## Boot from SD Card on Beagleboard XM

The OS for Beagleboard XM boots from SD card. The Android images supporting Beagleboard XM can be downloaded from Rowboat google group. For example, after download ‘beagleboard-xm-jb.tar.gz’ from Rowboat google group, run ‘tar xzvf beagleboard-xm-jb.tar.gz’.

Then, plug in the SD card through the SD card adapter, and run ‘df -h’. The information ‘/dev/sdXY’ will be displayed, where ‘X’ is a lower case letter.

Finally, in the folder ‘beagleboard-xm-jb’, run ‘./mkmmc-android.sh /dev/sdX’, and then the android boot image will be written to the SD card, where the Android OS can boot up. After the image has been written to the SD card, there will be 3 partitions on the SD card, and a format tool ‘HP USB Disk Storage Format Tool’ can be used to erase the 3 partitions.

## Enable USB host mode

To enable the Android USB host, the file ‘android.hardware.usb.host.xml’ containing the following content:

<?xml version="1.0" encoding="UTF-8"?>

-<permissions><feature name="android.hardware.usb.host"/></permissions>

should be available in the path ‘/system/etc/permissions’.

## Enable ADB for Beagleboard XM

The following steps can be followed to enable ADB for Beagleboard XM over USB on Windows OS.

* Download and uncompress Android USB driver from Google website

Edit (or create and then edit if it doesn't already exist) file in

* Add the following line in "%USERPROFILE%\.android\adb\_usb.ini":

echo 0x18D1 > "%USERPROFILE%\.android\adb\_usb.ini"

* In android\_winusb.inf, add the following content in [Google.NTx86] section for 32 bit machine or [Google.NTamd64] for 64 bit machine:

;TI EVM

%SingleAdbInterface% = USB\_Install, USB\VID\_18D1&PID\_9018

%CompositeAdbInterface% = USB\_Install, USB\VID\_18D1&PID\_9018&MI\_01

;TI AM45xEVM

%SingleAdbInterface% = USB\_Install, USB\VID\_451&PID\_9018

%CompositeAdbInterface% = USB\_Install, USB\VID\_451&PID\_9018&MI\_01

* Boot the board and connect the USB cable between PC and the board OTG.
* Install the driver for Rowboat gadget according to the following steps:
  + Open the device manager and update the driver for the rowboat gadget;
  + Select ‘Browse my computer for driver software’;
  + Select ‘Let me pick from a list of device drivers’, locate the USB driver folder, and then install the USB driver for the ADB.

The following steps can be followed to enable ADB in Ubuntu OS:

* In root, create or modify the file '/etc/udev/rules.d/51-android.rules' with the following contents:

SUBSYSTEM=="usb", SYSFS{idVendor}=="18d1", MODE="0666"

* Execute the following command:

chmod a+r /etc/udev/rules.d/51-android.rules

* Install android-tools-adb