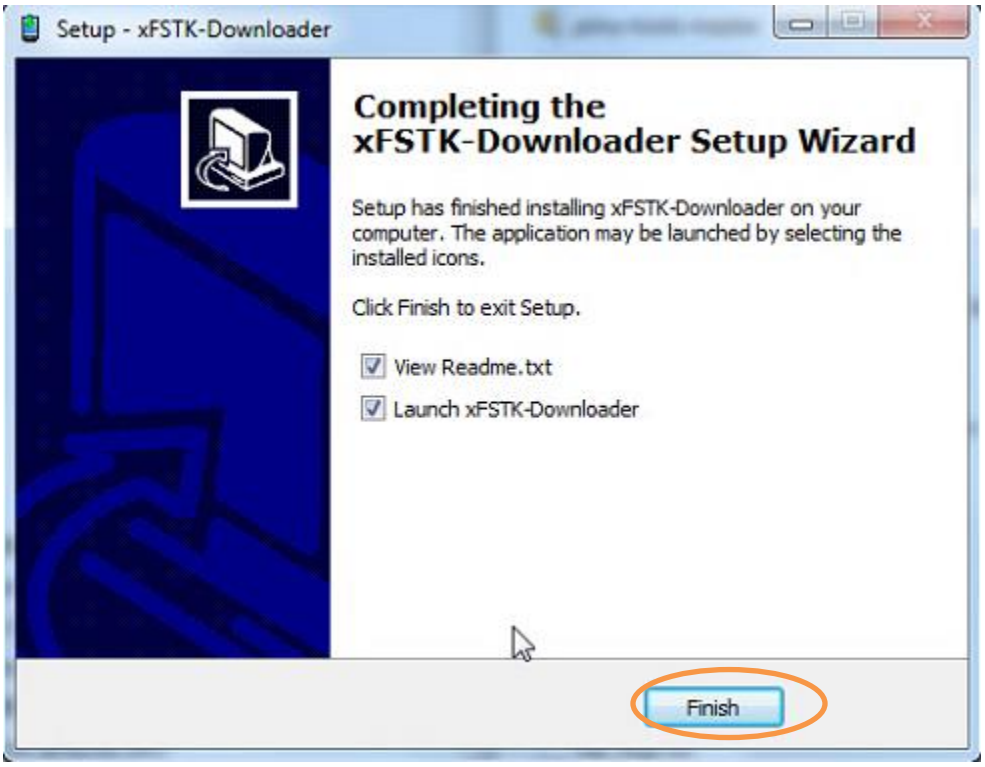

5) Select “Install”




6) You will see the screen below; Click “Yes”

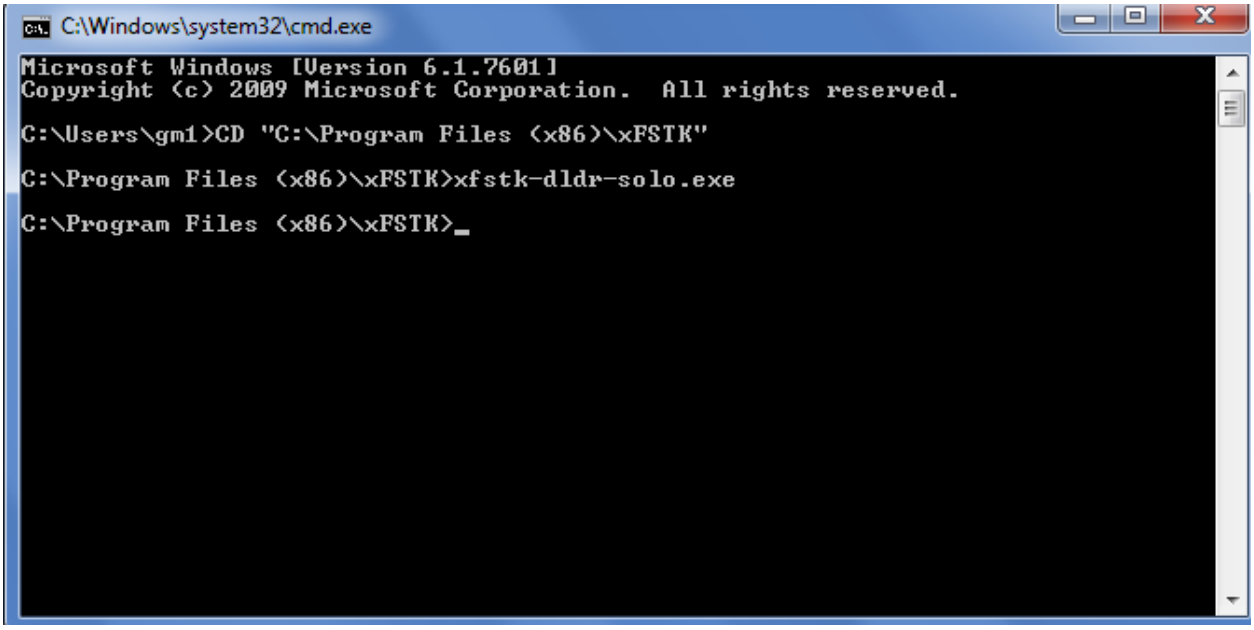


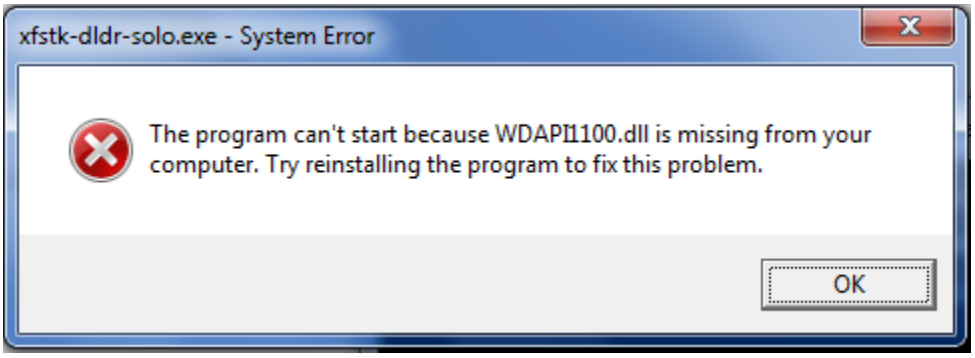

7) Finish up the installation



Note:

If you see an error like the one shown below when you launch xfstk from the command line utility

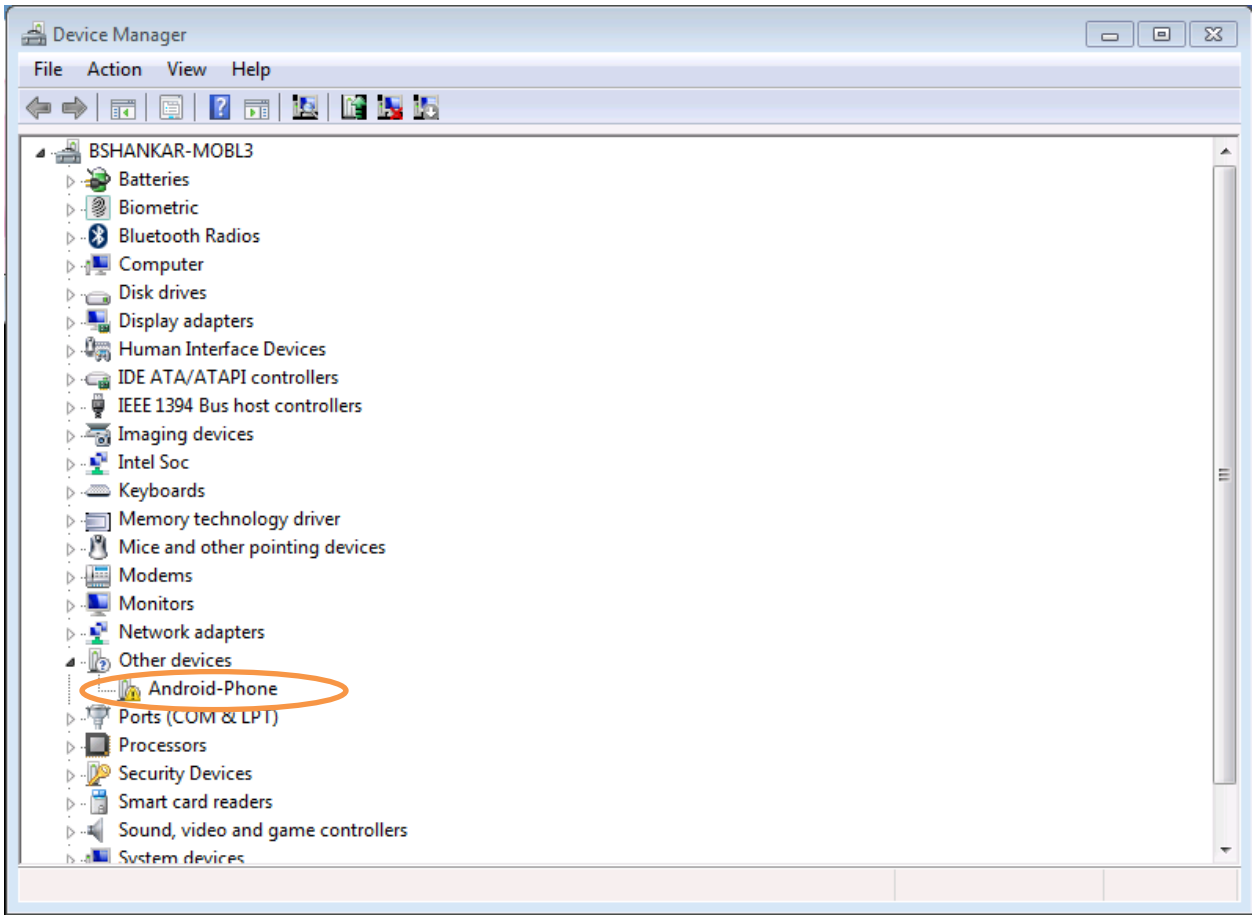


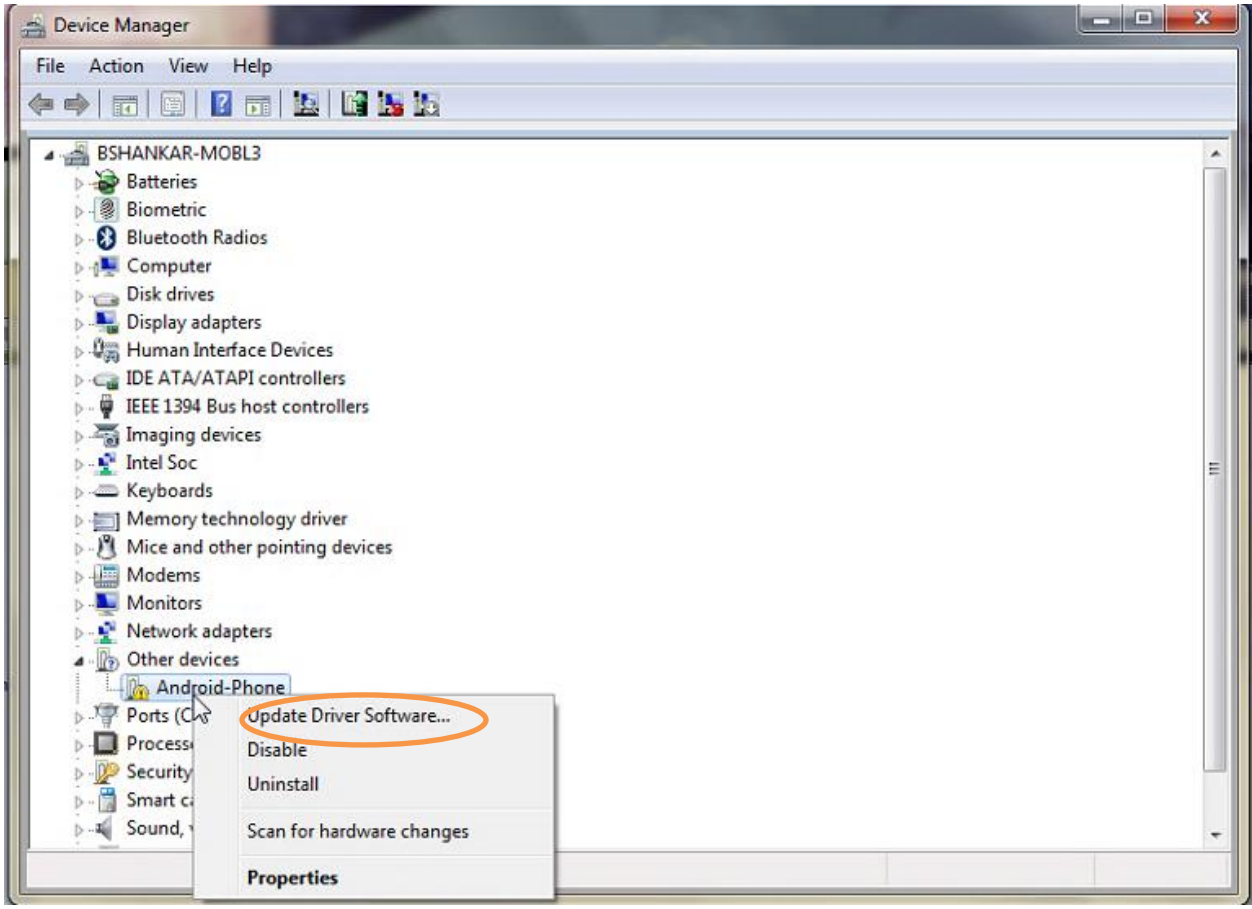

Grab the WDAPIXXXX.dll from C:\Windows\System32 and copy paste the dll in the folder in which xfstk is installed. Rename the file to WDAPI1100.dll.

## Install the USB driver for bootloader mode

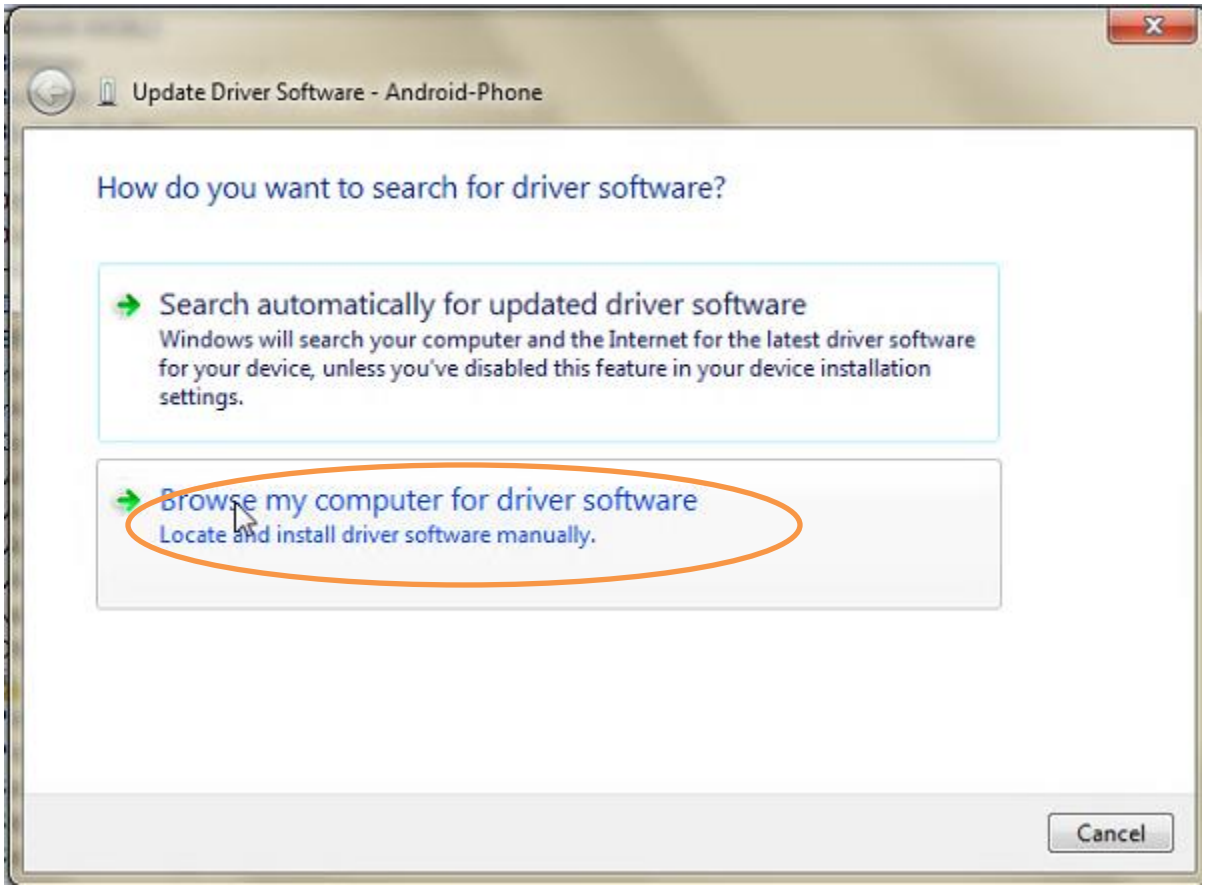
1) Connect the Tablet to your workstation
2) Open a cmd window and run “adb reboot-bootloader”; the tablet will boot into the “fastboot” menu
3) Install the USB driver for the fastboot mode
    a. Open the device manager (Control Panel -> System and Security -> Device Manager)



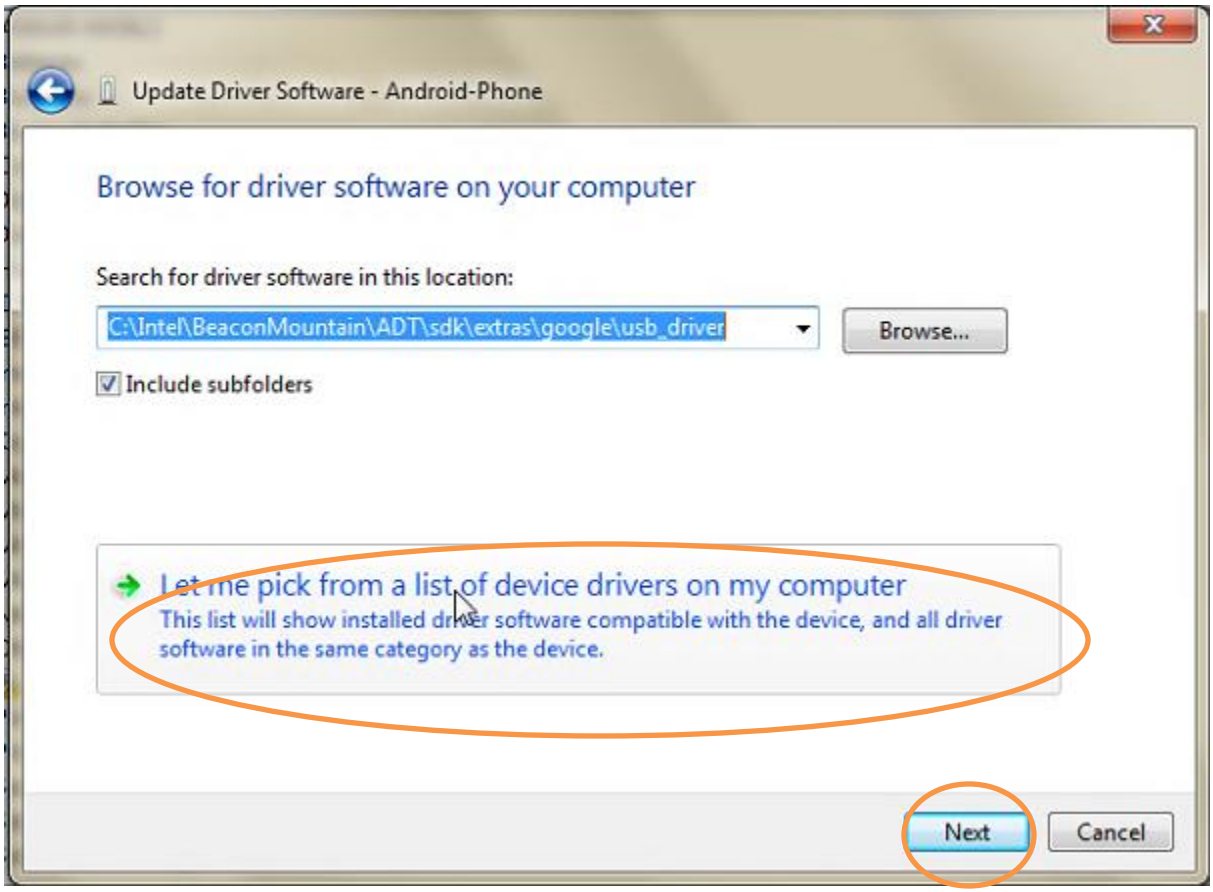
b. Right Click on “Android-Phone” and Select “Update Device Driver”



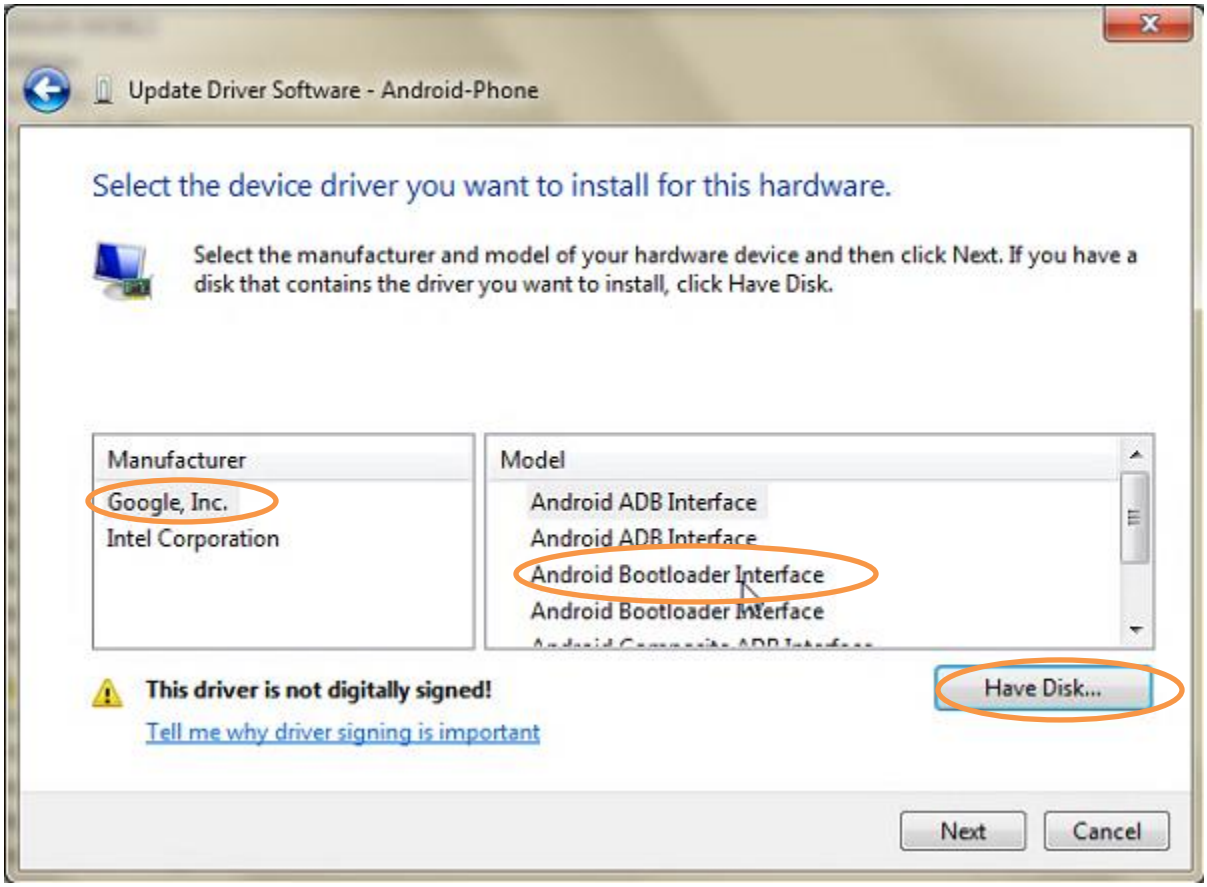
c. Select “Browse my computer for driver software”



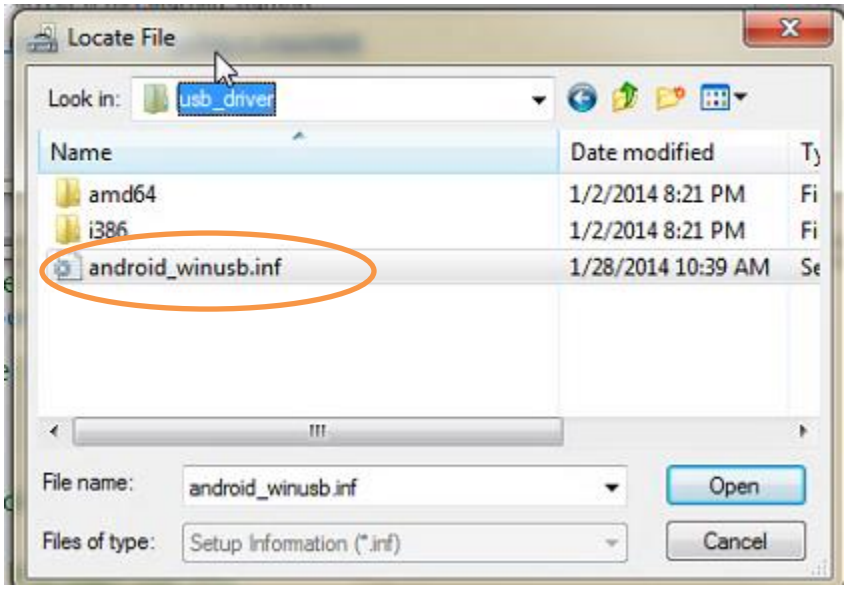
d. Select “Let me pick from a list of Device Drivers on my computer” and click “Next”



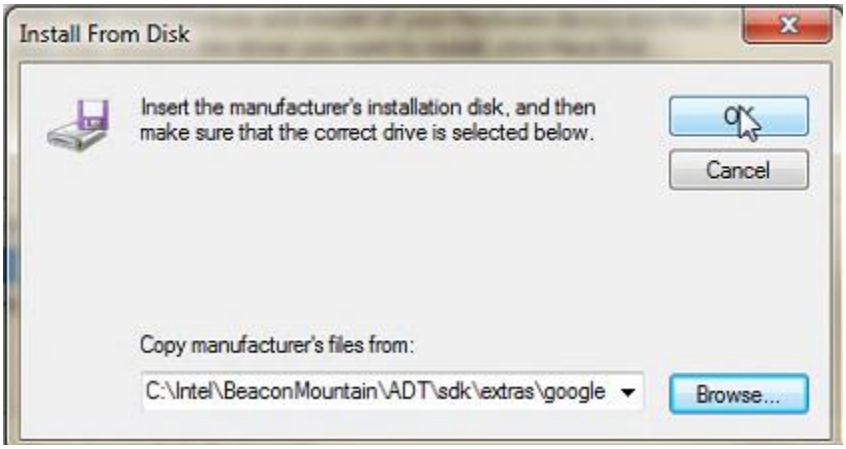
e. Select “Google Inc” and “Android Bootloader Interface”; click on “Have Disk”



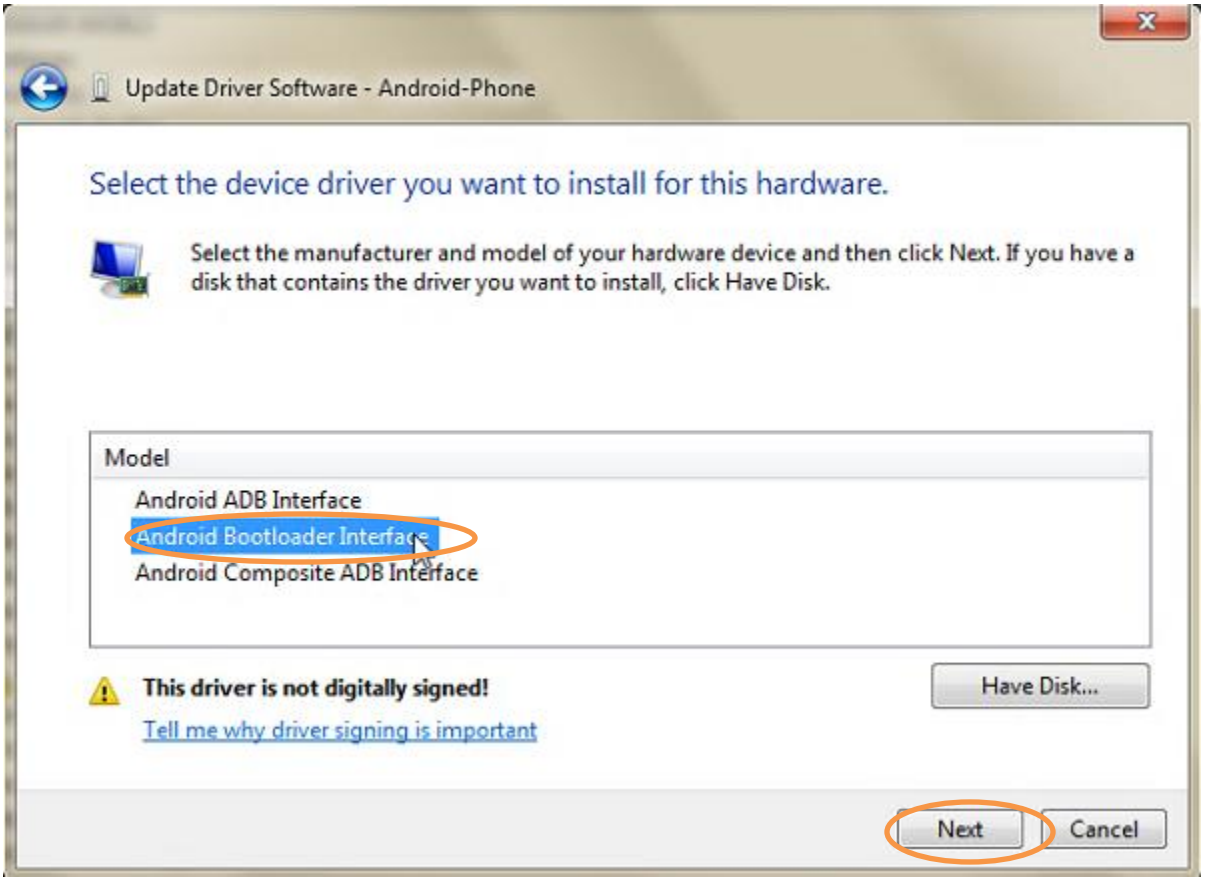

f. Browse to sdk\extras\google\usb_driver and select “android_winusb.inf” and click “Open”



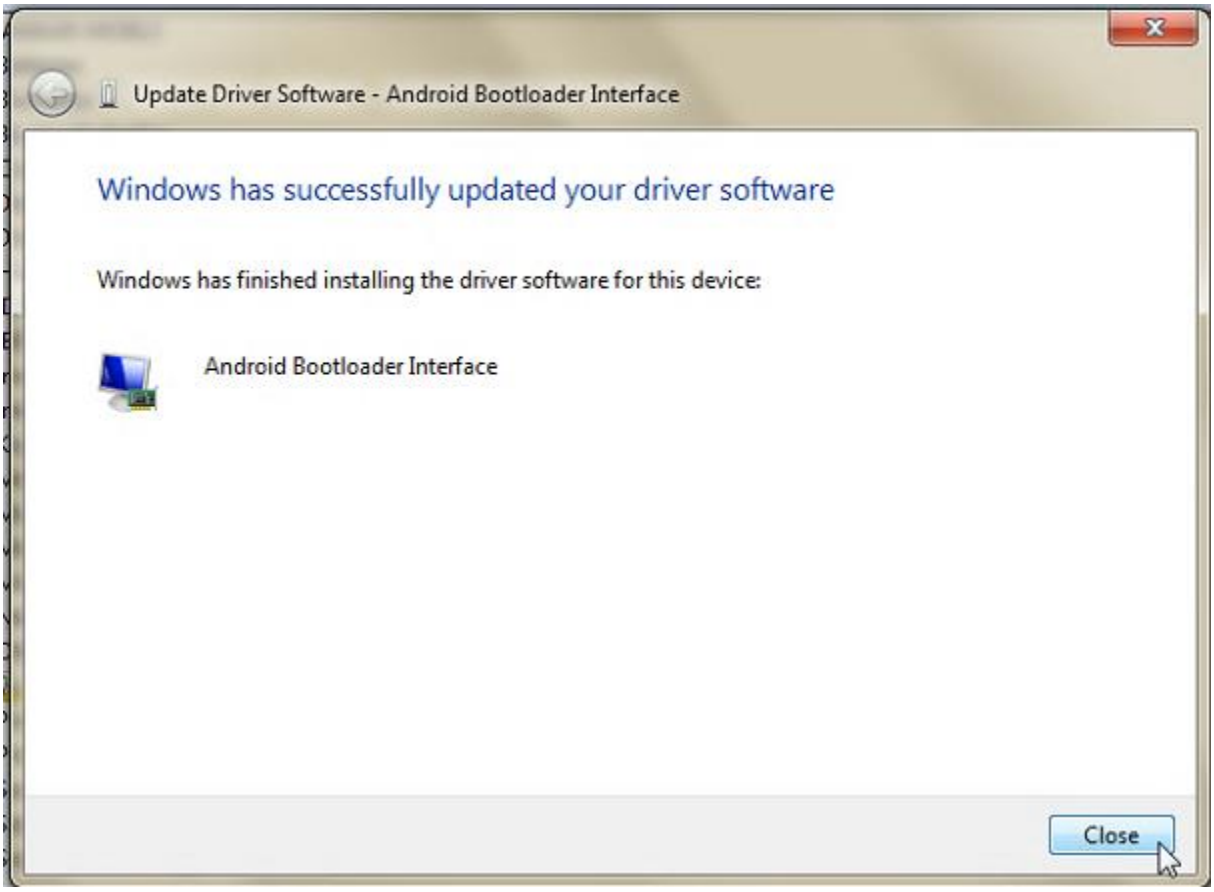
g. Click “OK”



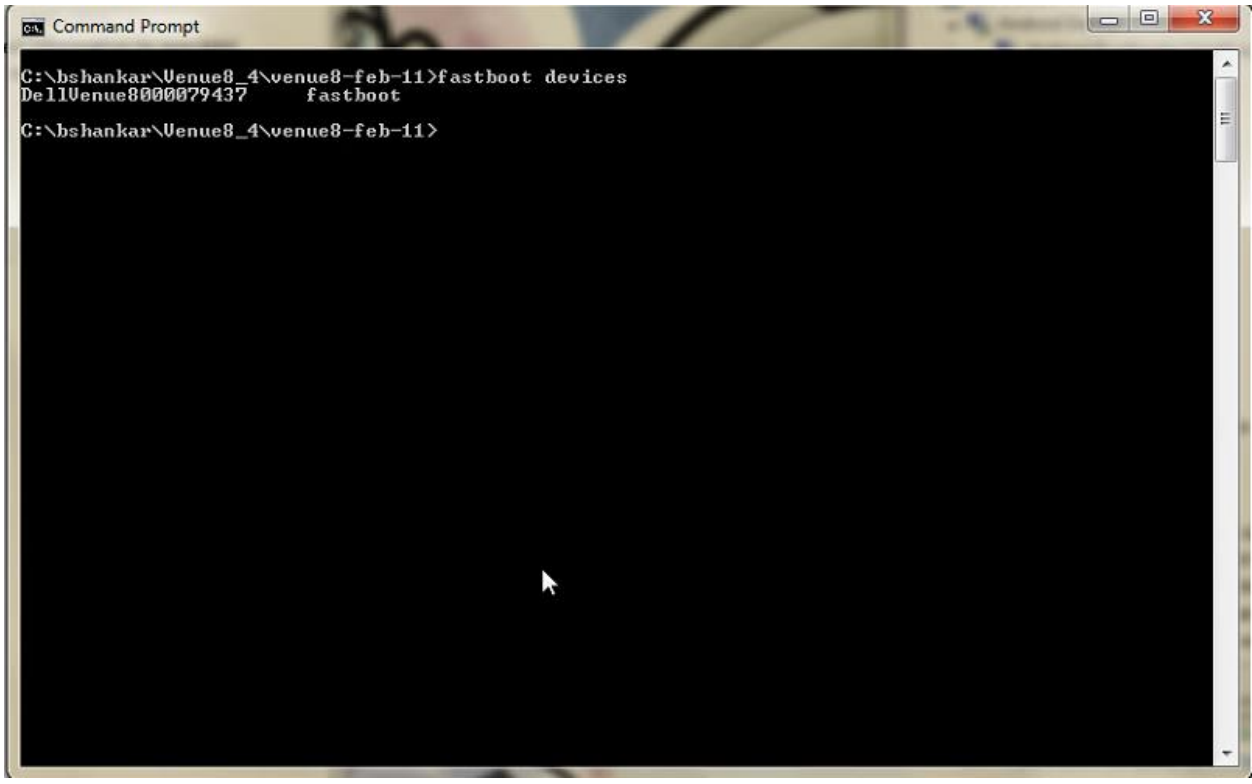

h. Select “Android Bootloader Interface” and click “Next”



i. Device will be successfully installed



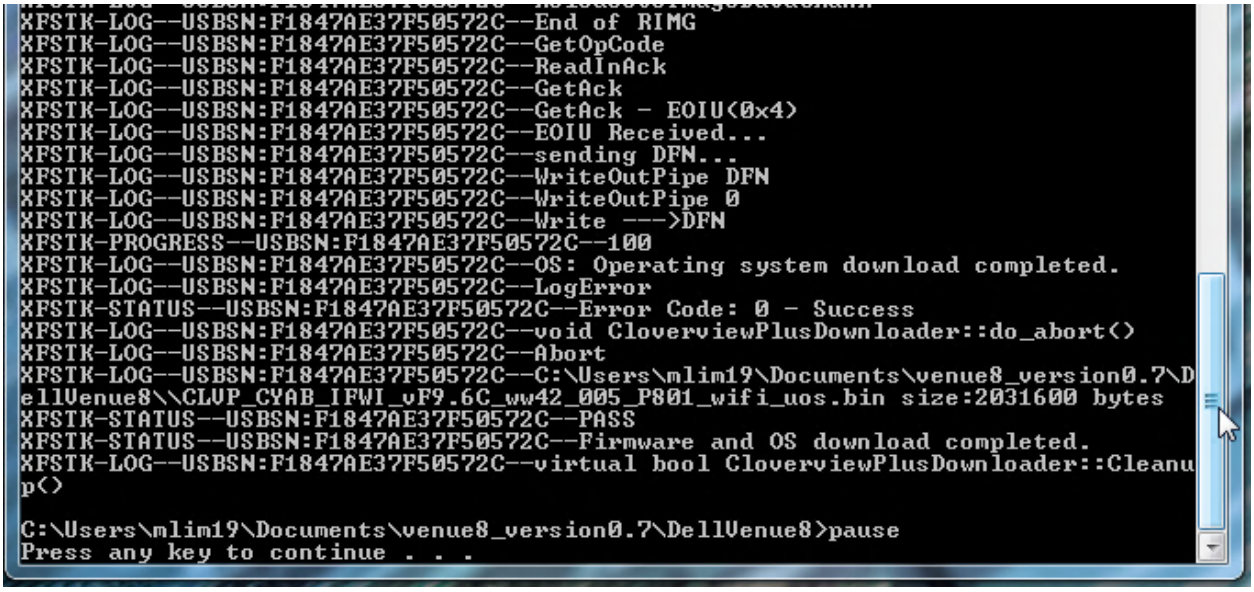
j. In a cmd window; type “fastboot devices” and you should see the screen




**k. Reboot the Windows workstation**

## Prepare the Dell Tablet for unbricking/rooting

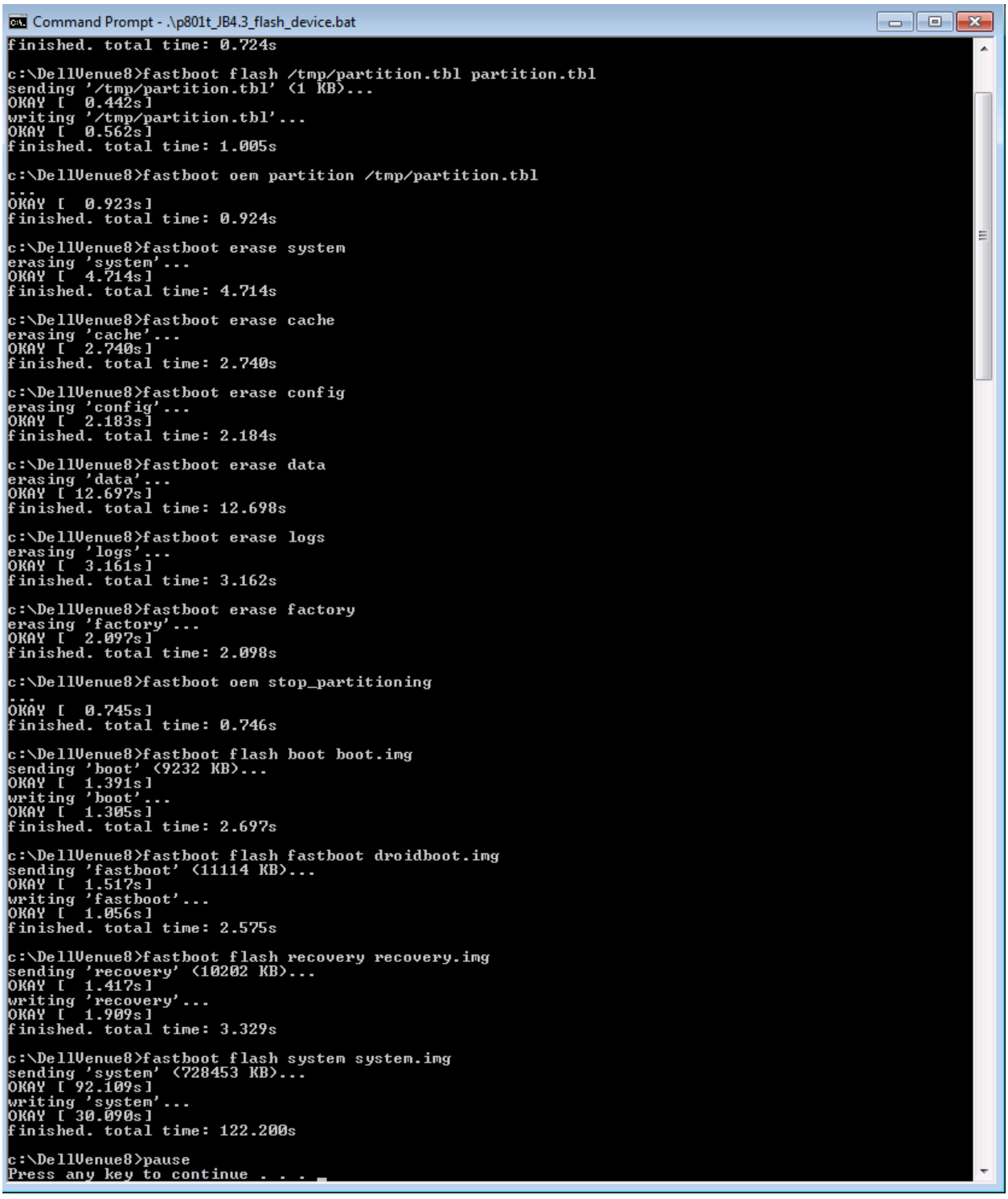
1) **Hard Power off** the Dell Venue tablet by holding the power button down.
2) **VERY IMPORTANT: ********* Unplug** the USB cable from the Dell Venue tablet **********
3) Unzip the file “venue8_version-1.22.zip”
4) Open a cmd shell ; cd “DellVenue8” ; and execute the batch file “setup_part1_xfstk.bat”
5) Now Plug in the USB cable to the device; and you will see the screen below
    a. **NOTE:** If there are multiple USB ports on the Windows workstation, you may need to try more than one.
6)




7) The Dell tablet will show the fastboot screen

## Setup: Part 5: Flash the OS images

1) Execute the script “p801t_JB4.3_flash_device.bat”




2) Press any key to continue
3) The Dell Tablet will now boot up
4) Re-enable Developer Mode (Part 1, bullet 1)

# How to build the kernel image from the kernel sources

This instruction shows how to build the kernel image for Dell Venue 8 3830 tablet using the kernel source package “linux-1.22.P801-Nomodem-20140321.tgz”.

1. If you haven’t changed the system or kernel image in device after your purchase, please make sure the firmwares are replaced by the ones available from where you downloaded the kernel source. If not done, the device will recognize only a signed boot image and the kernel image built in the following instruction won’t be successfully flashed.

2. Download Android AOSP 4.3 source codes from android.com. The detailed download instruction is available at https://source.android.com/source/downloading.html.
   \> pwd
   /localdisk3/dell_venue_8
   \> mkdir aosp
   \> cd aosp
   \> repo init -u https://android.googlesource.com/platform/manifest -b android-4.3_r3
   \> repo sync

3. Extract the kernel source package “linux-1.22.P801-Nomodem-20140321.tgz” to the Android source root directory, i.e. aosp directory in this example.
   \> pwd
   /localdisk3/dell_venue_8/aosp
   \> tar –xzf linux-1.22.P801-Nomodem-20140321.tgz
   Once done, you should be able to see the “linux” directory inside aosp directory

4. Follow https://source.android.com/source/initializing.html to setup build environment, then install extra packages as below.
   \> sudo apt-get install libxml2:i386
   \> sudo apt-get install libqtgui4:i386

5. Build the kernel image with the kernel build script
   \> . build/envsetup.sh
   \> lunch aosp_x86-eng
   \> cd linux
   \> ./kernel_build.sh

6. Check out if the kernel image “boot.img” was created.
   \> cd out/target/product/
   \> pwd
   /localdisk3/dell_venue_8/aosp/linux/out/target/product
   \> ls -al boot.img
   -rw-r----- 1 xxx yyy 8540672 Mar 19 14:56 boot.img

7. Now flash the kernel image to the device. Connect the tablet to the machine
   \> adb reboot bootloader

\> fastboot flash boot boot.img
\> fastboot continue

8. 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.