



1U 80mm fan unit

d dazden

[VIEW IN BROWSER](#)

updated 16. 1. 2024 | published 16. 1. 2024

Summary

A 19" rack unit with five 80mm fans for vertical airflow

[Gadgets](#) > [Computers](#)

Tags: [rackmount](#) [airflow](#) [80mmfanmount](#) [80mm](#)
[networkrack](#) [19zoll](#)

I needed a way to cool my Raspberry Pi cluster that is using PoE hats and has no active cooling.

The first model I tried was: <https://www.thingiverse.com/thing:5438277>
The model is nice, but not for me - because I am using USB-SSD adapters the cable is sticking out too far. And maintenance isn't easy if you have to unscrew the unit every time.

So I made this.

It uses the four 80mm 12v fans I already bought.

It was designed to be printed on my 220x220 print bed, therefore it has this funny shape.

I designed 4 pegs on the left side and the corresponding holes on the other side. So connecting them should go smoothly. Depending on your print settings and printer.

If you also mount a fan in the middle slot it will reinforce the structure.

Because my three brain cells couldn't handle getting the mounting holes for the fans right, I just drilled the holes after printing and used the screws that came with the fans.

The nice thing with fans is, that you don't need the exact amount of voltage to get them spinning.

As you can see in the picture, I mounted a round jack so it can be powered with many PSUs.

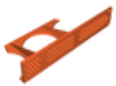
Here I am using a 5v PSU and it is enough.

If you want to improve the design here is the onshape link:

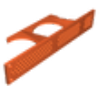
<https://cad.onshape.com/documents/0bbe2b9db01246a2307f4a5/w/ad83bd899fa901682a369f45/e/3ad2bedaebe15fb22cf07493?renderMode=0&uiState=65a6a06c86b7b92de9607069>

Model files

1u-80mm-right.stl



1u-80mm-left.stl



License

This work is licensed under a
Creative Commons (4.0 International License)



Attribution-NonCommercial

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

