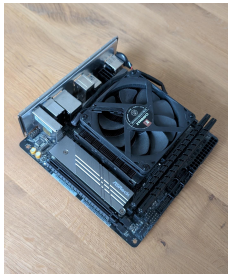
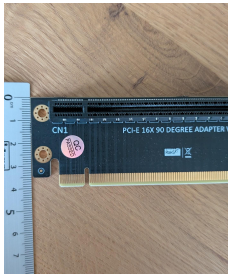
Build guide

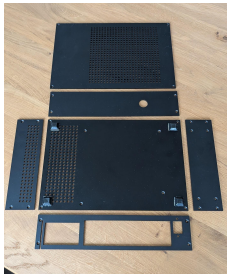
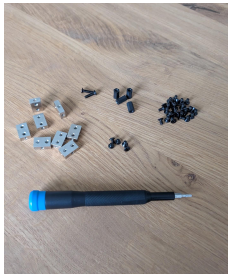
Welcome to the build guide of my free 3.6L DIY SFF case!

This is an early attempt, that I wanted to share with you.

Requirements

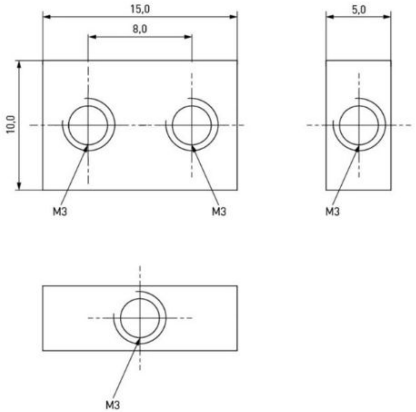


To attempt this DIY project, the following components are required:

-Standard **ITX motherboard** with up to **37mm CPU cooler**
-**HDPlex 250W GaN** PSU (other units won't fit)
-**Low profile GPU** up to 182mm with low profile bracket
-**90° fixed PCI-e riser card** or **flexible PCI-e riser cable**
-**19mm power button**
-all of the **3mm thick panels** out of the files
-8x **M3 cuboids**
-4x **10mm M3 standoffs** (both sides tapped)
-4x **M3x6 screws** for the motherboard
-32x **M3x6** countersunk **screws** (optional, only needed if panels are countersunk)
-2x **M3x12** countersunk or regular **screws** for power input
-4x any **sticky feet**, somewhere between 1-10mm high (can be applied in the end)

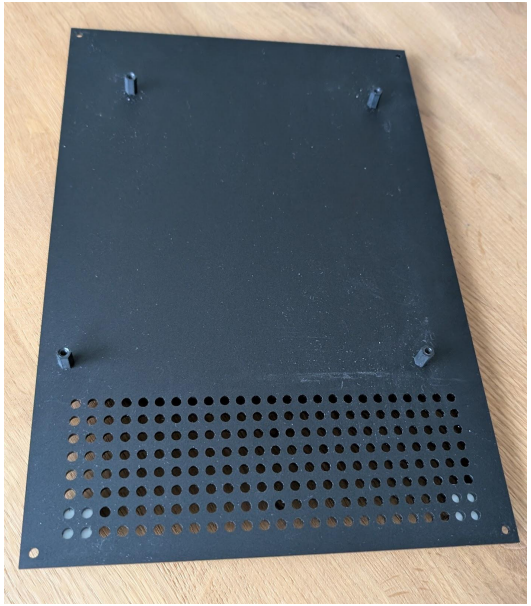


Optional prep

If you have access to a drill and a countersink, I would highly recommend to prepare all the panels for the use of countersunk screws now.

If not, just use some regular screws instead.

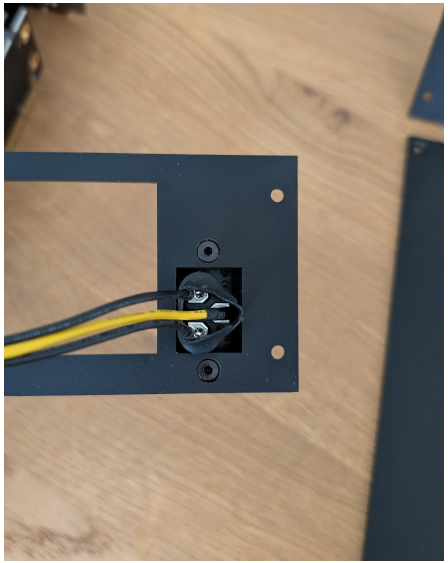
Motherboard

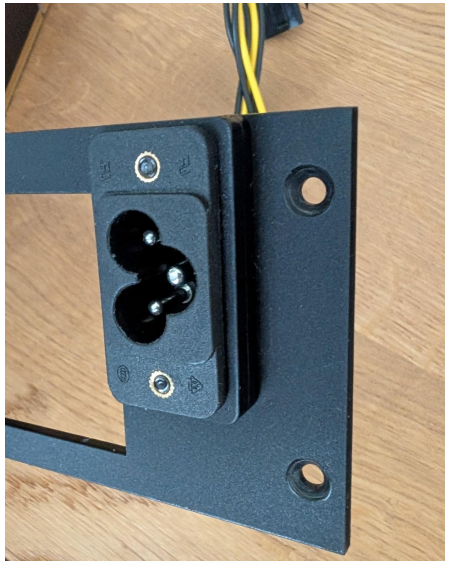


Mount the four 10mm standoffs from the back.

Then align the Motherboard on top and tighten it down.

Power input





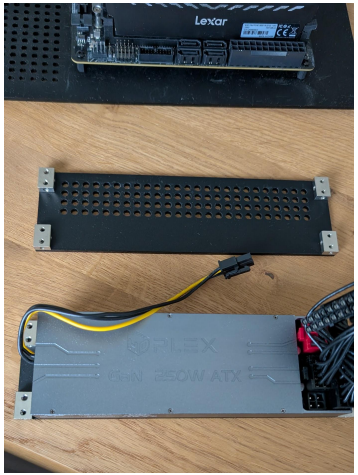
Put the two spacers behind the included C5 power input from HDPlex, then align everything and tighten down the long screws (optionally countersunk) from the inside.

Side panels and PSU

Align all 8 cuboids with the inner corners of the two side panels, using some of the M3x6mm screws.

Mount the HDPlex PSU slightly offset, with the gap to the left, where the power connector is located.

I personally removed the cable grommet, the PSU came with, to have a little bit more room for the power input.

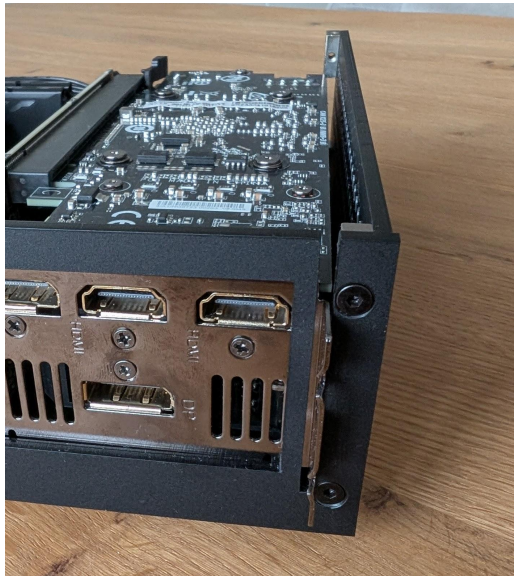


GPU installation

Put the GPU with the riser into the PCI-e slot, the GPU bracket should be behind the I/O shield of your motherboard.

Attach the rear panel onto the I/O shield and make sure, that the PCI-e bracket rests on the vertical cutout.

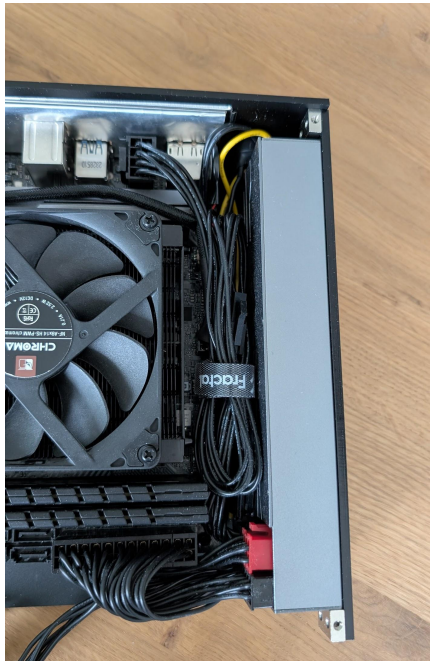
Panel attachment



Attach both panels to either side and screw them in.

Carefully flip the case to access the bottom and screw all the panels together.

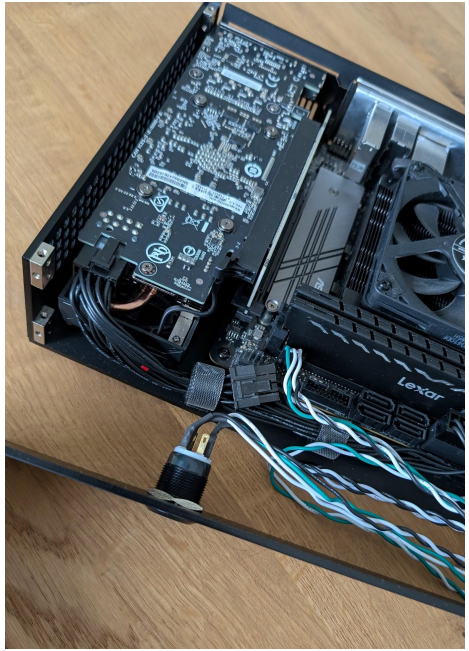
Cable management



After connecting the power input and PSU, you can stuff the cable in between the mobo and the PSU. Then connect the 8 pin EPS and short 24 pin cable and add a velcro or zip tie if you want.

Connect the 8 pin PCI cable to your GPU if it needs additional power.
You can stuff the additional pigtail connector slightly under the GPU shroud, so it doesn't touch the fan and also loop any excess under the mobo, as well as add velcro or zip ties.

Front panel



Attach the power button to the front panel, connect it to the mobo and screw it on.

Route any excess and add velcro or zip ties if you want.

All that’s left now is the top panel and you’re done!

Final touches

I undervolted my RTX 4060 in MSI afterburner to 950 mV at 2475 MHz to keep it cool and quiet, as well as keeping the power draw low.

The undervolt was stable in TimeSpy and the GPU power draw was around 100 watts.

My old Ryzen 3700X I used in this build was also slightly offset by 0.075 in PBO and I set a custom fan curve.

Having the CPU fan set to exhaust made all the difference for noise and temps, especially since I mainly have this PC sitting in the TV cabinet.

While I know that it's not 100% perfect, it will still have great functionality and be worth your time and money.
Feel free to customize it to your liking, I hope you will enjoy it as much as I do!

With appreciation,

Maximilian Grohnert