This shows a PicoPSU and a home made switching circuit....

What Volts Do I Need?

So, the Mini has an 18.5volt supply, my hard drive had an external 12v mains adapter, as did my full-size optical drive. So surely I just need 12v and 18.5v? Actually, no. Although my external drive casings only needed 12volts, opening up the cases and taking the drives out you find that you also need a 5volt supply. Add to this, If you want the occasional LED in your casing you may need 3.3volts, so in total you want to be able to generate not just 18.5v and 12v, but also 5v and 3.3v.

The power supply board on the mini is not designed to supply all of these voltages at the current needed for full-size drives, so you need some other way of getting all of this.

The traditional way is to use an ATX power supply of the type used in PCs for all this stuff, but that was WAY too big for me and the case size I had in mind.

I found things called Pico PSUs. These are basically like full-size ATX PSUs, but generally take a single input supply and then generate all your extras and come ready fitted with molex and SATA power plugs. They are TINY and need no cooling. Great.

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