



CUBIEBOARD

<http://cubieboard.org>

CubieAIO linux image install guide v1.0



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1. Install Prepare

1.1. Hardware requirements

- A host computer ,Windows or Linux operating system
- A CubieAIO
- 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)

1.2. 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.

1.3. Download image:

<http://dl.cubieboard.org/model/CubieAIO-A20/Image/>

1.4. Image name rules

Take linaro-14.04-desktop-cubieaio-card-v1.0.img.7z as a example

linaro-14.04-desktop : linux distro name
cubieaio : 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.
v1.0 : img version, plz use the newest one

1.5. Image file check

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

Take linaro-14.04-desktop-cubieaio-card-v1.0.img.7z as a example:

```
$ md5sum linaro-14.04-desktop-cubieaio-card-v1.0.img.7z
```

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

1.6. Unzip image

1.6.1.Windows users

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

1.6.2.Linux users

Such as:

```
$ 7z e linaro-14.04-desktop-cubieaio-card-v1.0.img.7z
```

2. Booting from card

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

2.1. Flashing

2.1.1. Window user

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

2.1.2. Linux user

Use " dd" command:

```
$ sudo umount /dev/sdx
```

```
$ sudo dd if=linaro-14.04-desktop-cubieaio-card-v1.0.img of=/dev/sdx
```

```
$ sync
```

2.2. Booting test

1. After flash the image into tfcard, insert the card into CubieAIO board
2. Access 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 passwd: linaro
Cubieez: user: user:cubie passwd : cubieboard user: root passwd :cubieboard

3. Booting from emmc

Get the tfcard image of flashing to emmc and flash the image to tfcard. Insert the tfcard, power on

and the system will be flashed to emmc automatically. After successfully flashing, the system will power off. Take out the tfcard, power on, system will start 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-14.04-desktop-cubieaio-emmc-v1.0.img of=/dev/sdx
```

```
$ sync
```

3.2. 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. You can see the booting log from LCD, and the system will automatically starting flash to emmc .If it failed,you can see the green word from LCD as following pictures:



```
Creating filesystem with 15368 1k blocks and 3856 inodes
Filesystem UUID: bb6473b3-cdc6-4122-ba5e-3d1fd4279b3f
Superblock backups stored on blocks:
    8193

Allocating group tables: done
Writing inode tables: done
Writing superblocks and filesystem accounting information: done

mke2fs 1.43-WIP (09-Jul-2014)
Creating filesystem with 1909504 4k blocks and 477664 inodes
Filesystem UUID: f3db6c74-f399-4af3-aaf3-3b950e689479
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

EXT3-fs (mmcblk0p2): error: couldn't mount because of unsupported op
EXT2-fs (mmcblk0p2): error: couldn't mount because of unsupported op
EXT4-fs (mmcblk0p2): mounted filesystem with ordered data mode. Opt
cp: can't stat '/bootfs/*': No such file or directory
failed to flash

/ #
```

4.Wait a few minutes ,LCD have no display output , prove the system automatically shut down.It mean the flash operation is successfully complete.

5.Connect the CubieAIO with mouse and keyboard, power on , For a moment, LCD has display output. The first time 's booting will do some initalization , it will take longer time to boot .

Matters needing attention :

- After power on, if the system keep automatically rebooting, please check whether the card had been partition into two partitions .The first partition has uImage file and the second partition has rootfs files .
- In order to reduce the flash time,recommend use class -10 card .
- The creating image only can be flash using Win32diskimager tools or use Linux dd command , Phoenixsuit or Livesuit is no OK.