



Elegoo Centauri Carbon Vented Riser



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Summary

This is a vented riser for Elegoo's Centari Carbon 3d printer with provisions for LED strips or bars.

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Tags: [elegoo](#) [centauricarbon](#)

Update 2 (8/22/25)

It's here! Version 2.0 of the riser with tighter fitting vents that release easier and a tool hole to release the vents. I've also put in tabs to hold LED strips. Thanks to my fellow Elegoo Discord server members for helping me test! I haven't got the crossbar version completed yet, but I'm working on it (slowly, I know). Check the updated printing notes. I'm going to try to post a video soon.

In my testing, I found that this riser doesn't significantly raise the temperature in the build volume, but it does keep it much more stable. I'm still doing testing with some multi probe thermocouples, and will also update here when I have that data ready to present.

Vented LED riser for the Centauri Carbon

I took inspiration for this from the plethora of similar models for the Bambu X1C all over Printables. I'm an amateur designer, and couldn't have done this without help. Huge thanks to the other community helpers and admins of the Elegoo Discord that helped me test this design. In no particular order, Chirimorin, LaserVelociraptor, YogurtDrink, Kiera, and SQUIRRELYMOOSE were great help in providing feedback on this design.

This riser has the following features:

- Vents that can be opened or closed based on the material you're printing
- A 45 degree bevel around the perimeter for LED strip lights
- Bevel transitions to 90 degrees on the corners so that strip lights can follow the bend
- Rear corners have cutouts for wiring to pass through
- An optional cross bar for bar style lights with provisions to use zip ties
- The entire riser (minus the cross bar) can be printed in a single job on the Centauri Carbon
- Printed mostly without supports. Crossbar A is the only part that will require supports.

Bonus feature: Testers have found that the rounded corners of the glass top may not be ground correctly, making the lid not sit flush. This riser compensates for that by allowing more space for the rounded corners.

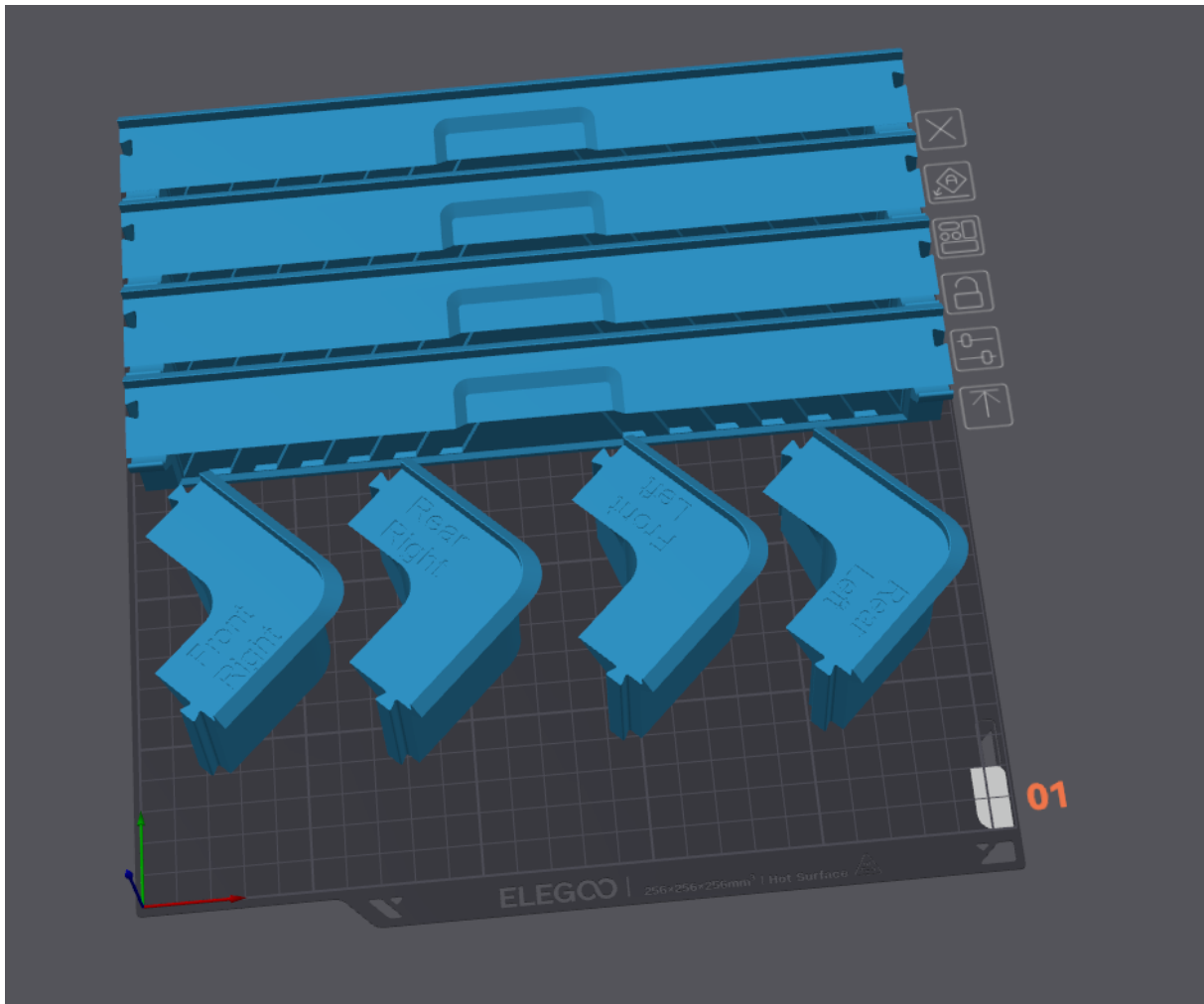
Assembly

All 4 sides panels are the same except when using the cross bar which is optional. The slots in the panels fit the tabs on the corners. Gluing is optional, but will reduce movement and possibly vibration at certain resonances.

Since the CC is not perfectly square, the corner pieces are each different and require proper orientation. They are labeled for easy assembly. Each corner has a side that is slightly longer. The text should be "right side up" when you look at them from the front of the machine. The cross bar also has a "front" indicator.

The LED cross bar is printed in two parts and can be held together using your LED bar as a support or glued together on the two horizontal flats in the middle. This may also reduce some vibration at certain resonances.

Optimal print layout:



Note the corners are in the front and the panels are in the rear. The panels want to lift off the print bed in my testing near the front because of the glass door not being fully sealed.

Printing notes

You will need to print 4 total panel pieces and one of each corner. They can all be arranged to fit on the build plate of the CC as in the example to the right.

Print option 1: Standard, without cross bar

- Print 4 copies of "CC Riser - Panel V2.step." You can substitute the solid panel for any or all of these.
- Print 1 of each corner piece

Print option 2: With cross bar

- Print 2 copies of "CC Riser - Panel.step"
- Print 2 copies of "CC Riser - Notched panel.step"
- Print 1 of each corner piece

- In a separate job, print one “CC Riser - Crossbar A.stl” and one “CC Riser - Crossbar B.stl”

After printing, you can free the sliders by pressing a screwdriver or hex key into the hole on the end of the panel. This will pop the vent loose with minimal force and less chance of breaking anything.

Installing LED strips

I ordered a generic USB powered LED strip from Amazon for under \$20. It wasn't terribly bright, but was good enough to do the job and had an inline dimmer and power switch. Any LED strip will do as long as it's less than 13mm wide (standard strips are 8mm).

I started with the part of the strip where the wire connects next to the cutout and wrapped it around, sticking it as you go. Make sure to keep a little bit of tension as you do to prevent sagging. Strips have designated cut marks, get as close as you can to the full perimeter and cut on the nearest mark. I've read that briefly applying heat from a small butane torch to the surface of the printed part where you will be sticking the strip with a torch will improve adhesion. I haven't tried though. I have found that double sided gel tape works extremely well for this.

If you're using an LED bar that would necessitate the cross bar, you can attach it with a couple of zip ties. The length of the LED bar zip tied across should hold the bar together well, but you can glue the mating surfaces together if you would like.

Any feedback on this design is greatly appreciated!

Older updates:

Update 1 (2/21/25)

A single piece version for larger format printers was requested, and has been added. I have not personally printed this, but it is just the original pieces joined so shouldn't be an issue. Please let me know if there are issues.

Update 1.1 (7/21/25)

Wow, I feel so incredibly honored and humbled to see my model featured on 3d Printing Nerd! I see some feedback in the comments there and will work on making some more updates. Life has been... life... and I have some stuff in the works already.

https://youtu.be/VkITXBn4Aa4?si=KIn1_t4tD1VLmDo9

Update 1.2 (7/26/15)

Added a pre-arranged layout 3mf file for easy printing. I've also picked up a 4 probe temperature data logger to do some thermal testing with the vents. I've got a prototype of a better sealing model that I'll probably release as V2.0, hopefully by the end of summer once I've validated my data.

Model files



Original model for smaller beds

10 files



cc-riser-panel-v2.step

☐ The new and improved riser!



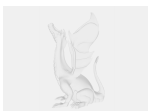
cc-riser-v2-single-print-layout.3mf

☐ Parts oriented for printing all at once on the CC



cc-riser-non-vented-panel-v2.stl

☐ If you want the riser without the vents, this is a solid panel with no moving parts.



cc-riser-notched-panel.step

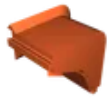
☐ This is the original design, does not include the LED tabs or updated vent geometry.



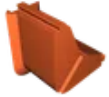
cc-riser-corner-fl.stl



cc-riser-corner-rr.stl



cc-riser-corner-fr.stl



cc-riser-corner-rl.stl



cc-riser-crossbar-a.stl



cc-riser-crossbar-b.stl



One piece print for large beds

2 files



cc-riser-one-piece.step

☐ This is the original design, does not have the improved vent design.



cc-riser-one-piece-crossbar.stl

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