

config.txt file description

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config.txt is a startup configuration file unique to the Raspberry Pi system, located on the first (boot) partition of the SD card and read by the GPU before initializing the ARM CPU and Linux.

```
Raspberry Pi OS config.txt path: /boot/config.txt
```

View Status

Use the following command to view the current option settings:

- Display a specific configuration value: `vcgencmd get_config`

```
Example: vcgencmd get_config arm_freq
```

- List all integer configuration options that have been set (non-zero)

```
vcgencmd get_config int
```

- List all string configuration options that have been set (non-zero)

```
vcgencmd get_config str
```

File Format

File Format:

1. Single statement per line, the content is an integer or string
2. Comment: Add # at the beginning of the line

You can add a line of comments before each statement to explain the statement function. The length of each line is limited to 98 characters. The content exceeding the limit will be ignored.

```
# Example:

# Enable audio (loads snd_bcm2835)
dtparam=audio=on

# Automatically load overlays for detected cameras
camera_auto_detect=1

# Automatically load overlays for detected DSI displays
display_auto_detect=1

# Enable DRM VC4 V3D driver
dtoverlay=vc4-kms-v3d
```

Common options

- **camera_auto_detect**

When this setting is enabled, the firmware will automatically load overlays for CSI cameras it recognizes.

Set to disabled:

```
camera_auto_detect=0
```

- **display_auto_detect**

When this setting is enabled, the firmware will automatically load overlays for DSI displays it recognizes.

Set to disable:

```
display_auto_detect=0
```

- **dtoverlay**

Used to load and configure device tree overlays. By configuring dtoverlay, users can add additional hardware support or features to the Raspberry Pi system.

Load an overlay that enables kernel graphics drivers:

```
dtoverlaydtoverlay=vc4-kms-v3d
```

GPIO Control

Set GPIO pins to specific modes and values at boot time without using custom files.

Each line sets pins with the same mode: can be a single pin, a pin range, or a comma-separated list of pins;

The pin settings are followed by one or more comma-separated properties.

Abbreviation	Full name	Meaning
ip	Input	
op	Output	
a0-a5	Alt0-Alt5	Multiplexing
dh	Driving high (for outputs)	
dl	Driving low (for outputs)	
pu	Pull up	
pd	Pull down	
pn/np	No pull	

Example:

```
# Select Alt2 for GPIO pins 0 to 27 (for DPI24)
gpio=0-27=a2

# Set GPIO12 to be an output set to 1
gpio=12=op,dh

# Change the pull on (input) pins 18 and 20
gpio=18,20=pu

# Make pins 17 to 21 inputs
gpio=17-21=ip
```

Description

Only some options are listed here, please visit the official website for more detailed information!

<https://www.raspberrypi.com/documentation/>