

How to change HDMI output resolution

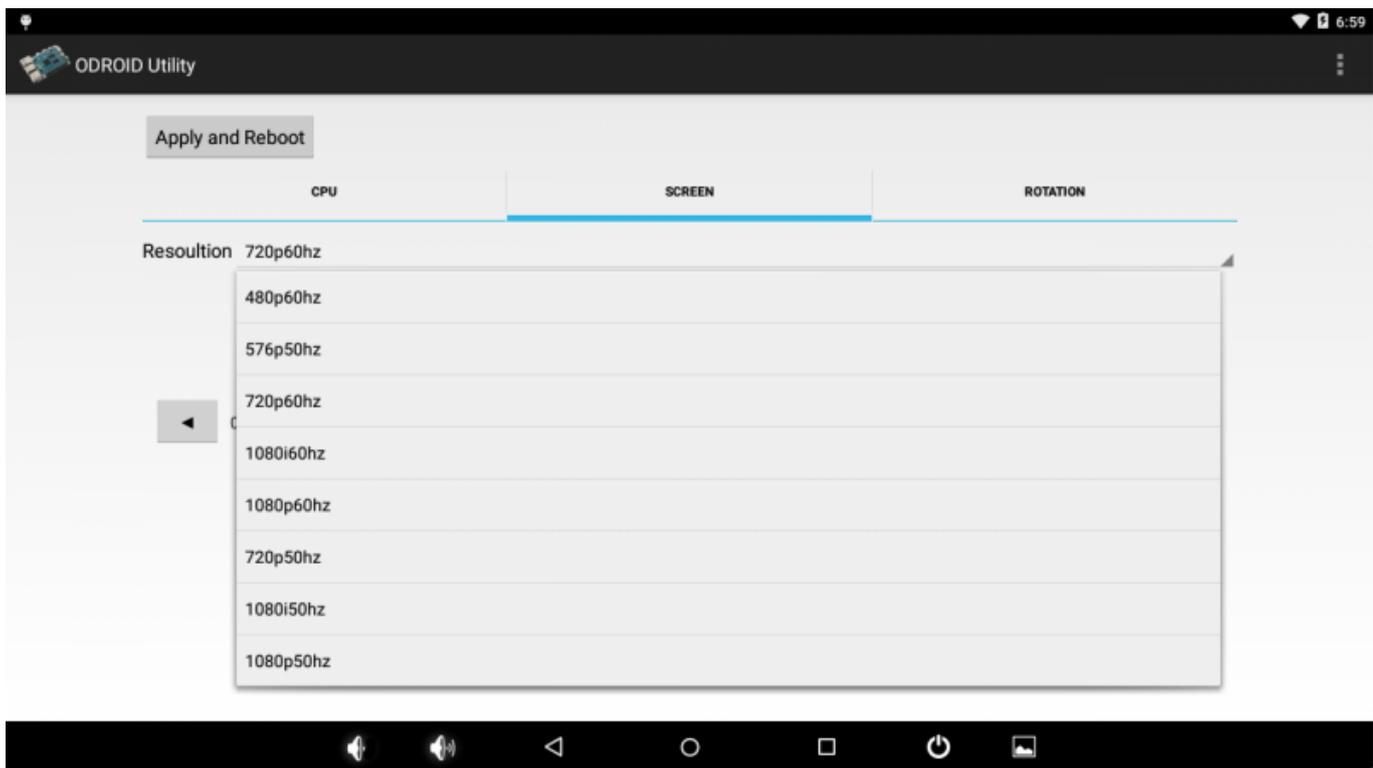
ODROID-C2 can support various resolution on HDMI output, you can select one of supported resolutions for your display (LCD monitor or TV).

Please make sure the resolution you select can be supported by your display before you start. Otherwise you would be hard to recover the resolution again.

Supported resolutions

Android

We provide you a simple but useful application, **ODROID Utility**. This helps you to change the resolution by menu as below and you can select one of them for your display. Once you select one, click the button **Apply and Reboot**. Then your **ODROID-C2** will restart with new resolution.



Linux / Ubuntu

[Display Auto Detection using EDID](#)

Lowlevel Change

This section introduce you to change the resolution by manual, this would be helpful if you are failure to change the resolution and not able to sett the face of **ODROID-C2**.

The fact what initiate the resolution is from **U-boot** and the environment key is **hdmimode**. Probably your U-boot would have the one like this by default.

```
odroidc# print hdmimode
hdmimode=720p60hz
```

This will be passed to Linux kernel by **bootargs** just before Linux kernel is started. Here is the default value of **bootcmd** which starts Linux kernel. As you see, **hdmimode** is passing as boot argument.

```
odroidc2# print bootcmd
bootcmd=cfgload; setenv bootargs root=/dev/mmcblk0p2 rw init=/init rootwait
console=ttyS0,115200 hdmimode=${hdmimode}
hdmityx=${ceccconfig} logo=osd1,loaded,${fb_addr},${hdmimode}
androidboot.hardware=odroidc2 androidboot.serialno=${fbt_id#}
androidboot.selinux=disabled;showlogo ${hdmimode}; movi read dtb 0x1000000;
movi read boot 0x20000000;
booti 0x20000000 - 0x1000000
```

How to change the value of hdmimode

There are three ways to change **hdmimode** to change the resolution, you can replace **1080p60hz** with the other resolution you wish to change for your display. And only the way with adjusting hdmimode arg value in boot.ini is available for ODROID-C2 so far, the other ways are in progress.

U-boot

Currently, 720p60hz mode is fixed on U-Boot stage after power-on and reset. But you can change hdmimode temporarily using 'showlogo' command.

```
showlogo 1080p60hz
```

Boot.ini

You can boot with **boot.ini** without changing U-boot environment values permanently. If **boot.ini** is existed in FAT partition **ODROID-C2** does boot with it first, unless boot with default setting stored in U-boot environment. The example related to display is as following.

```
setenv hdmimode "720p60hz"
```

```
# CEC Configuration
setenv cecconfig "cecf"

# HDMI/DVI Mode Configuration
# This will enforce the signal type of display
# "hdmi" - For HDMI interface
# "dvi" - For DVI interface
setenv vout_mode "hdmi"

setenv bootargs "${rootopt} ${consoleopt} hdmimode=${hdmimode}
hdmitx=${ceconfig} vout=${vout_mode} overscan_top=${top}
overscan_left=${left} overscan_bottom=${bottom} overscan_right=${right}
logo=${logoopt} ${androidopt} ${selinuxopt}"

showlogo ${hdmimode}
```

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