

# Release Note of Ubuntu MATE 18.04 LTS (v4.0)

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## Summary

Release Date	2018-05-01
Release Type	new image

File name : ubuntu-18.04-4.14-mate-odroid-**xu4**-20180501.img.xz

***XU4 OS image is fully compatible with HC1, MC1 and XU3.***

## Download from below servers

- Official US West Coast: [http://odroid.in/ubuntu\\_18.04lts](http://odroid.in/ubuntu_18.04lts)
- Official US East Coast: [http://east.us.odroid.in/ubuntu\\_18.04lts](http://east.us.odroid.in/ubuntu_18.04lts) (Thanks to David Beauchamp @ archlinuxarm)
- Official EU Germany: [http://de.eu.odroid.in/ubuntu\\_18.04lts](http://de.eu.odroid.in/ubuntu_18.04lts)
- Official Korea Mirror: <http://dn.odroid.com/5422/ODROID-XU3/Ubuntu/>

## New features

- Ubuntu 18.04 LTS Bionic Beaver with Mate Desktop
- Kernel 4.14.37 LTS (the latest LTS Kernel version at this moment)
- OpenGL ES 3.1 and OpenCL 1.2 drivers for Mali T628MP6 GPU
- X11 armsoc display driver with full-screen VSYNC implementation
- Kernel header package is improved to support the DKMS driver build
- Support ARM streamline performance analyzer ([https://wiki.odroid.com/odroid-xu4/application\\_note/arm\\_streamline\\_on\\_xu4](https://wiki.odroid.com/odroid-xu4/application_note/arm_streamline_on_xu4))
- FFMPEG with hardware accelerated H.264 decoder
- SDL patched with OpenGL ES Support
- GPU accelerated Chromium browser
- Kodi 17.6 playback 1080p/60fps H.264 files without tearing
- CPU performance-counter feature works with big and little cores for more efficient HMP program development
- WiringPi and other GPIO/SPI/I2C/ADC/IRQ tinkering libraries are available
- KVM feature is ready to run
- Docker feature is ready to run
- And many other features



The RootFS Auto-resize feature has changed!!!  
Once everything is done after auto-resize, the power will turn off



automatically. Wait a couple of minutes.  
And press the power button if the blue LED is off.

## Known issues and Tips

- Tons of issues undocumented. 😞
- Mali GPU access could be blocked by a recent Canonical's EGL package. In that case, you need to install our Mali driver manually.

```
sudo apt-get install mali-x11 --reinstall
```

- To change **CPU governor** to “ondemand”, refer [this guide](#) boot.ini tweaking doesn't work with Kernel 4.14 any more.
- VLC doesn't start due to a video driver compatibility issue.
- The first time launching of Chromium takes around one minute due to internal initialization process. After that, it starts in 1~2 seconds.
- To enable Auto-login, edit `/usr/share/lightdm/lightdm.conf.d/50-greeter-wrapper.conf` file like this.

```
[SeatDefaults]
greeter-session=lightdm-gtk-greeter
autologin-user=odroid
```

- Some UASP capable USB-to-SATA bridge controllers are not compatible. If your external HDD is not working properly, add its VID/PID in boot.ini [Boot arguments](#) to disable the UAS function something like this.

```
usb-storage.quirks=0x0bc2:0x2322:u
```

- The Youtube video quality on Chromium browser can be improved a lot with “h264ify” extension in Chrome Web Store. 720p/30fps videos are fine with the extension.
- How to test Qt5 GPU acceleration.

```
sudo apt install qtbase5-examples
/usr/lib/arm-linux-gnueabi/hf/qt5/examples/opengl/cube/cube
```

## Access Credentials

Username	Password
root	odroid
odroid	odroid

## How to Update system and kernel software. Don't forget

## dist-upgrade

target

```
sudo apt update
sudo apt upgrade
sudo apt dist-upgrade
sudo reboot
```

## Linux Kernel build

**This guide is only for the NATIVE BUILD.** Run it on the board.

### Installing building tools

You may need to install the building tools.

target

```
$ sudo apt-get install git gcc g++ build-essential
```

Download and build the kernel source

### Updating Kernel and DTB (Device Tree Blob)

Please note that native kernel compile on ODROID-XU4 will take about 25 minutes.

target

```
$ git clone --depth 1 https://github.com/hardkernel/linux -b
odroidxu4-4.14.y
$ cd linux
$ make odroidxu4_defconfig
$ make -j8
$ sudo make modules_install
$ sudo cp -f arch/arm/boot/zImage /media/boot
$ sudo cp -f arch/arm/boot/dts/exynos5422-odroid*dtb /media/boot
$ sync
```

## Updating root ramdisk (Optional)

target

```
$ sudo cp .config /boot/config-`make kernelrelease`
$ sudo update-initramfs -c -k `make kernelrelease`
$ sudo mkimage -A arm -O linux -T ramdisk -C none -a 0 -e 0 -n uInitrd
-d /boot/initrd.img-`make kernelrelease` /boot/uInitrd-`make
kernelrelease`
$ sudo cp /boot/uInitrd-`make kernelrelease` /media/boot/uInitrd
$ sync
```

## Before you start with new Linux kernel v4.14

You would check all necessary files are in place as below before reboot. The file size would differ.

target

```
$ ls -l /media/boot/
total 14756
-rwxr-xr-x 1 root root 9536 Oct 25 23:29 boot.ini
-rwxr-xr-x 1 root root 753 Aug 20 22:38 boot.ini.default
-rwxr-xr-x 1 root root 62565 Nov 2 01:24 exynos5422-odroidxu3.dtb
-rwxr-xr-x 1 root root 61814 Nov 2 01:24 exynos5422-odroidxu3-
lite.dtb
-rwxr-xr-x 1 root root 62225 Nov 2 01:24 exynos5422-odroidxu4.dtb
-rwxr-xr-x 1 root root 61714 Oct 25 23:30 exynos5422-odroidxu4-
kvm.dtb
-rwxr-xr-x 1 root root 9996513 Nov 2 01:27 uInitrd
-rwxr-xr-x 1 root root 4844744 Nov 2 01:24 zImage
```

target

```
$ sudo sync
$ sudo reboot
```

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