



Mosfet Housing with 6010 Fan for HiLetGo 25A "Snowflake" Heatsink Board

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Summary

Housing with integrated xt60 ports and a 6010 fan for the HiLetGo 25A Mosfet board with snowflake-style heatsink.

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This is a 3d printed case that I designed for use with an external Mosfet for the heatbed on my CR-6 Max. Somehow, the mainboard mosfet hasn't given out on my CR-6 Max, but while I'm doing a bunch of other upgrades to it, I decided to add an external Mosfet to try and make the mainboard survive a little longer. I've integrated panel mounted XT60 ports for the 24V input from your PSU as well as the Heatbed output. A barrel jack is utilized for the signal voltage from the heatbed output on your 3d printer mainboard.

WARNING: If you use this model, you're going to be dealing with electricity. You are responsible for your own safety. You must be knowledgeable about what you're doing. Sufficient knowledge will help you reduce your risk of

bodily harm or death and damage to your property. Use of this model means that you have assumed all risk associated.

You'll need the following parts to use this model:

1. One Mosfet board: https://www.amazon.com/dp/B07C7RQ4C6?psc=1&ref=ppx_yo2ov_dt_b_product_details
2. One 5.5x2.1 mm DC Power Jack Socket: https://www.amazon.com/dp/B07Y7FB7TY?ref=ppx_yo2ov_dt_b_product_details&th=1
3. Two Panel mount Xt60 sockets: https://www.amazon.com/dp/B07VV92WZS?psc=1&ref=ppx_yo2ov_dt_b_product_details
4. One 6010 case fan (choose one that uses the same output voltage as your printer's mainboard, most often 24v. I used one of these: https://www.amazon.com/dp/B07R3WCKCX?psc=1&ref=ppx_yo2ov_dt_b_product_details)
5. Eight m3 heatset inserts, 4.5mm OD
6. Eight m3 x 6 button head cap screws
7. Four m4x16 Screws with nuts
8. Four m2.5x6 screws
9. One JST-XH 2 pin connector

Assembly instructions:

1. Print the models.
2. Install the heatset inserts in the 8 provided holes.
3. Wire the XT60 panel mount connectors to the board. I used about 1.5 inches of wire for each one. Note: these should be connected BEFORE you install the board.
4. Install the Mosfet board. Once screwed down with four of the m3x6 BHCS, place the XT60 connectors into the slots provided in the 3d printed case. Use the 4 m2.5x6 screws to attach them in place.
5. Wire the barrel jack. You'll need to use the JST-XH 2 pin connector for this connection.
6. Install the barrel jack and plug the jack in.
7. Attach the fan to the lid with the 4 m4x16 screws and nuts. The housing is sized to allow a 10mm thick fan to comfortably sit inside the housing. If you use a thicker fan, you may have to mount it externally and will need longer screws. On mine, I put the nuts on the inside of the lid.
8. Plug the fan in to the fan port on the board. Pay attention to polarity - easiest way on this is to find the ground continuity. If you don't know how to check that, you probably shouldn't be doing this project. If needed, swap the wires on the JST plug on your fan. I trimmed the wires on my fan and installed a new JST plug to eliminate most of the slack.
9. Connect the bed heater output on your board to the barrel jack on the mosfet housing.

If you're using PID to control your heatbed temperature, you'll want to run the PID tuning again.

Model files



mosfet-board-housing-lid.stl



mosfet-board-housing.stl

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