



Power Supply For 12v Components w/ Cooling Fan



neatstranger

[VIEW IN BROWSER](#)

updated 24. 11. 2022 | published 24. 11. 2022

Summary

A box to power all of the electronics on my desk!



11.60 hrs



2 pcs



0.30 mm



0.40 mm



PET



213 g



Prusa
MK3/S/S+

[Hobby & Makers](#) > [Electronics](#)

Tags: [12v](#) [19v](#)

Update 11/24/22:

Everything fit really well but the fan was super loud so I unplugged it and am currently working on a solution to make it a quieter

I had way too many small 12v power bricks for my modem, router, switch, and a home server that I run on an Intel NUC. So to clean up my desk space, I designed this to use a standard 12v power supply, and a boost converter set to +19v, so I could also power my server.

As soon as I get everything finished printing and assembled I will update the design!

The 12v supply I normally use has a fan header, but you can also just hook up any 40mm 12v two wire fan.

I print almost exclusively out of PETG, so I have included my PETG print files.

Parts:

I had almost everything in my parts bins, but this is what I used.

1.) 12V Power Supply

We throw a bunch of these away at work so I have a stockpile I used, but they are quite expensive.

Reference:

https://mikrotik.com/product/gb60a_s12

Purchase Source:

https://www.neobits.com/mikrotik_gb60a_s12_12v_5a_internal_power_supply_p22488803.html?atc=gbs

Similar Product on Amazon

https://www.amazon.com/NOYITO-AC-DC-100-260V-Industrial/dp/B07C2MMKW3/ref=sr_1_3?crid=2C1HGMLU87M05&keywords=12v%2Bpower%2Bsupply%2Bpcb&qid=166920613

2.)Boost Converter

https://www.amazon.com/dp/B08TWKK5Z9?psc=1&ref=ppx_yo2ov_dt_b_product_details

3.) M3 Heat Set Inserts

https://www.amazon.com/ALEX-Printing-Embedment-Automotive-4-6x5-7mm/dp/B09TNK8GD6/ref=sr_1_1_sspa?crid=1Z2TSSD49TJ01&keywords=m3+heat+set+inserts&qid=1669206267&srefix=m%2Caps%2C123&sr=8-1-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&psc=1

4.) 40mm Cooling Fan 2 Wire

https://www.amazon.com/Printer-Cooling-Bearing-Brushless-40X40X10mm/dp/B0B8ZY4LH2/ref=sr_1_1_sspa?crid=2AMCKHP1037OK&keywords=40mm+cooling+fan&qid=1669206300&srefix=40spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&psc=1

5.) IEC 63020 C13

https://www.te.com/usa-en/product-1609133-2.html?te_bu=Cor&te_type=srch&te_campaign=ggl_usa_cor-ggl-usa-srch-fy23-smbmktg-is-ind-emi_sma-2681_14&elqCampaignId=161769&gclid=CjwKCAiApvebBhAvEiwAe7mHSJtGyMDRoCpWEQAvD_BwE

Model files



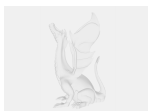
power-supply-v5.3mf



power-supply-lid.stl



power-supply-main-box.stl



power-supply-v5.step

Print files



power-supply-lid_03mm_petg_mk3s_4h47m.gcode

PET 0.40 mm 0.30 mm 4.78 hrs 89 g Prusa MK3/S/S+



power-supply-main-body_03mm_petg_mk3s_6h49m.gcode

PET 0.40 mm 0.30 mm 6.82 hrs 124 g Prusa MK3/S/S+

License

This work is licensed under a
GNU



General Public License v3.0

- | Sharing without ATTRIBUTION
- | Remix Culture allowed
- | Commercial Use
- | Meets Open Definition
- | Share under the same license