

# How to set max cpu frequency and cores

This functionality has not been released yet. The version will be specified here after the new version release.

- Ubuntu : N/A
- Android : N/A

For further information, you can refer to the following forum thread.

<http://forum.odroid.com/viewtopic.php?f=141&t=23044>

## How to set max cpu frequency

Here are the available cpu frequency sets and you can set one of them as max. cpu frequency using boot.ini

### The available list of cpu frequency set

Here are the common sets we recommend under normal conditions.

frequency	notation on boot.ini
1.656 GHz	"1656"
1.536 GHz	"1536"
1.296 GHz	"1296"
1 GHz	"1000"
500 MHz	"500"
250 MHz	"250"
100 MHz	"100"

There are some advanced frequency sets you can try below.

The following sets are unstable with 2 or more cpu-cores so, you should adjust cpu cores as described the next section.

frequency	notation on boot.ini	note
1.680 GHz	"1680"	booting OK with 4 cores / recommend 3 cores for heavy load test
1.752 GHz	"1752"	booting OK with 4 cores / recommend 2 cores for heavy load test
1.896 GHz	"1896"	booting OK with 1~3 cores / recommend running with a single core
1.920 GHz	"1920"	booting OK with 1 or 2 cores / recommend running with a single core
1.944 GHz	"1944"	booting OK with a single core but unstable
2.016 GHz	"2016"	extremely unstable

## setting boot.ini

Please modify **max\_freq** based on the aforementioned frequency table. The unit of max\_freq in boot.ini is MHz.

```
### boot.ini

# max cpu frequency in dvfs table / in MHz unit
# setenv max_freq "2016" # 2.016GHz
# setenv max_freq "1944" # 1.944GHz
# setenv max_freq "1944" # 1.944GHz
# setenv max_freq "1920" # 1.920GHz
# setenv max_freq "1896" # 1.896GHz
# setenv max_freq "1752" # 1.752GHz
# setenv max_freq "1680" # 1.680GHz
# setenv max_freq "1656" # 1.656GHz
setenv max_freq "1536" # 1.536GHz

# Boot Arguments
# add max_freq in bootargs
setenv bootargs "root=UUID=e139ce78-9841-40fe-8823-96a304a09859 rootwait ro
${condev} no_console_suspend max_freq=${max_freq} hdmimode=${m} ${comde}
m_bpp=${m_bpp} vout=${vout} fsck.repair=yes net.ifnames=0 elevator=noop
disablehpd=${hpd}"
```

After setting it, then be sure you do reboot.

You can check the frequency list as following.

ex) setenv max\_freq "1656"

```
root@odroid64:~# cat
/sys/devices/system/cpu/cpu0/cpufreq/scaling_available_frequencies
100000 250000 500000 1000000 1296000 1536000 1656000
```

## How to set the number of cpu cores

Also, you can set cpu-cores you want to activate using boot.ini

The available range is "1" to "4"

## setting boot.ini

```
### boot.ini

# max cpu-cores
```

```
# setenv maxcpus "1"
# setenv maxcpus "2"
# setenv maxcpus "3"
setenv maxcpus "4"

# Boot Arguments
# add max_freq in bootargs
setenv bootargs "root=UUID=e139ce78-9841-40fe-8823-96a304a09859 rootwait ro
${condev} no_console_suspend max_freq=${max_freq} maxcpus=${maxcpus}
hdmimode=${m} ${comde} m_bpp=${m_bpp} vout=${vout} fsck.repair=yes
net.ifnames=0 elevator=noop disablehpd=${hpd}"
```

After setting it, then please be sure you do reboot.

You can check the activated cpu cores as following.

ex) setenv maxcpus "2"

```
root@odroid64:~# cat /sys/devices/system/cpu/online
0-1
root@odroid64:~# cat /sys/devices/system/cpu/offline
2-3
```

```
root@odroid64:~# cat /proc/cpuinfo
processor       : 0
BogoMIPS      : 2.00
Features      : fp asimd crc32
CPU implementer : 0x41
CPU architecture: 8
CPU variant   : 0x0
CPU part      : 0xd03
CPU revision  : 4

processor       : 1
BogoMIPS      : 2.00
Features      : fp asimd crc32
CPU implementer : 0x41
CPU architecture: 8
CPU variant   : 0x0
CPU part      : 0xd03
CPU revision  : 4

Hardware      : ODROID-C2
Revision     : 020b (or 020c)
```

Last update: 2016/09/05 09:23 odroid-c2:application\_note:software:set\_cpu\_freq http://wiki.odroid.com/odroid-c2/application\_note/software/set\_cpu\_freq?rev=1473063824

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