

Hardware PWM

ODROID-C1 Has two possible PWM ports. One port is shared with SPI.

Starting from [Ubuntu Release \(v1.1\)](#) or a kernel update performed on 2015-01-01 or later includes the PWM support.

Usage

For pin position, numbers and names, please refer to the pinmap [Expansion Connector](#)

Option 1: Single PWM and SPI

The code below loads the PWM module with a single PWM and the PWM controller module.

PWN PIN: 33

```
sudo modprobe pwm-meson npwm=1
sudo modprobe pwm-ctrl
```

Option 2: Two PWM and ****NO-SPI****

PWM PINS:

PWM0: 33

PWM1: 19

```
sudo modprobe pwm-meson npwm=2
sudo modprobe pwm-ctrl
```

Examples of usage

You can control this pwm via simple sysfs entries.

On `/sys/devices/platform/pwm-ctrl` You'll find the following files:

duty0

Duty cycle of 1023 (10bit resolution)

```
echo 102 > duty0
```

will result in 102/1023 (approx 10%) of Duty cycle.

```
echo 512 > duty0
```

will result 50:50 of Duty cycle.

enable0

Enable/Disable this PWM

```
echo 1 > enable0
```

Will enable this PWM

```
echo 0 > enable0
```

Will disable this PWM.

freq0

This is the PWM Frequency in Hertz!

```
echo 100000 > freq0
```

This will set the frequency to 100kHz

Maximum Frequency is 1Mhz.

On PWM0 you can test higher frequencies. There are not guarantee's! 1Mhz is what we support.

If you are using TWO pwm setup, You have: enable0, freq0, duty0 AND enable1, freq1, duty1

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