Pi4 7" LCD Case with fan

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VIEW IN BROWSER

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Summary

Perfect Octoprint addition with a Pi4 and Touch Screen LCD.

🕐 18.77 hrs	2 pcs	0.15 mm	0.40 mm	PLA	108 g	Prusa MINI / MINI+

3D Printers > 3D Printers - Upgrades

Tags: ikea   case   lack   octoprint   lcd   pi4

Perfect Octoprint addition with a Pi4 and Touch Screen LCD.

I built a LACK table and first thought about having the PI4 and LCD as two separate components but then figured it would be nice to have everything compact and organized so I built this LCD/PI4 Case with a 50mm fan for cooling. I used a 12v fan but looking back I might go with a 5v one in the future to prevent some extra wiring.

The Case is built in two halves and the LCD just slides inside. The wall attachment brackets hold everything together and allow the LCD to be tilted for the best viewing angle.

Here is the list of items I used in this build excluding the PI4 which you can find almost anywhere.

7'' 1024x600 IPS Touch Screen
https://www.amazon.com/gp/product/B07S51QDTG/ref=ppx_yo_dt_b_asin_title_o04_s01?ie=UTF8&psc=1

50mm CPU fan
https://www.amazon.com/gp/product/B008S1DN66/ref=ppx_yo_dt_b_asin_title_o03_s00?ie=UTF8&psc=1

12v Fan Thermostat Speed Controller with Sensor
https://www.amazon.com/gp/product/B078BR5NK7/ref=ppx_yo_dt_b_asin_title_o06_s00?ie=UTF8&psc=1

Print instructions

I tried to build this with minimal supports but due to the extra area needed for cables and the 50mm fan a small support is suggested to keep the shell from flexing while printing. I have printed without supports but the back seam doesn't line up well if you do that. The cutouts for the USB and Ethernet port on the left shell are a little steep to print without supports but after multiple revisions I was happy with the result even though it wasn't perfect.

I also printed the bolts but you can use a metric M6x1 bolts if you don't trust the plastic ones. When printing the bolts I used a perimeter count of 3 and solid infill for the threaded portion.

Only one support is provided but just mirror it for the other side.

Currently there are only wall mounting supports for a vertical surface but a stand or longer supports for a horizontal attachment could be made if so desired. I have printed multiple test builds for fit and alignment checks and only in PLA but plan to do a PETG build when I get around to it. Write up any issues you find and I will include them in the next iteration.

Model files
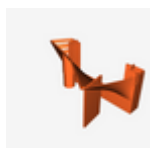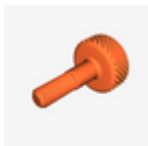

shell_right.3mf

bracket_wall_r1.stl

bracket_lack_r1.stl

bolt.3mf

shell_left.3mf

shell_left_r1.stl

bolt_r1.stl

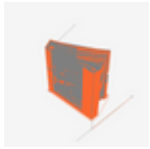**shell_right_r1.stl**

Print files

shell_right_015mm_pla_mini_6h48m.gcode

PLA   0.40 mm   0.15 mm   6.80 hrs   42 g   Prusa MINI / MINI+

shell_left_015mm_pla_mini_11h58m.gcode

⊗ PLA   ⊻ 0.40 mm   ≡ 0.15 mm   ⏲ 11.97 hrs   ⚖ 66 g   ▤ Prusa MINI / MINI+

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