



CUBIEBOARD

<http://cubieboard.org>

Cubieboard2 Android Building Guide

Cubieboard2

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Version	Author	Modification	Check
V0.1	Payne	Init version	Aaron
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1. Introduction

Cubieboard2 is the second generation product of Cubieboards , Cubietech customized a android4.2.2 os , and open the source code to the community .

2. Overview

This is a quick guide for Cubieboard2 SDK :

- How to download SDK
- How to set up PC compilation environment
- How to build and pack a image

3. Software requirements

- Developing host PC with Linux os , Ubuntu12.04 AMD64 is suggested
- USB upgrading tools : Livesuit or PhoenixSuit
- Cross-compilation environment

4. Install JDK

```
$wget dl.cubieboard.org/software/tools/android/jdk1.6.0_45.tar.gz
```

```
$sudo tar -xvf jdk1.6.0_45.tar.gz
```

```
$ sudo vim ~/.bashrc
```

add:

```
JAVA_HOME=/jdk_path
```

```
export JRE_HOME=/jdk_path/jre
```

```
export PATH=$JAVA_HOME/bin:$JRE_HOME/bin:$PATH
```

```
jdk_path: jdk1.6.0_45 path
```

save and verify:

```
$source ~/.bashrc&&java -version
```

```
le@le:~$ source ~/.bashrc&&java -version
java version "1.6.0_45"
Java(TM) SE Runtime Environment (build 1.6.0_45-b06)
Java HotSpot(TM) 64-Bit Server VM (build 20.45-b01, mixed mode)
```

It is successful.



5. Cross-compilation environment set up

On your Ubuntu12.04 the below tools need to be installed :

```
$sudo apt-get update
$sudo apt-get upgrade
$sudo apt-get install build-essential u-boot-tools uboot-mkimage binutils-arm-linux-gnueabi
$sudo apt-get install gcc g++ gcc-arm-linux-gnueabi gcc-arm-linux-gnueabi-hf g++-multilib
$sudo apt-get install cpp-arm-linux-gnueabi-hf libusb-1.0-0 libusb-1.0-0-dev wget fakeroot
$sudo apt-get install kernel-package zlib1g-dev libncurses5-dev build-essential
$sudo apt-get install texinfo texlive ccache zlib1g-dev gawk bison flex gettext uuid-dev
$sudo apt-get install ia32-libs git gnupg flex bison gperf build-essential zip
$sudo apt-get install curl libc6-dev x11proto-core-dev libx11-dev:i386 lib32ncurses5-dev
$sudo apt-get install libreadline6-dev:i386 mingw32 tofrodos python-markdown
$sudo apt-get install libxml2-utils xsltproc zlib1g-dev:i386 libgl1-mesa-dev
```

6. Download SDK

You can download the Cubieboard2 sdk from here:

[Android-Cubieboard2](#)

This is a git repo from <https://bitbucket.org/> , don't git clone form <https://bitbucket.org/> directly, due to the file transfer limit, you can not get the whole repo . Checking your Bitbucket account and Git tool is available, start to get the whole android sdk following the steps:

```
$ sudo apt-get install git
$ mkdir -p a20/lichee
$ mkdir -p a20/android

$ cd a20/lichee
$ tar -zxpf a20_homelet_v2.0_lichee.git.tar.gz
$ git reset --hard
$ git checkout Cubieboards

$ cd ../../a20/android
$ tar -zxpf a20_homelet_v2.0_android4.2.git.tar.gz
$ git reset --hard
$ git checkout Cubieboards
```



Update in the future and download Cubieboard2 patch:

[Cubieboard-patch](#)

== Aplly new patch ==

```
$ cd android
$ git checkout Cubieboards
$ git apply new.patch
```

```
$ cd lichee
$ git checkout Cubieboards
$ git apply new.patch
```

7. Building

7.1. Building Lichee

This step is to build linux kernel .

```
$ cd lichee/linux-3.4
$ cp arch/arm/configs/cubieboard2_config .config
$ cd ..
$ ./build.sh -p sun7i_android
```

When Lichee compilatons is finished , you can get below log :

```
INFO: build u-boot OK.
INFO: build rootfs ...
INFO: skip make rootfs for android
INFO: build rootfs OK.
INFO: build lichee OK.
```



7.2. Building Android

```
$cd android  
$source ./build/envsetup.sh  
$lunch sugar_cubieboard2-eng // Chosing product  
$extract-bsp // Packing Lichee driver modules  
$make -j8 // Start compilation  
$pack // Packing image
```

OK , your image is packed here :

[lichee/tools/pack/sun7i_android_sugar-cubieboard2.img](#)