CUBIEBOARD
http://cubieboard.org

Cubieboard2-20151211-EMMC linux image install guide v1.0

Website:http://cubieboard.org/
Email: support@cubietech.com

Version	Author	Modification	Check
V-1.0-20160422	Sam	Init version	Aaron

Table of Contents

1. Overview

Cubieboard2-20151211-EMMC is called CB2-EMMC for short. Compared with Cubieboard2-20150909-Nand , it change the NAND FLASH to EMMC FLASH, and add RTC,Microphone. About how to distinguish cubieboard2 version, refer:

http://dl.cubieboard.org/model/CubieBoard2/How%20To%20Distinguish%20Your%20CubieBoard2%20Version%20.pdf

EMMC FLASH can be regarded as a Micro SD CARD. Compared with NAND FLASH,the advantage of EMMC FLASH

1).System on EMMC FLASH is no easy to be broken when shuting down the board.

2).EMMC FLASH driver is mmc drvier, which is open source.

3).You can build the image refer the SDK.

NOTICE: TSD FLASH is same with EMMC FLASH. You can regard them as a Micro SD Card. So the CB2-EMMC image is same with CB2-TSD image. You can flash their image each other. But CB2-Nand image can not be flash into CB2-EMMC.

2. Install Prepare

2.1. Hardware requirements

- A host computer ,Windows or Linux operating system
- A CB2-EMMC
- TF-Card + Card Reader , class 10 suggested ,4G or more ,read and write speed the sooner the better

- The mouse, keyboard, official power supply (dc5v, 2A), HDMI display, serial port (optional)

2.2. Tools

- PC OS: Windows or Linux operating system.

In Windows: you need to download Win32diskimager to install the image to tfcard.

http://dl.cubieboard.org/model/cubietruck/Tools/win32diskimager-v0.7-binary.zip

In Linux: You can use dd command to install the image to tfcard.

Notice: PhoenixSuit or LiveSuit tools can no be used to flash the linux card or emmc image.This is different with android image.

2.3. Download Image:

http://dl.cubieboard.org/model/CubieBoard2/CubieBoard2-20151211-EMMC/Image/

2.4. Image name rules

Take linaro-server-cb2-20151211-card-hdmi-V1.0.img as example

linaro-server : linux distro name

cb2-20151211 : hardware device

card/emmc :The image with “card” is tfcard booting card image, the system will flash into card. The image with “emmc” is tfcard image which will flash automatically the system into emmc. After succeed to flash,power off by itself.

Hdmi : Display mode

v1.0 : img version, plz use the newest one

2.5. Image file check

After downlaoing image, you can check the file md5 by md5sum cmd,

Take linaro-server-cb2-20151211-card-hdmi-v1.0.img.7z as a example:

```
$ md5sum linaro-server-cb2-20151211-card-hdmi-v1.0.img.7z
```

Windows users can use Win32diskimager compute md5sum. Make sure the calculated md5sum value is same like the downloading md5sum value.

2.6. Unzip Image

2.6.1. Windows users

Please use the support 7z format decompression tool to extract package

2.6.2. Linux users

Such as:

```
$ 7z e linaro-server-cb2-20151211-card-hdmi-v1.0.img.7z
```

3. Booting from Card

The systerm will booting form card, this is used for those user want bootint system from SD card. The user who want to install system to emmc just jump to next step(step 4: Booting from emmc)

3.1. Flashing

3.1.1. Window User

Connect card reader with tfcard, Open the Win32diskimager , Select the image and driver letter. And then click “write”.

3.1.2.Linux User

Use dd command:

```
$ sudo umount /dev/sdx
$ sudo  dd if= linaro-server-cb2-20151211-card-hdmi-V1.0.img of=/dev/sdx
$ sync
```

3.2. Booting test

1. After flash the image into tfcard, Insert the card into CB2-EMMC

2.Access HDMI, mouse, keyboard, network cable, and finally with the standard of dc power supply power . the system boot from card.

3.Account and password:

Linaro ubuntu : user: linaro pawwd: linaro

Cubieez: user: user:cubie passwd : cubieboard user: root passwd :cubieboard

4. Booting from emmc

Get the tfcard image of flashing to emmc and flash the image to tfcard. Inert the tfcard, poweron and the systerm will flashed to emmc automatically. After successfully flashing, the system will power off. Take out the tfcard, power on, systerm will start from emmc.
.

4.1. Flashing

4.1.1.Window User

Connect card reader with tfcard, Open the Win32diskimager , Select the image and driver letter. And then click “write”.

4.1.2.Linux User

Use dd command:

```
$ sudo umount /dev/sdx
$ sudo  dd if= linaro-server-cb2-20151211-emmc-hdmi-V1.0.img of=/dev/sdx
$ sync
```

4.2. The step of flashing system to emmc

1.Insert card into card slots on board.

2.With official standard dc power supply or batteries on electric start .

3.Blue LEDS and Green LEDs are blinking prove that flash process normal. If it fails , Green LEDs will become keeping bright.

4.Wait a few minutes ,all LEDs does not light,prove the system automatically shut down.It mean the flash operation is complete.

5.Pull out the card ,connect HDMI monitor,mouse and keyboard, power on .Wait a moment, monitor begin to display and LEDs blinking . It will execute initialization for the first time, so slow boot.

Matters needing attention :

- Monitor can't display, maybe it can't support the resolution of the system default ,have compatibility problems. The default HDMI resolution is 1080p50.
- If found the LEDs have no blinking , please check whether the card had been partition into two partitions .The first partition has uImage file and the second partition has rootfs files .
- Don't power outages when flashing process . The board will automatic shutdown will after complete the flash operation .
- In order to reduce the flash time,recommend use class -10 card .
- The image only can be flashd using Win32diskimager tools or use Linux dd command , Phoenixsuit or Livesuit is no OK.