# Dragonboard 410c Hardware Setup and Software Installation

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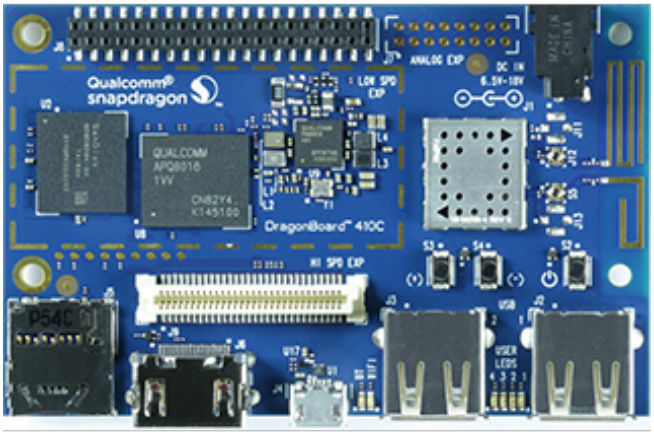
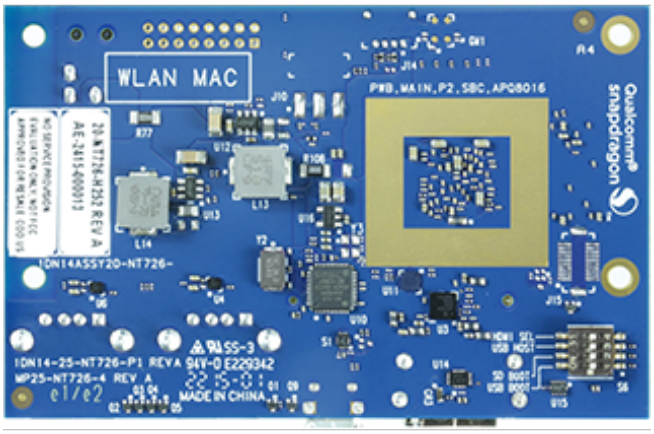



## Introduction

The purpose of this document is to explain how to quickly setup the hardware and install the GENIVI Development Platform (GDP) on the Dragonboard 410c

**Dragonboard 410c**

Please refer to this link for detailed hardware specifications.




## Master (GDP rolling release)

To build the Master source code release for dragonboard-410c please check GDP Master wiki page, which includes the latest instructions for every supported target board.

## GDP 11 RC2

## Software Setup

### Quick Start

The GDP repo uses git-submodules and source scripts to automate the configuration of the required repository build layers. Although this does not fully automate the process, the use of it is advised especially for those wanting to get up and running quickly.

**The following is known to work on Ubuntu Linux 14.04 LTS (x86_64)**

1. Install the required development tools on the host by executing the following command.
   ```
   $ sudo apt-get install gawk wget git-core diffstat unzip texinfo gcc-multilib build-essential chrpath socat libsdl1.2-dev xterm
   ```

2. Create a directory for the GDP sources
   ```
   $ mkdir GDP
   $ cd GDP
   ```

3. Clone genivi dev platform on the release branch
   `$ git clone https://github.com/GENIVI/genivi-dev-platform.git -b gdp-11-rc2`

4. Initialise build environment, the firmware for the Qualcomm Dragonboard is distributed with a EULA and the accept-eula is required in order to accept those conditions.

   ```
   $ cd genivi-dev-platform
   $ source init.sh dragonboard-410c accept-eula
   ```

5. If you wish to enable touch support for the known Genivi AMM monitor (Faytech 10" V2), uncomment in the local.inc
   #USE_FAYTECH_MONITOR = "1"
6. `$ bitbake genivi-dev-platform`

7. Once built, Setup Hardware & Deploy

# Hardware Setup

## Hardware prerequisites

1. Dragonboard 410c
2. AC adapter
3. LAN Cable
4. HDMI Cable
5. Touchscreen monitor with HDMI connector (known to work reference) (A non touchscreen monitor paired with a USB mouse can also be used)
   or Monitor with HDMI connector.

## Deployment on Dragonboard 410c (eMMC)

### On the host

#### Linux (Ubuntu 14.04 64bit)

#### Prerequisites

1. Install fastboot in linux

   ```
   $ sudo add-apt-repository ppa:phablet-team/tools && sudo apt-get
   update
   $ sudo apt-get install android-tools-fastboot
   ```

2. Download the latest linux bootloader zip located here
3. Flash the eMMC with the bootloader
   : unzip the bootloader that was downloaded in the previous step. Note the directory that is it located in.
   : assure that a micro USB cable is connected from the micro-USB port on the dragonboard 410c to the host PC
   : assure micro SD Card slot is empty on the dragonboard 410c
   : set the S6 switch on the dragonboard 410c to: 0-0-0-0 {SD Boot set to off}
   : power on the dragonboard 410c into fastboot mode
   - Press and hold the Vol (-) button on the DB410c (S4)
   - While pressing S4 button, power up the DB410c. It will come up in fastboot mode
   : from the host PC terminal window, run the following commands:

   ```
   # Check to make sure fastboot device connected. If not resolve
   $ sudo fastboot devices
   # cd to the directory the bootloader zip file was extracted
   $ cd <extraction directory>
   $ sudo ./flashall
   ```

4. The bootloader is now installed on the dragonboard 410c.

#### Install GDP image to eMMC

1. assure that a micro USB cable is connected from the micro-USB port on the dragonboard 410c to the host PC
2. Copy output image from build machine to linux machine that is connected micro-USB (Often, those are same machines)
   Output Image location in build machine for dragonboard-410c
   **: GDP/genivi-dev-platform/gdp-src-build/tmp/deploy/images/dragonboard-410c/boot-dragonboard-410c.img**
   **: GDP/genivi-dev-platform/gdp-src-build/tmp/deploy/images/dragonboard-410c/genivi-dev-platform-dragonboard-410c.ext4.gz**
   or download the files if you prefer not to build them.
3. Flash output image to your eMMC

```
$ cd <extraction directory>
$ gzip -d genivi-dev-platform-dragonboard-410c.ext4.gz
$ sudo fastboot flash boot boot-dragonboard-410c.img
$ sudo fastboot flash rootfs genivi-dev-platform-dragonboard-410c.
ext4
```

4. Reboot

**Note:**

- To use usb keyboard or usb ethernet, please remove micro-USB connection.
- User / password is **root / root**

# Known Issues

**GDP-402** - Getting issue details... STATUS

**GDP-403** - Getting issue details... STATUS

# Reference

- https://github.com/96boards/documentation/wiki/Dragonboard-410c-Installation-Guide-for-Linux-and-Android