



Raspberry Pi 4 case - Retro tower desktop



Parker Boyd

[VIEW IN BROWSER](#)

updated 23. 11. 2022 | published 23. 11. 2022

Summary

Case for raspberry Pi 4

[3D Printers](#) > [Accessories](#)

Tags: [desktop](#) [retro](#) [creality](#) [rasberrypi](#) [rasberrypicase](#)
[rasberrypi4](#) [ender3](#) [rasberrypihousing](#) [crealityender3](#)
[rasberrypi4bcase](#) [crealityender3v2](#)

A retro style beige Raspberry Pi 4 tower case. It has a working power button, LED, and IO activity LED. The SD/microSD card can be inserted like a floppy disk to swap between different operating systems. It also has 2 HDMI ports, audio jack, and USB-C power on the rear of the case. There is space for a 40mm exhaust fan and a 40mm or 50mm front intake fan. There is also enough space for a large cooler like the ICE tower.

NOTE:

There is now a slightly improved V2 of the case.

Changes:

Added version of case that is 1.5cm taller

Increased hole size for push button

Added hex cutout to use the included nut for a push button

Moved wall ridges to prevent interference with tall connections on GPIO

Parts needed (links at the end):

Micro SD to SD Card extender: 1
Micro HDMI to HDMI Adapter Cable: 2
Panel-Mount USB-C Extension Cable: 1
40mm 5V fan (for exhaust): 1
Low-Profile CPU Cooler or ICE Tower Cooler: 1
SPST Momentary Mini Push Button: 1
5mm LED with resistor: 1
3mm LED with resistor: 1
#6-32 UNC thumbscrew (standard PC case screw): 2
#6-32 UNC screw or M3 screw (standard PC case screw): 6
various wire/header connectors (for connecting fans/LEDs/power button)
Optional:
Front 5V 40mm/50mm fan: 1 (note: I've not needed this even when overclocking the Raspberry Pi)
Noctua NF-A4x10 to replace CPU Cooler fan: 1
Panel-Mount 3.5mm AUX Male to Female Extension Cable: 1 (note: pre-made cables may be too long and should be shortened.)

Assembly instructions

Prepare all parts

note: any places that require screwing plastic parts together can be replaced with glue if you are way too confident/lazy.

- Print out all parts with whatever material/color you would like.
- (optional but helpful) Use a thread tap on all screw holes

Start Assembly

- Tap threads for push button. If you don't have a tap, you can use the push button to create the threads. You may need to use a file to help make sure the push button fits if you don't have a tap.
- Press fit 3mm LED into the main case. Glue can be added, but the press fit should hold it fine.
- Press fit 5mm LED into the main case. Glue can be added, but shouldn't be needed.
- Put SD card extender in the SD card tray and attach to the case with screws or glue. This may require a long screw driver that can reach through the fan grill or a very short one that will fit in the case. This is easier to do before anything else is in the way.
- (Optional) Attach front fan with screws
- Screw/Glue in front panel. Make sure LEDs are visible and the push button does not get stuck.

- Put HDMI adaptors in the HDMI holder, but don't mount it in the case.

Connect wires to the GPIO Header

- (Optional) Make a simple splitter for the CPU/Case fan(s). I have the fans connected to 3.3V (pin 1) and ground (pin 9). The fans can use a 3.3V or 5V pin for power and any unused ground.
- The push button goes across pin5/pin6 (polarity doesn't matter).
- The power LED goes to pin8(+) and pin14(-).
- The GPIO LED goes to pin37(+) and pin39(-).
- Connect all wires, connectors, and micro SD card extender to the raspberry pi before carefully placing it in the case. At this point all cables/extendors should be connected to the Raspberry pi, but not the case. (note: if using the ICE or low profile heatsinks, they should not be attached at this point)

Finish Assembly

- Use the brass spacers/mounts/standoffs from the cooler to screw the Raspberry PI to the case. These 4 brass pieces should now be going through the Raspberry Pi's mount points into the case.
- Add thermal paste or the thermal pad to the processor and attach the CPU cooler with the included screws.
- Screw in the HDMI Holder.
- Screw in the USB-C extender
- Screw in the Audio jack
- Attach the rear exhaust fan.
- Slide the side panel on and add thumb screws

config.txt setting

- (Optional over clock setting -- Use at your own risk)

```
# overclock
arm_64bit=1
hdmi_enable_4kp60=1
over_voltage=15
arm_freq_min=100
arm_freq=2350
gpu_freq=750
gpu_mem=512
```
- Enable GPIO LED and IO activity LED

```
# Additional overlays and parameters are documented /boot/
overlays/README
dtoverlay=act-led,gpio=19
enable_uart=1
```

- Enable the power button: <https://github.com/Howchoo/pi-power-button>

Model files



raspberry_pi_4_retro_case_v2_default.stl



raspberry_pi_4_retro_case_hdmi_holder.stl



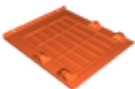
raspberry_pi_4_retro_case_sd_tray.stl



raspberry_pi_4_retro_case_front_panel.stl



raspberry_pi_4_retro_case_v2_front_panel_tall.stl



raspberry_pi_4_retro_case_side_panel.stl



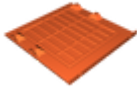
raspberry_pi_4_retro_case_default.stl



raspberry_pi_4_retro_case_circular_grill.stl



raspberry_pi_4_retro_case_large_grill.stl



raspberry_pi_4_retro_case_v2_side_panel_tall.stl



raspberry_pi_4_retro_case_v2_circular_grill.stl



raspberry_pi_4_retro_case_v2_default_tall.stl



raspberry_pi_4_retro_case_v2_large_grill.stl

License ©

This work is licensed under a
[Creative Commons \(4.0 International License\)](#)



Attribution

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✓ | Commercial Use
- ✓ | Free Cultural Works
- ✓ | Meets Open Definition