

Ender 3 rear electronics case with additional 40mm fans



Chiral

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Summary

A modification of the original Ender 3 (pro) rear electronics case remix with improved cooling

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Tags: [ender3](#) [ender3pro](#) [ender3promods](#)

This is a remix of a remix. The original idea is from this Remix on [thingiverse](#) from vfrman.

A rear mounted electronics case for the Ender 3 or Ender 3 pro. It includes space for the following parts:

- A Raspberry Pi 3B+
- The original Ender 3 mainboard or a derivate with the same layout for the fixtures I am using a BTT SKR mini E3 V2.0
- UPDATE: I have added a version for the BTT SKR mini E3 V3.0. It increases the height of the mounting standoffs for the board from 2 to 4,5mm to have clearance for the welding pins of the stepper motor cooler. (right side case v1 for BTT-SKR-min E3 V3 (read description). 3mf) This reduces the clearance to the fan significantly and the space for the cabling is also reduced. It should fit but since I have no V3.0

here I cannot test it properly **So print at your own risk. Feedback welcome :)**

- 2 buck converters with display ([Amazon Link](#)) to reduce the voltage from 24V to 12V and 5V
- 2 4020 fans. One used as intake for fresh air and one facing the air stream outward.

I have added a small part that can be pushed in the cutout in the bar of the Ender to protect the cables.

In addition the connection for the cable chain to protect the heated bed cable had to be moved to the side. The solutions with the connection above the two 4020 fans always lead to scraping of the cable chain on the bottom of the heating bed levelling screws.

All ports of the Raspberry and the ender mainboard should be accessible with the exception of the raspi SD card slot which is on the other side of the board.

There should be no need for additional feet for the printer to increase the height.

I am thinking about a variant with the PCBs turned inside to improve the cabling situation and without access to the ports. I learned during the usage of my housing that I don't bother with the fiddling with the SD card anymore and manage the prints via Octoprint wirelessly.

printed without rafts, with supports 25% infill.

Changelog: 13.06.22: Added untested BTT SKR MINI E3 V3.0 version

Added STEP files for better editing (use 3MF version for printing)

feedback for improvement is always welcome

This remix is based on



Ender 3 all in one, universal rear electronics case

by TeachingTech

Model files



3mf Files

8 files



right-side-case-v1.3mf

☐ printer mainboard and 1 buck converter

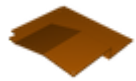


right-lid-v1.3mf



left-side-case-v1.3mf

☐ Raspberry Pi 3B+ and 1 buck converter



left-lid-v1.3mf



cable-protection-v1.3mf



cable-chain-angled-2-v1.3mf



cable-chain-angled-1-v1.3mf



right-side-case-v1-for-btt-skr-min-e3-v3-read-descr... .3mf

☐ increased the height of the BTT board for more clearance with the stepper cooler



STEP files

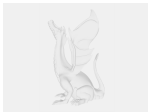
6 files



right-side-case-v2-for-btt-skr-min-e3-v3-read-de.step



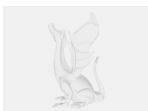
right-side-case-v1.step



left-side-case-v1.step



right-lid-v1.step



cable-protection-v1.step



left-lid-v1.step

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