AudioZEN

AZ1021 setup kits

for Soekris dam1021 control
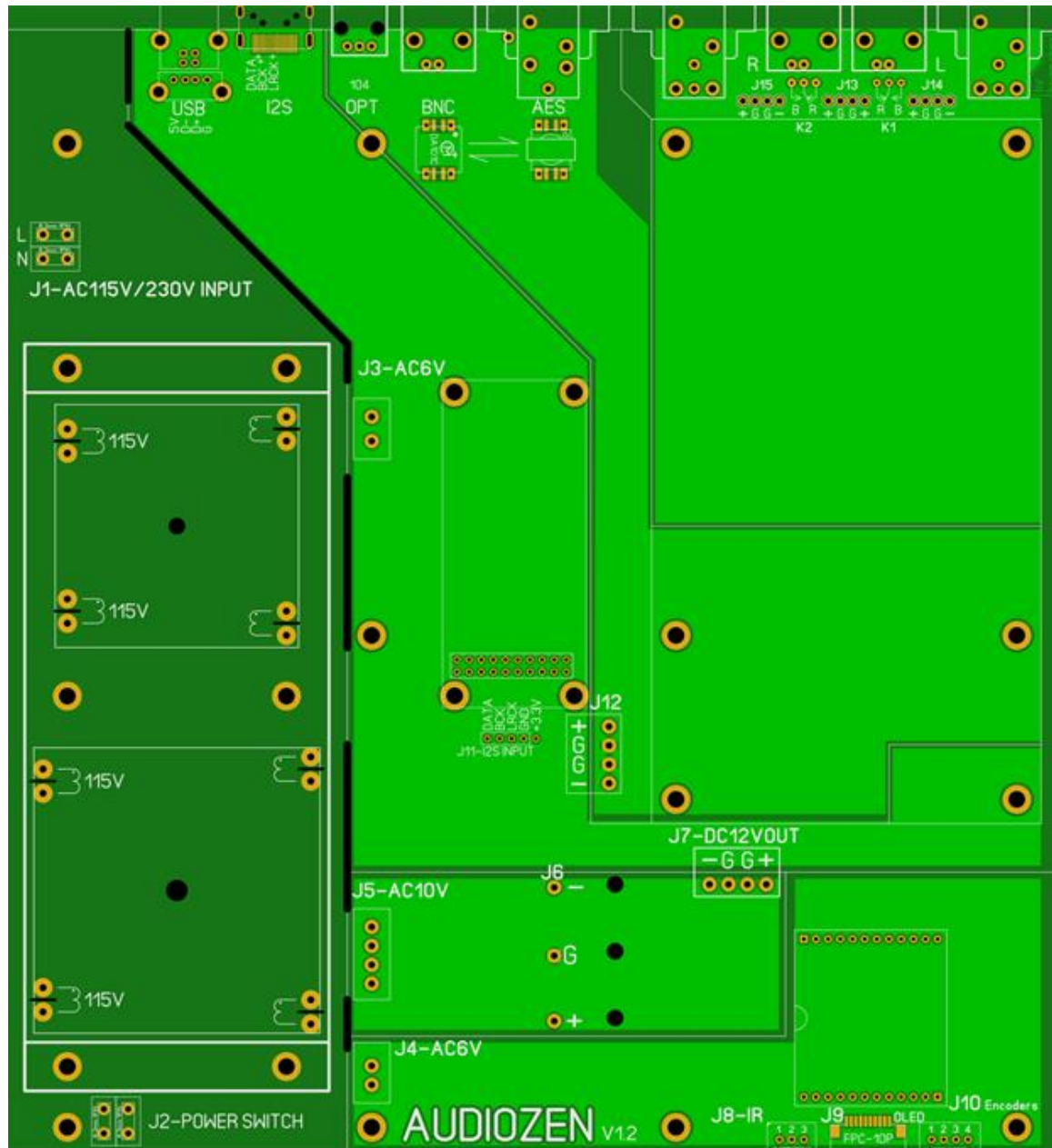
User Manual

Vers 0.2-June 2017
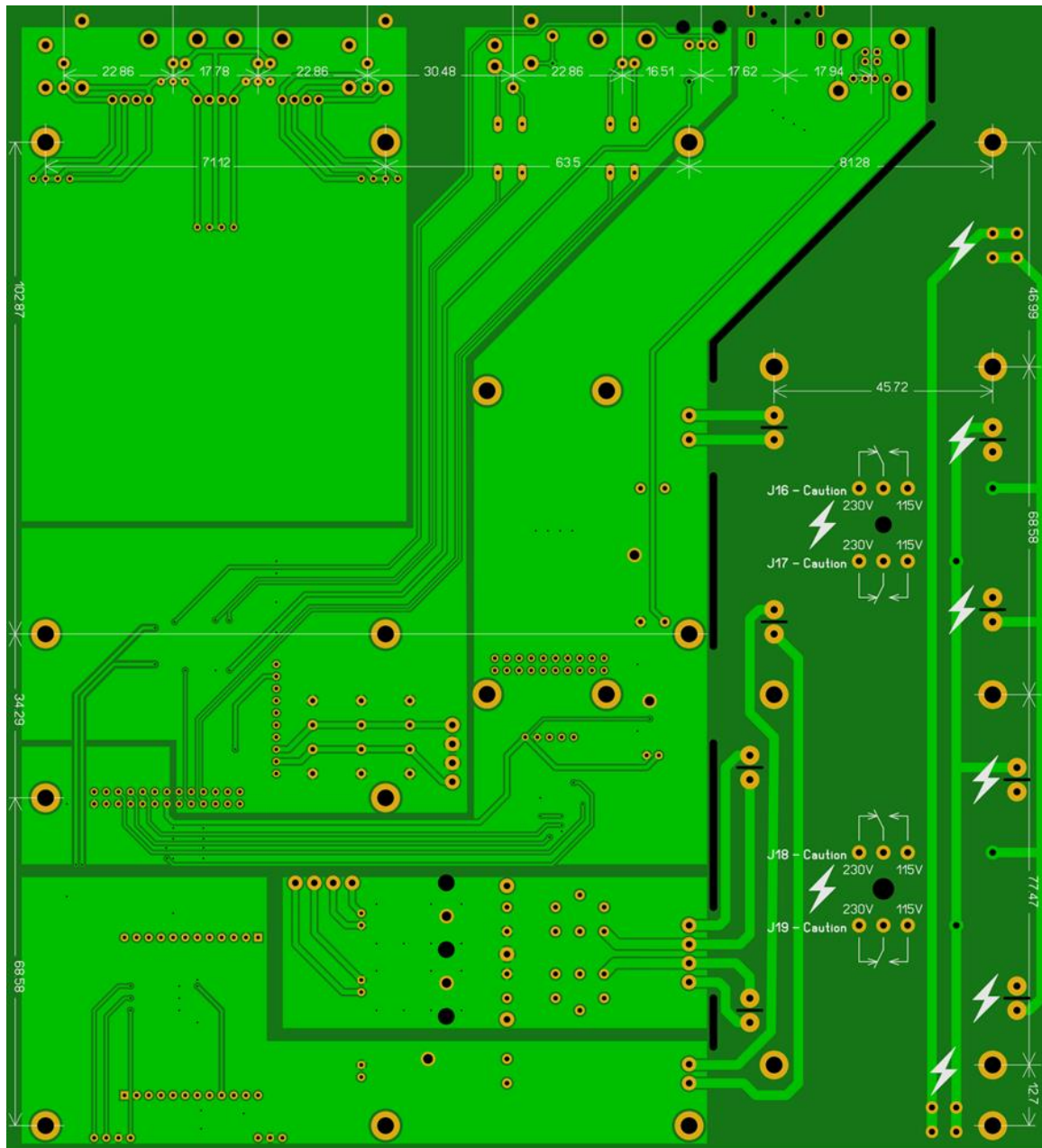
SPECIFICATION

DAM 1021 SK

1. MCU control DAM1021 via isolate serial port. Real-time volume control, digital filter switching, input selection, PCM / DSD sample rate display.

2. 3.1 inch OLED display(256 * 64 resolution).

3. One key mute (IR Remote only).

4. Rotary encoder or IR Remote full function control.

5. IR Remote control support learning function, support most kinds of IR Remote 6. Power-down memory, automatically load the last shutdown settings.

7. With two different styles of display window, the screen display can be turned off

8. Using SI8642 isolation chip between MCU and dam1021, to ensure that MCU noise will not be introduced dam1021.

9. Input support: Optical fiber，Coaxial, AES, USB（not included）, external I2S (LVDS mode).

10. RCA output can be switched between Buff and RAW.

11. Transformer board are detachable, support AC115V / 230V.

12. Use a separate winding transformer to power the USB module (amanero) and use ultra-low noise TPS7A47 for regulation.

13. Onboard TPS7A47 / TPS7A33 PSU.

14. A variety of DAM1021 power supply options.

Attention: USB module (combo384), the transformers are not included in the kits. In order to be more compact, the official delivery of the PCB will be smaller than that of the photo, removing the extra edges.

CONNECTORES AND INDICATORS

DAM 1021 SK

J16 – Caution
230V   115V

J17 – Caution
230V   115V

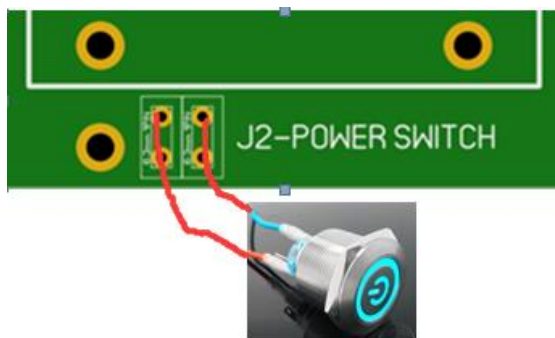J18 – Caution
230V   115V

J19 – Caution
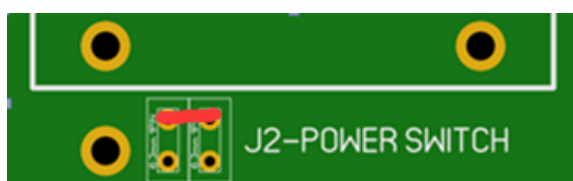230V   115V

J1 AC IN

Install connector. If you don't like connector, you can weld power cable directly to PCB.
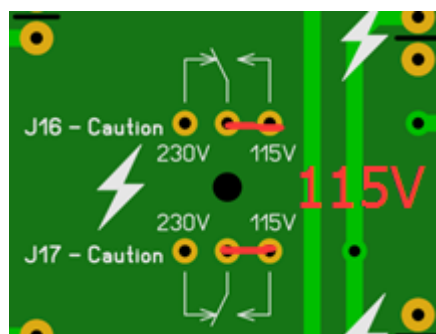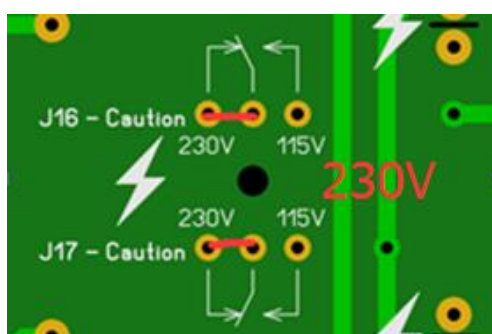

J2 Power switch

If you do not like to use the power switch, you can directly short J2.
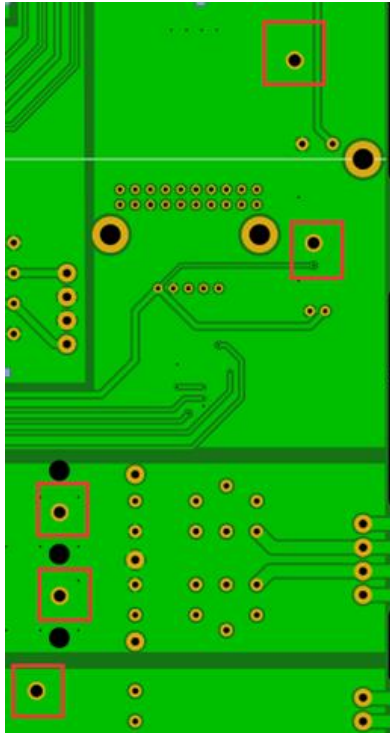

J16 J17 J18 J19   230V/115V switch

Short J16 J17 J18 J19 as following.

Talema transformers don't seem to have dual AC10V specs. With dual AC12V transformers, be sure to solder the heat holes behind the 4701/3301 chip or add heat sink to the chip. Please note that there are altogether 5 heat conducting holes. Please warm it up first, because the copper sheath is thermally conductive. Also, don't solder it too long.
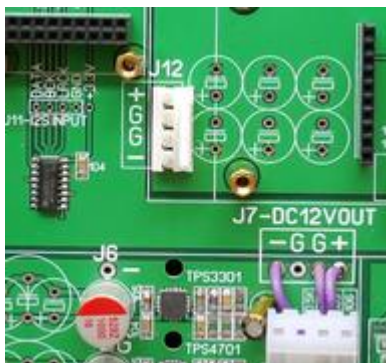

J7 ±12v DC output
J12   Optional power supply

Skip the rectifier bridge directly to the 1021 DC power supply.

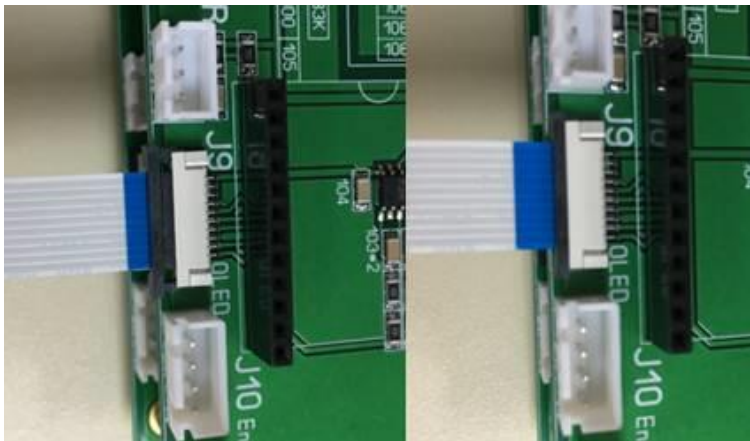You can power the 1021 directly via J7, or use J7 to power the J11.

USB cable

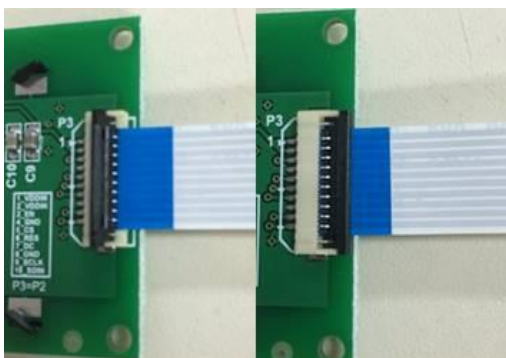Purple D+, Brown D-. Red +5V, black GND.

FPC connector

AZ1021 SK

Push-pull type connector
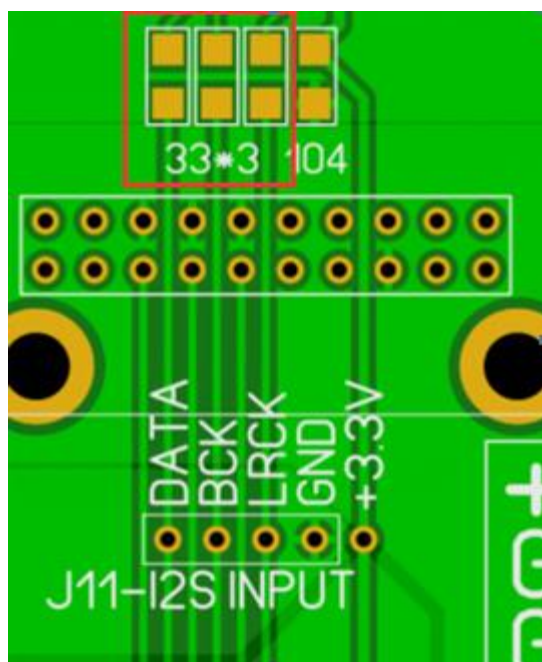

OLED

Upturned type connector

I2S over HDMI

	A	B
1	P1	DATA-
2	P2	GND
3	P3	DATA+
4	P4	BCK+
5	P5	GND
6	P6	BCK-
7	P7	LRCK-
8	P8	GND
9	P9	LRCK+
10	P10	NC
11	P11	GND
12	P12	NC
13	P13	NC
14	P14	NC
15	P15	NC
16	P16	NC
17	P17	GND
18	P18	NC
19	P19	GND
20		

I2S not over HDMI

Using J11 to connect the raspberry pi(Or other I2S devices), you need to remove three 33 ohm resistors. This way, the i2s is the raspberry pie, but the hdmi i2s isn't available.

DAM1021 connectors

Capacitor

Capacitor is reserved, please choose capacitor according to your preference.

Main capacitors:2200/3300/4700uf 25v Notice that the capacitor size is too large and the PCB space is not enough.