## Adjust Resolution for Raspberry Pi

If you are using Raspberry Pi with the screen, you may encounter incomplete display, with black space around. that would be wrong resolution.

## Step 1: Open config.txt

Connect a mouse and a keyboard to your Raspberry Pi. Click open the Terminal, and type in the command to open config.txt
sudo leafpad /boot/config.txt

## Step 2: Modify the config.txt file

Now the file config.txt is opened.

1) Define a custom CVT mode add the following lines below \#hdmi_force_hotplug=1.
hdmi_cvt=1920 1080603000
hdmi_cvt=<width> <height> <framerate> <aspect> <margins> <interlace>

| Value | Default | Default |
| :--- | :--- | :--- |
| width | (required) | width in pixels |
| height | (required) | height in pixels |
| framerate | (required) | framerate in Hz |
| aspect | 3 | aspect ratio $1=4: 3,2=14: 9,3=16: 9,4=5: 4,5=16: 10,6=15: 9$ |
| margins | 0 | $0=$ margins disabled, $1=$ margins enabled |
| interlace | 0 | $0=$ progressive, $1=$ interlaced |
| rb | 0 | $0=$ normal, $1=$ reduced blanking |

2) Find the following lines (If there is a "\#" mark at the beginning of any of the three lines, which means they are comments, delete the mark. The asterisk "*" represents the value.

$$
\begin{aligned}
& \text { hdmi_group=* } \\
& \text { hdmi_mode=* } \\
& \text { hdmi_drive=* }
\end{aligned}
$$

3) Modify the value, like this:

$$
\begin{aligned}
& \text { hdmi_group }=2 \\
& \text { hdmi_mode }=87
\end{aligned}
$$

hdmi drive=2
hdmi_group $=\mathbf{2}$ means DMT (Display Monitor Timings; the standard typically used by monitors)
hdmi_mode=87 indicates the resolution mode we set before.
hdmi_drive $=\mathbf{2}$ selects the Normal HDMI mode.
For more details about configuring config.txt, refer to Raspberry Pi official website:
https://www.raspberrypi.org/documentation/configuration/config-txt.md.
After the modification is done, save, exit then reboot your Raspberry Pi and enjoy.

