

# ODROBIAN Jessie (64bit) & (32bit)

by [XeoSal](#) » Mon Feb 08, 2016 4:02 pm

Here we come, I have been enjoying Debian (64bit) on my little machine, it's incredible so I wanted to share the experience. In fact, this image has been there and working perfectly even before ODROID-C2 was officially available on sale, I am proud to say that we were the first to bring development of this particular Debian OS to life, we will still continue to offer our best right in time.

## >> UPDATE <<

The hybrid 32bit edition is now supporting both Kodi & Mali-Fbdev with 32bit (armhf) packages.

 [odrobian-system-monitor.png](#)

(33.02 KiB) Downloaded 34465 times

## Special thanks to:

Great people must be credited.

- @debian-developers
- @mdrjr (Kernel, drivers, technical references, hosting ODROBIAN repository, etc)
- @OverSun (KODI & AMLogic VPU libraries source code)
- @mad\_ady (ODROID CPU Control utility, testing & support)
- @crashoverride (Console cursor fix, ideas and testing)
- @robroy (Community support)

Many other members that I've learnt from, and of course the whole HardKernel team.

## Contributors/Supporters:

Anybody can join us on this list to show support.

- Everyone that gave feedback/support on previous ODROBIAN threads.

You will be automatically included as soon as you start showing great feedback, suggestions or educational contributions.

## Features

- Pure Debian 8.3 (Jessie) pulled from official stable ARM64 branch working perfectly.
- We have our own repository integrated perfectly which means you will receive new kernels & other updates remotely.
- All scripts required by HardKernel are installed and working as expected including "C2\_init" & "aml\_fix".
- Automatic rootfs resize and SSH keys regeneration script on first boot.
- Fully Hardware accelerated Kodi Jarvis supporting OpenGLv2 along with AMlogic VPU optimizations.
- Initramfs tools are working and you can regenerate "ulnitrd" automatically with resolution fix already.
- Packages "firmware-linux" and "firmware-realtek" are installed by default meaning your USB peripherals will work out of the box.
- Kernel headers are available by issuing "apt-get update && apt-get install linux-headers-odroid-s905".
- Underclocking in a range from 300MHz to 2.0GHz with simple commands and scripts to show current CPU clock and temperature.
- Ethernet is pre-configured with DHCP for you by default.
- No bloatware at all, only essential tools are installed as deb packages beside the original software.

Make sure you have Ethernet connection during boot or else it will get stuck waiting for "eth0" to come up. Otherwise, just disable the "eth0" interface inside "/etc/network/interfaces" before booting the system.

### **Linux Hybrid Kernel64/Debian32**

- All remarks & features posted above apply exactly the same for this version except it's an ARMHF based system.
- This is basically a system with Linux Kernel 64bit running through Debian 32bit based rootfs.
- Maximum compatibility with ARMHF software built for previous ODROIDs meaning you can install anything.
- ARM64 is configured as a foreign architecture so you can also install 64bit applications.

- Hostname is "odroid32" unlike regular version which has "odroid64" instead.
- Some ARM64 packages are installed for kernel with other s905 specific ones to get updates from my repository.
- The idea is by [@crashoverride](#).

### Available Packages

These are the most important packages available on [ODROBIAN repository](#) that I've compiled specifically for this distribution with the required ODROID C2 optimizations of course.

**Kernel Image** ([linux-image-odrobian-s905](#)) - Installed by default obviously

**Kernel Headers** ([linux-headers-odrobian-s905](#))

**Advanced MATE Menu** ([advanced-mate-menu](#))

**CEC 3.1** ([libcec-odrobian](#))

**Chromium Browser** (armhf) ([chromium-browser-odrobian](#))

**KODI Jarvis for Fbdev** ([kodi-odrobian-fbdev](#))

**Platform V2** ([libp8-platform2](#))

**Shairplay** ([libshairplay](#))

**Moonlight Embedded** ([moonlight-embedded](#))

**Mali Fbdev Drivers** ([mali-fbdev](#))

**SDL2 for Fbdev** ([libsdl2-odrobian-fbdev](#))

**RetroArch for Fbdev** ([retroarch-odrobian-fbdev](#))

**EmulationStation for Fbdev** ([emulationstation-odrobian-fbdev](#))

**ODROBIAN Platform** ([odrobian-platform-s905](#)) - Default

**ODROBIAN Hook Utilities** ([oh-utils](#))

**AMlogic VPU Libraries** ([aml-libs](#))

**Boot Scripts for s805** ([bootini](#)) - Default

**XBOX Gamepad Userspace Driver** ([xboxdrv-odrobian](#))

### CODE: [SELECT ALL](#)

```
odroid:$ sudo apt-get update
odroid:$ sudo apt-get install *

(*) = Any Package
```

You will also find MANY more, if you take a further look there at

the packages listed in our main project thread.

### Documentation

You can find everything you want to know about this distribution and how to configure it according to your own needs by exploring the [documentation available on our repository](#), you should also read the [ODROBIAN Project](#) thread to learn more. Let me show you the head notes list to summarize what you should expect to see there:

- ODRROID Chipset Reference
- Getting Started
- Advice & Tips
- Updating Software & Kernel
- Web Browser Experience
- ODRROID CPU Clocking
- Multimedia & Kodi
- Vanilla Section
- ORGA Entertainment System
- Stock Platform Material
- Examples
- Changelogs

I can create more documents based on your suggestions, while you can still contribute to this project by submitting a documentation article for ODROBIAN written by you.

### Kodi with Hardware Acceleration (up-to 4K)

I have just pushed an update for Kodi to support 4K resolution by [@OverSun](#) and added more features to ODROBIAN Hook utilities along with fixing ODRROID-C2 CPU governors, now you can install Kodi through one-click installation process.

The new kernel has the cursor fix by [@crashoverride](#) along with support for CEC, Kodi fix for subtitles, change default color mode 24bpp to support Kodi specifically. So, everything is now working right out of the box with the latest software/kernel, you can also make use of ODROBIAN-hook utilities ([oh-utils](#)) by

executing it directly from console/terminal as stated in [ODROBIAN documentation \(Updating Software\)](#) section.

**CODE: SELECT ALL**

```
Make sure you have "oh-utils" if you haven't
installed it before:
odroid64:$ sudo -s
odroid64:# apt-get update && apt-get install oh-
utils
```

```
Execute GUI Tool:
odroid64:# oh --gui
```

This utility is able to upgrade itself automatically upon execution so you don't need to update it manually.

Note that you would have to reboot your ODROID after installing Kodi through option number "15" on the main menu for changes to take effect. After that, you can install a desktop environment if you wish by clicking on the option number "6" available in the second menu.

The workaround for black screen that happens after exiting Kodi is just switching consoles by pressing on your keyboard ( Ctrl + Alt + F3 ) followed by ( Ctrl + Alt + F7 ) or any other session. In fact, even if you have installed Kodi before with "apt-get" you should install it again with this, I have included some essential configurations to support Alsa which will allow you to start Kodi without any Desktop Environments installed, additionally using Alsa instead of PulseAudio will fix GUI sound latency as well. 😊

PulseAudio will only get installed if you have a Desktop Environment, you can use the option available on the tool above

to disable it whenever you want, and to enable it again. You must know that Kodi is performing at best when ALSA is enabled. Make sure to reboot your ODROID after installation to take effect, after that everything should work properly for Kodi, you can run it from ( [Menu > Sound & Video > Kodi](#) ) or directly from console.

**CODE: SELECT ALL**

```
Run Kodi:
odroid64:$ kodi
```

### Remarks

So things are all changed and improved with this new kernel version (**14-odroidbian**) you have to keep this in mind.

- Kodi now supports 4K resolution through scaling the interface while VPU is showing 4K for movies.
- It's now completely fine to run Kodi upon an X desktop session layer.
- The missing software cursor in console is now available.
- The missing CEC option/functionality is now enabled by default.
- All "udev" rules are updated correctly to fix AMLogic devices permissions.
- Color depth mode is now set to 24bpp till HardKernel provide a better fix for Alpha channel.
- Screen freezing during Kodi video playback and missing subtitles bug is completely fixed.
- It supports accelerated video decoding up-to 4K for both H264 & HEVC video files.
- Most credits go to **@OverSun** for the current state of hardware acceleration.

You could also make use of the [Vanilla section](#) in documentation to install desktop environments and configure OS with more detailed information for the pure Debian images in particular.

### Download for C2

ODROBIAN Jessie is available in flavors that you can choose from:

- Desktop (MATE) - **Not Yet for C2**
- Vanilla (PURE) - [64bit/arm64-based](#)
- Vanilla (PURE) - [32bit/armhf-based](#)

Just download your desired edition directly from our repository:  
<http://oph.mdrjr.net/odrobian/images/>

**ODROID C2 (SOC) = "s905"**

My desktop image will be available soon, hopefully we can get KODI and Mali-x11 to work by that time. Photo attached below is the result of installing MATE desktop environment, it's the moment when I was compiling the very first odrobian Linux kernel natively on the device with max CPU load. Have fun guys!