



Raspberry Pi 5 NVMe HAT case (snap fit)



CatPadThai

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Summary

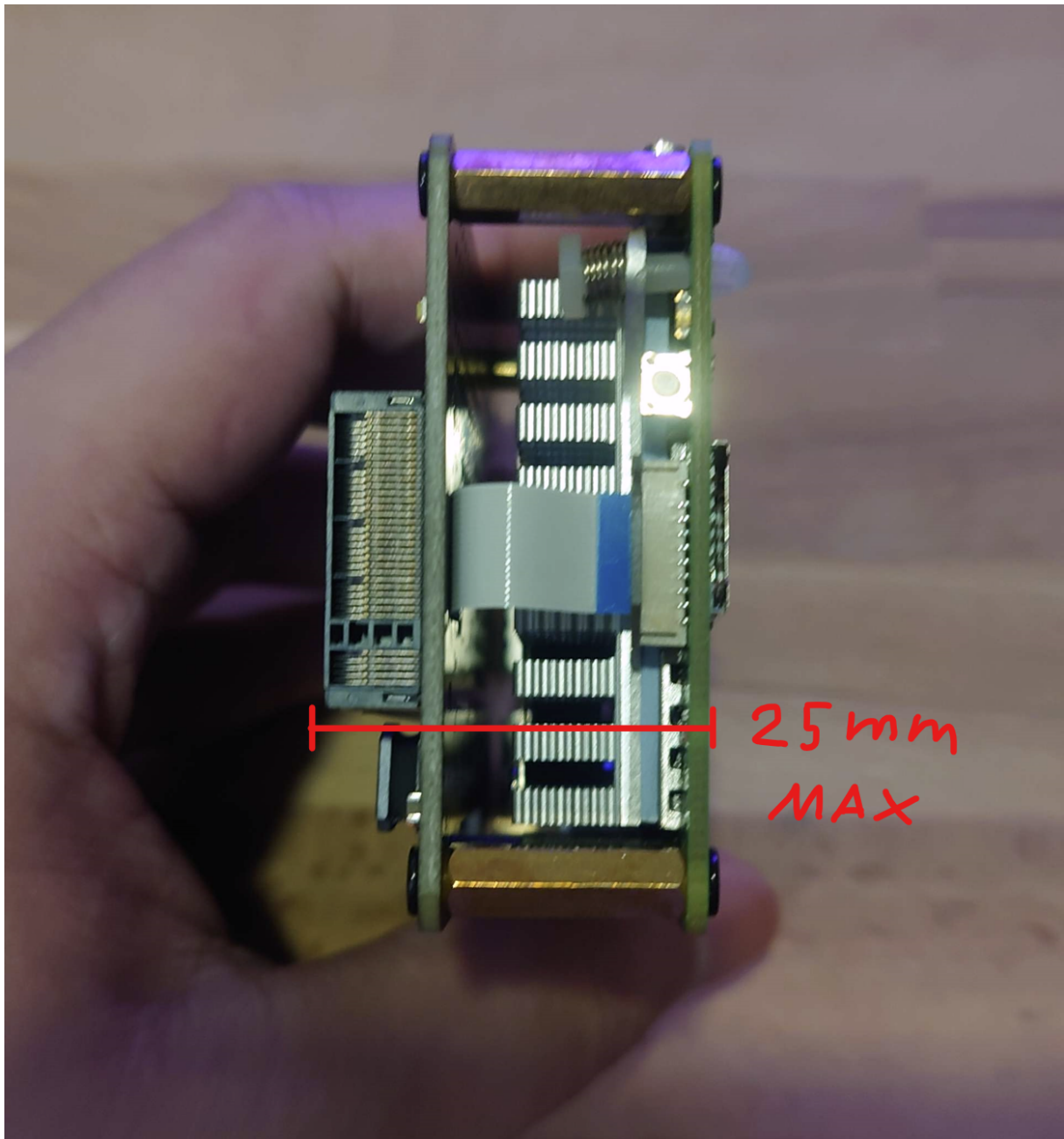
remix of pyrho's Pi 5 snap fit case for Pi 5 with NVMe HAT

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I really like pyrho's snap fit case, but my NVMe HAT wouldn't fit, so I decided to remix it.

I remixed the original model to fit the 52pi N04 M.2 2280 PCIe To NVMe HAT specifically, but **other HATs can fit** in the case fine **as long as you use 17mm standoffs and the HATs PCB fits within the Pi 5 PCB footprint when looking from the top view**, except the rear where the USB and Ethernet port are, it can be longer in that direction, but be careful with height, **it wouldn't fit if the whole Pi + HAT combo is thicker than 25mm**



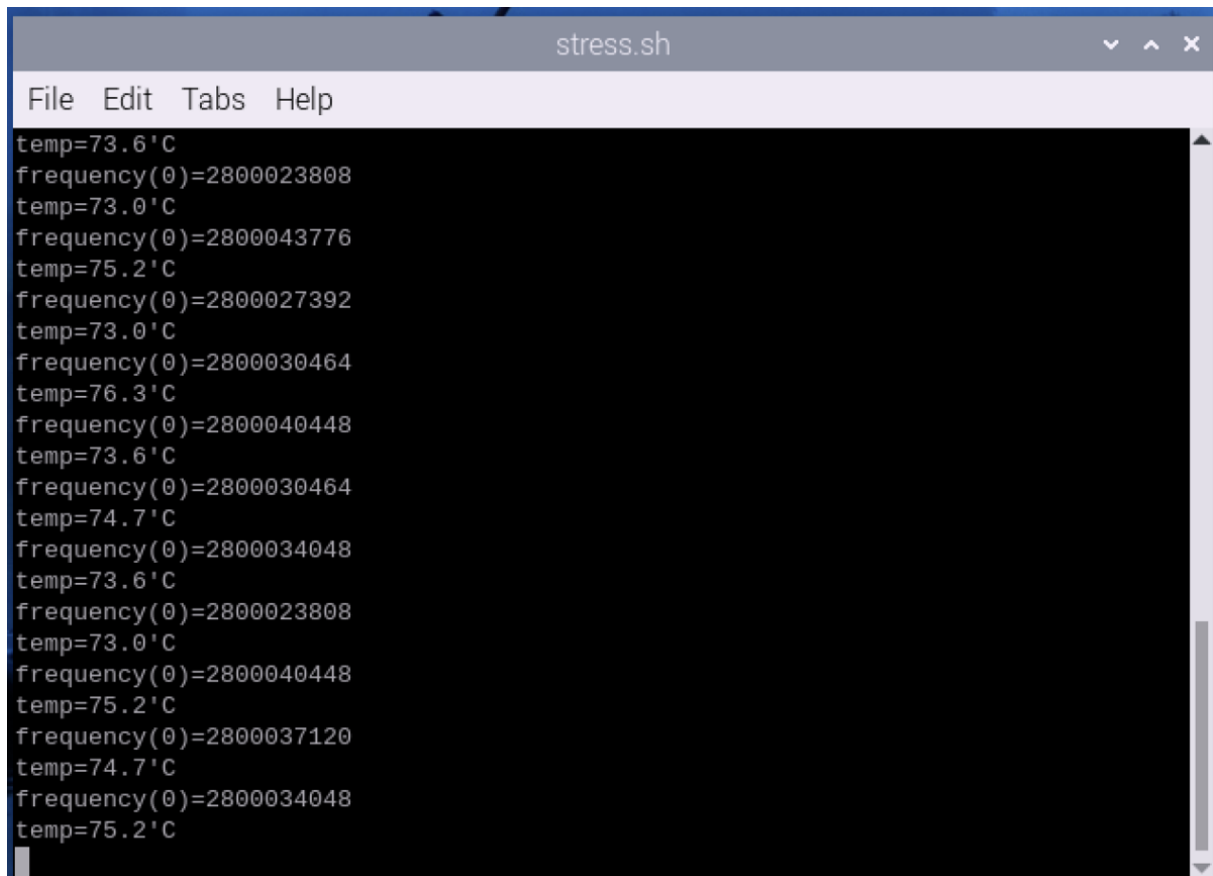
I also leave the gap in the back around the HAT area on purpose for extra airflow, if you use GPIO you can also route the wires out through the back, it just looks better than having random wires protruding out on top of the case.

Thermals:

I'm using the official Pi 5 heatsink and running the stress test for 15 minutes straight on my overclocked Pi in a 30C room with 45% humidity.

I use 2800Mhz arm frequency and no over-voltage, it keeps things under the throttle limit at 80C just fine.

Your results may vary if you're using a different HAT since the HAT that I use has the ventilation holes drilled on the PCB.



```
stress.sh
File Edit Tabs Help
temp=73.6'C
frequency(0)=2800023808
temp=73.0'C
frequency(0)=2800043776
temp=75.2'C
frequency(0)=2800027392
temp=73.0'C
frequency(0)=2800030464
temp=76.3'C
frequency(0)=2800040448
temp=73.6'C
frequency(0)=2800030464
temp=74.7'C
frequency(0)=2800034048
temp=73.6'C
frequency(0)=2800023808
temp=73.0'C
frequency(0)=2800040448
temp=75.2'C
frequency(0)=2800037120
temp=74.7'C
frequency(0)=2800034048
temp=75.2'C
```

How to print:

I printed mine with PLA+ and 0.2mm layer height, 0.25mm also works but doesn't fit as nicely, I tested on both 0.4 and 0.6 nozzles, and both work just fine. If your Pi is subjected to an extended period of high load, I recommend you print the top shell with PETG instead, the PLA top shell can warp if exposed to high heat for an extended period, the bottom shell seems fine tho.

Update #03/23/2024:

In the new version, I added a notch for extra clearance for some HATs, since some of them have different tolerances, the top shell now fits better.

I also added easier to print version of the bottom shell, since some printers might have a hard time printing.

Update #04/30/2024:

Added another variant of the top shell that includes extra vent holes on the side.

Edited printing instructions.

Update #12/01/2024:

Added STEP files

This remix is based on



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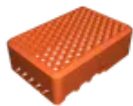
by pyrho // 25.wf

Model files

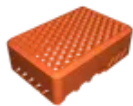


Current Verson

4 files



top_nvme_hat_honeycomb_shell.stl



top_nvme_hat_honeycomb_shell_extra_vent.stl



bottom.stl

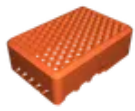


bottom_ez.stl



Old Version

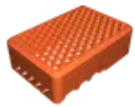
4 files



top_nvme_hat_honeycomb_v0.stl



bottom_v0.stl



top_nvme_hat_honeycomb_v1.stl



bottom_v1.stl



STEP

2 files

top_shell.step

bottom_shell.step

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