Retro Desktop PC Raspberry Pi case V2

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VIEW IN BROWSER

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Summary

Retro Desktop PC case based on an old 286 desktop PC I grew up with. Boots via SD card in the 5.25 drive.

Gadgets > Computers

Tags: retro   retrogaming   raspberrypi   raspberrypicase   pccase

Retro Desktop PC style case based on an old 286 PC I grew up with. Designed to fit a Raspberry Pi with a 3.5 inch HDMI MPI3508 LCD display. V2 features the following improvements over the original:

- Boot SD card reader placed in the 5.25 floppy drive that connects to the Pi's Micro SD card reader.
- Fan mounts in the desktop base for 2x 25mm fans.
- Improved front panel design enabling easier multicolour printing. The panel can also now be removed without needing to disassemble the rest of the desktop allowing for easier access to the Pi.
- Display brace allows for easier alignment of the 3.5" display inside the monitor shell when closing up.

While there are more features in this version this is a more involved design compared to V1. If you'd prefer a simpler experience or don't need the SD

card reader in the disk drive, I'd recommend checking out the original as cosmetically it's very similar with fewer additional parts to source. Alternatively you could also build it without the SD card reader cable or the fans.

In addition to the print you'll need:

- Raspberry Pi (I used a 4B but you should print the desktop base to match your Pi)
- 3.5 inch HDMI MPI3508 LCD display (such as this one)
- Micro SD to SD Card flexible extension cable (this one). The reader drive part has been specifically designed to fit the one in the link as others I tried were too big on the micro-SD side to fit the desktop base. The correct orientation for the SD reader is for the SD card to be inserted with label facing up.
- HDMI flat flexible cable (such as this one). I used D2 + A2 + 15cm cable from the link.
- 1x M1.5x8 dowel pin (such as this one) for the SD card drive latch.
- 40 pin GPIO extension cable (such as this one). When assembling, try to keep as much of the extra slack in the monitor as possible to leave room in the desktop for the other cables.
- 4x M2.5x5 screws for securing the Pi to the desktop base
- 4x M2.5x5 screws for securing the desktop case to monitor base
- 1x M2.5x5 screw for securing the SD drive brace to the front panel back
- 2x M2.5x8 screws for securing the desktop case to desktop base
- 2x M2.5x8 screws for the monitor

Optional:

- Pi speaker expansion board (such as this one).
- Dual 25mm fans connected to LCD display 5v pins (such as this one). I also needed a JST 2-pin extension cable.
- 8x M2.5x8 screws for securing the fans to the desktop base.

All parts except the following should be printed with supports:

- monitor connector
- front panel face
- front panel back
- drive latch
- display brace

I used eSun Bone White PLA but my options for a close matching beige were limited where I am. I used a Molotow Liquid Chrome marker to paint the front panel key lock. I used a label maker to print my front panel sticker.

OS Configuration notes:

I followed this guide by @Hypn to get the Pi to boot into DOSbox with retro splash screen.

I'm running DOSbox under Debian Bullseye (As of writing I couldn't get the custom splash screen to work under Bookworm). After installing the LCD-show display drivers I used the following values in my /boot/config to get the output to fit the monitor and rotate to the correct orientation:

overscan_left=20
overscan_right=60

framebuffer_width=640
framebuffer_height=480

Add to the [all] section:

dtoverlay=tft35a:rotate=270
display_rotate=2

Add the following if using the above linked audio module:
dtoverlay=audremap,pins_18_19

CHANGE LOG

Jan 16 2024

• Added additional boot/config.txt items

Jan 13 2024

• Added desktop base for Pi 2, 3, 5

Jan 4 2024

• Fixed screw port alignment on desktop cover and base

This remix is based on

Retro Desktop PC Raspberry Pi case
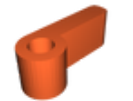
by fantasticmrdavid

Model files

display_brace.stl

monitor_connector.stl

drive_latch.stl

front_panel_v2_sd_back.stl
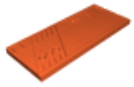
monitor_base.stl

sd_card_reader_drive_brace.stl

sd_card_reader_drive.stl

front_panel_v2.stl

monitor_front.stl

front_panel.stl

monitor_back.stl

desktop_cover.stl

desktop_base_pi4.stl

desktop_base_pi2_3_5.stl

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