

Bambu Lab A1 MINI Enclosure



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updated 3. 4. 2024 | published 3. 4. 2024

Summary

BASIC is a simple and easy enclosure for the Bambulab A1 mini desktop printer

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Tags: [mini](#) [enclosure](#) [acrylic](#) [lasercut](#) [a1](#) [gehaeuse](#)
[bamboo](#) [bambulab](#) [plp](#)

Design Approach:

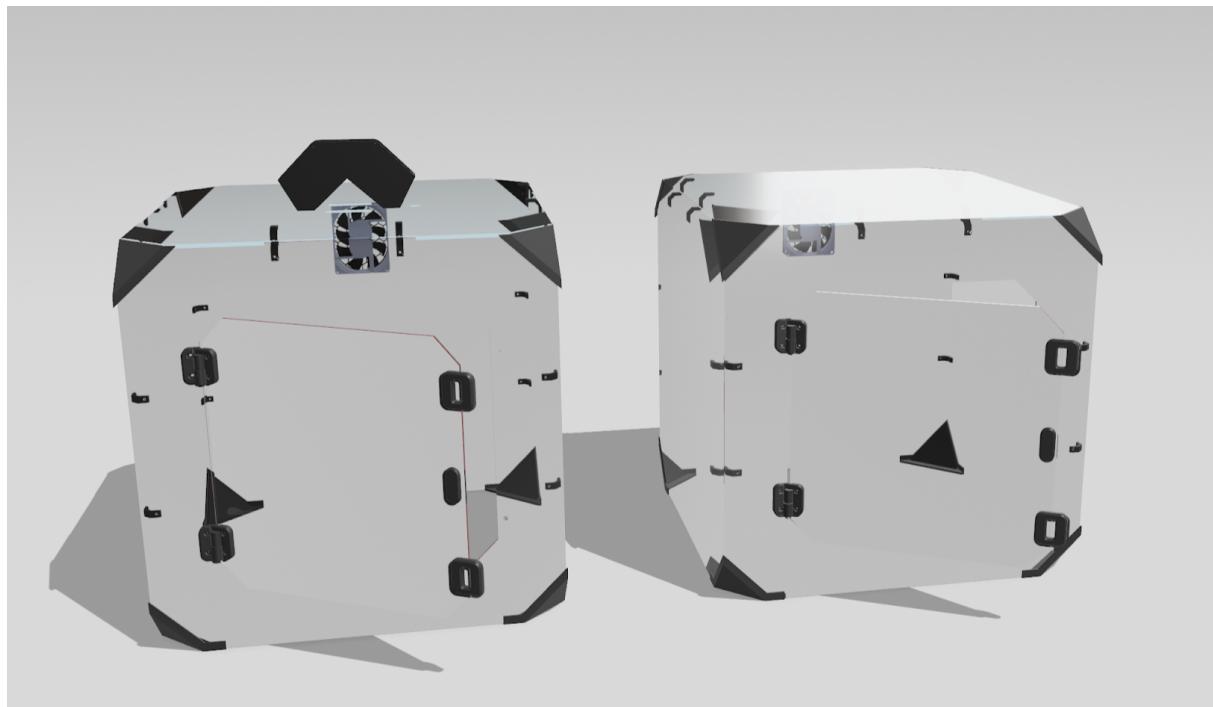
Give the A1 Mini a housing that is perfectly matched to its size. Now with bigger dimensions (490mm) everything fits inside. Don't worry for bent heatbed cables or not enough space for a pooptray. If you plan to use the included spool holder, we highly recommend to print a spool holder that sits next to the door for easy access. The overall costs of the build should be kept low, so I decided to work with just 3 mm acrylic panels, which are stable enough thanks to the corner pieces.

Features:

- Size: 490x490x490mm / door: 330x330mm
- Strong 5mm Top-Plate

- Removable door
- Chamber Fan support (optional)
- LED kit support
- Spool fits inside
- AMS Support on Top (optional)

You can build the enclosure in 2 variants:



5mm Top-Plate with AMS 3mm Top-Plate with spool inside

The 5mm variant supports the AMS lite on top of the case. Please notice that 2 of the bowdentubes need to be extended to fit the AMS on top.

This enclosure can be bought as a complete kit from my online shop. All kits now include the panels, bowdentube extensions, screws & magnets.

You only need to print the parts from PLA in the color of your choice.

<https://shop.netlaser.de/products/bambu-lab-a1-mini-basic-gehause-enclosure>

Printing instructions:

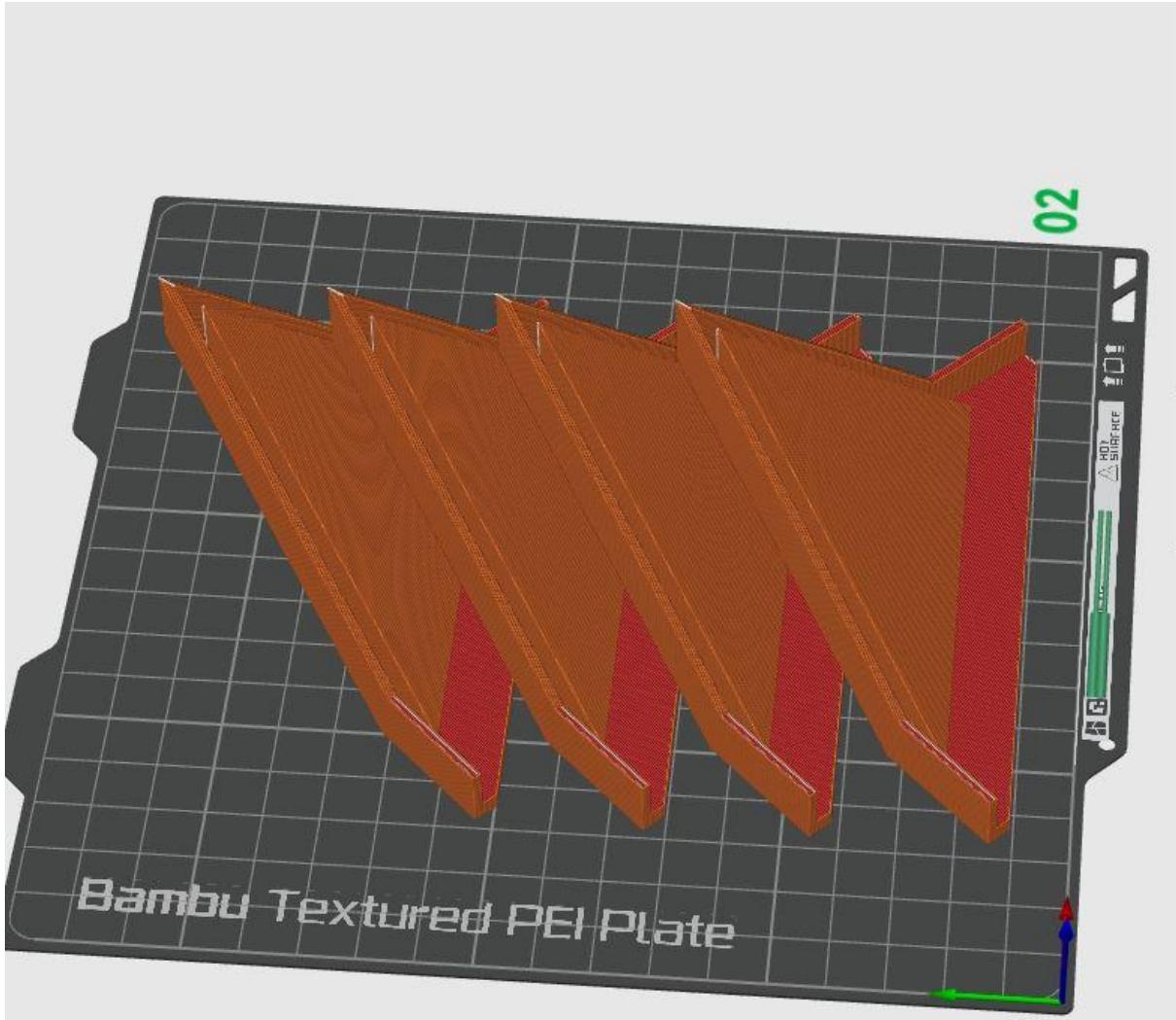
Printing the parts from PLA is okay, even for higher temperatures. We suggest standard-settings: 0,2mm layer, 2 perimeters, 20-30% infill.

Printed parts list:

- 4x bottom-corner
- 4x top-corner
- 16x sidepanel-bracket

- 2x hinge frameside
- 2x hinge doorside
- 2x magnet
- 1x doorknob
- (optional) 2x LED-mount
- (optional) 2x cableclip
- (optional) 1x AMS-mount

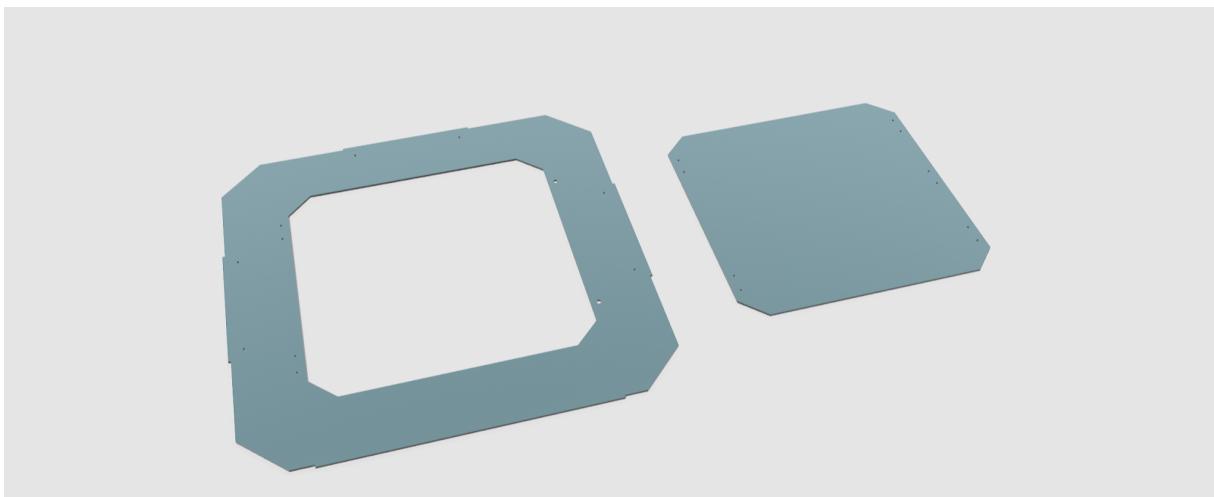
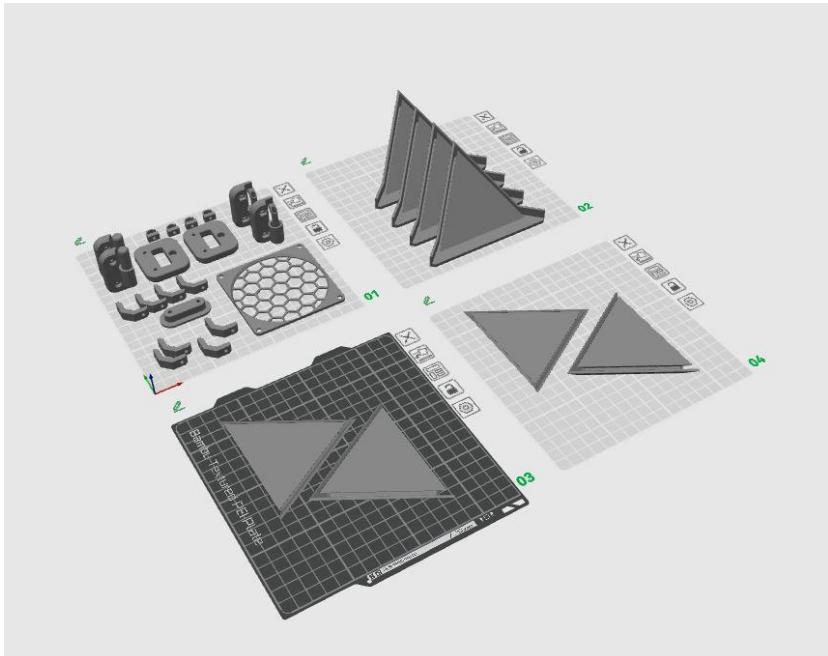
Please print the bottom corners standing like in the picture.



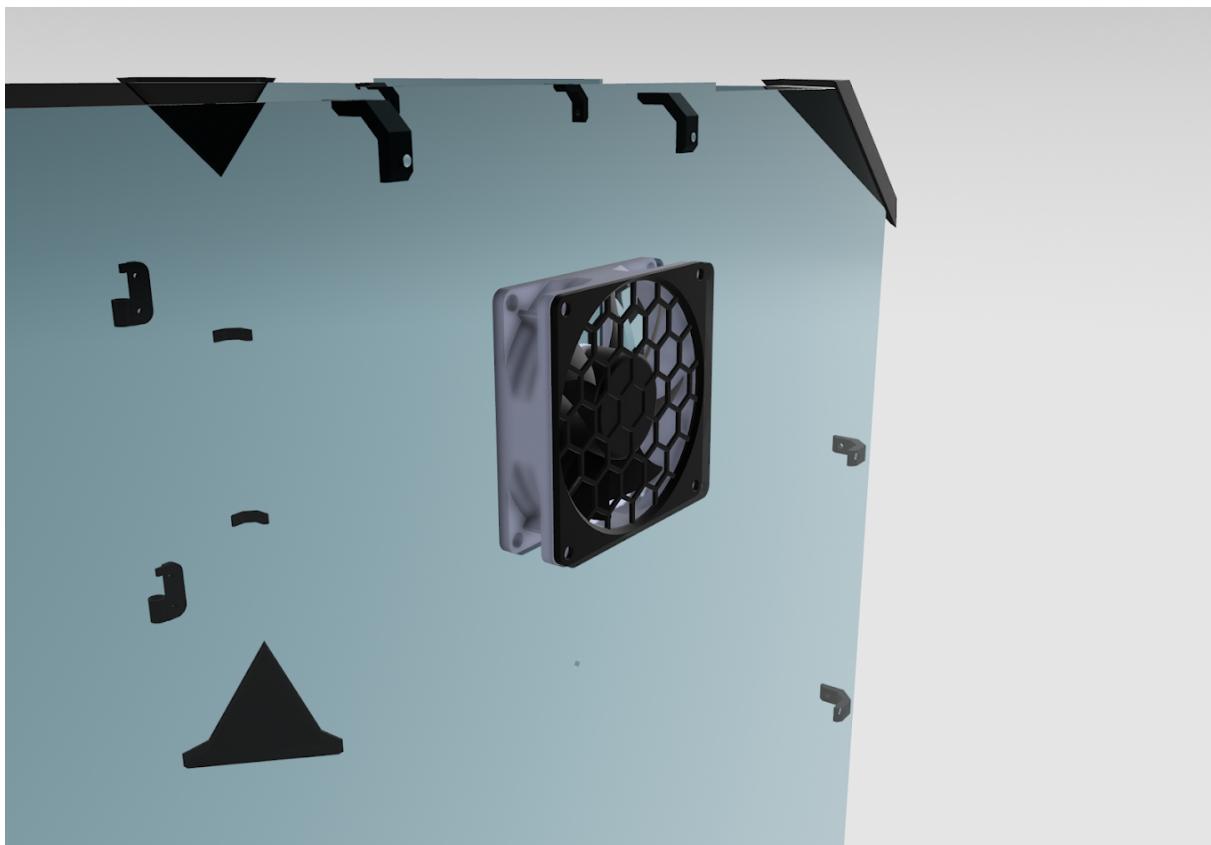
I added a plated version with all parts in the files tab.

Lasercut Parts:

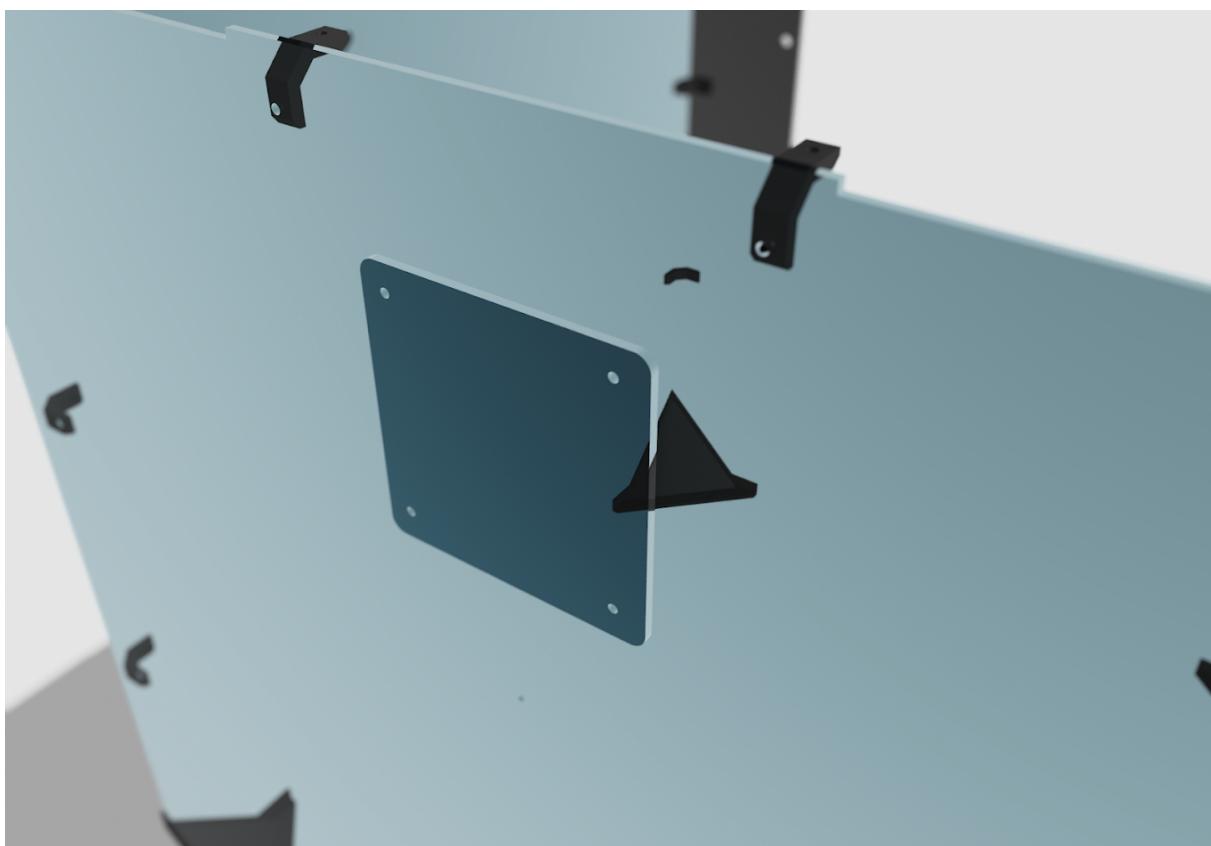
For the acrylic parts, a laser cutter is needed. You can download the cutting files and cut it in your local makerspace/hackerspace or support my design and buy a complete kit from my onlineshop.



Chamber Fan:



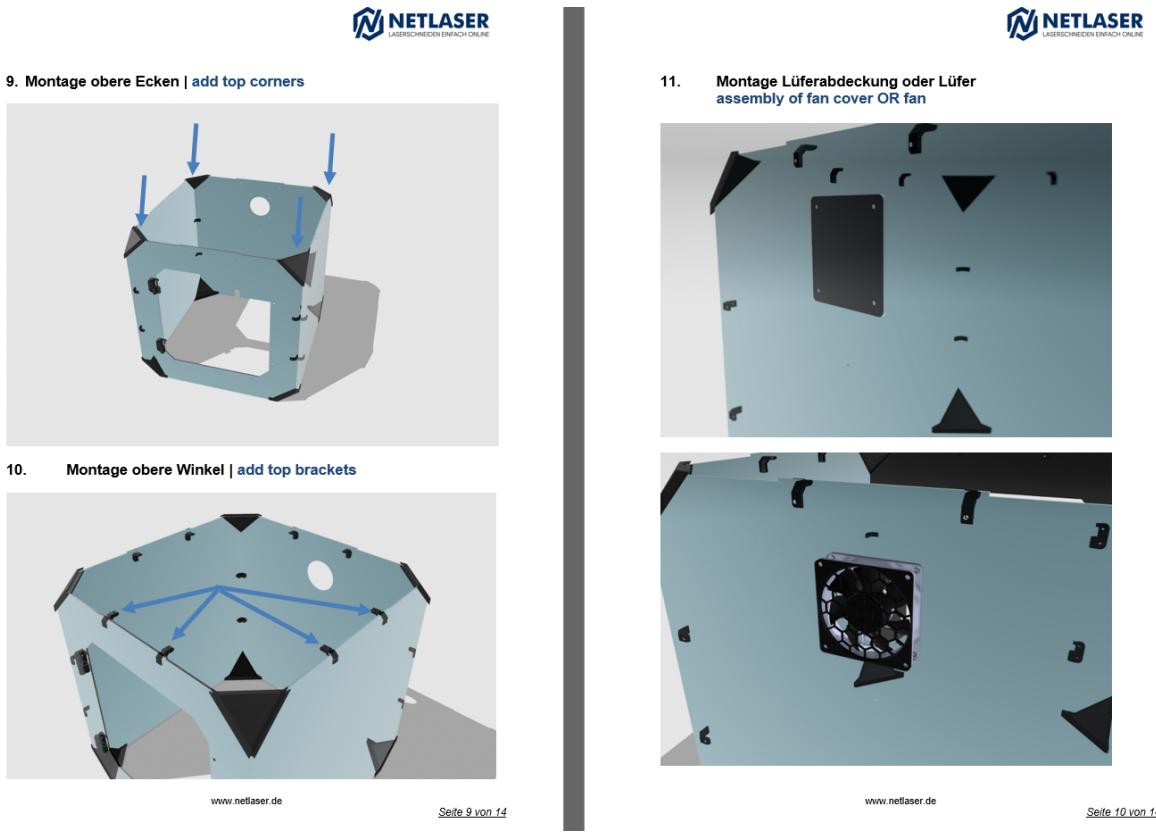
80mm chamber-fan can be added: with or without filter.



The kit also includes a transparent fan cover plate.

Assembly manual:

download here: <https://cloud.fh-prototyping.de/s/NEcscJ4bCaR53D6>



Useful links:

LED-Holder/ Fan:

<https://www.printables.com/de/model/682010-universal-led-and-fan-system>

AMS Lite Holder for the top-plate:

<https://www.printables.com/de/model/686538-ams-lite-top-plate-mount>

Poop-Tray:

<https://www.printables.com/de/model/595365-bambu-lab-a1-mini-waste-bin>

Spool holder:

<https://www.printables.com/de/model/175898-spool-holder>

BOM:

- 4x bottom-corner
- 4x top-corner
- 16x sidepanel bracket
- 2x hinge framesinde
- 2x hinge doorside

- 2x magnet
- 1x doorknob
- Laser-cut parts: 1x front, 2x side, 1x back, 1x top-panel
(fit on 4 Sheets 500x500x3mm + 1 x 500x500x5mm Plexiglas/acrylic)
- Total of 65 pcs M3x10mm screws + nuts:
 - 32 pcs for the corners
 - 14 pcs for the hinge and door
 - 4 pcs for the fan-cover
 - 4 pcs for the AMS-Holder (opt.)
 - 2 pcs for the LED-holder(opt.)
- 4 pcs round magnets 6x3mm
- 2 pcs Bowdentube 700mm (only for AMS use)

Updates:

- 19.11.2023: Initial release of design
- 15.12.2023: Update panel files and size
- 16.01.2024: Release of redesign with new shape and size
- 27.01.2024: Update BOM + manual
- 03.03.2024: Updated panel-files

Model files

 PANELS	4 files
a1_mini_v2_side.dxf	
a1_mini_v2_top.dxf	
a1_mini_v2_back.dxf	
a1_mini_v2_front.dxf	

 PRINTED PARTS	10 files



x2_hinge2_v2.stl



x2_magnet_v2.stl



doorknob_v2.stl



fancover-closed.stl



cableclip.stl



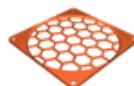
bottomcorner_x4.stl



sidepanelmount_x16.stl



topcorner_x4.stl



fancover-hex.stl



x2_hinge1_v2.stl

a1_mini_enclosure.3mf

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