

AUMA DRAGON DAC

The Dragon Digital-Analog Converter(DAC) can translating the digital materials to analog sound (for example multimedia players, and CD or DVD players digital output signal) in the highest audio quality, so it can function as the best pure analog audio source.



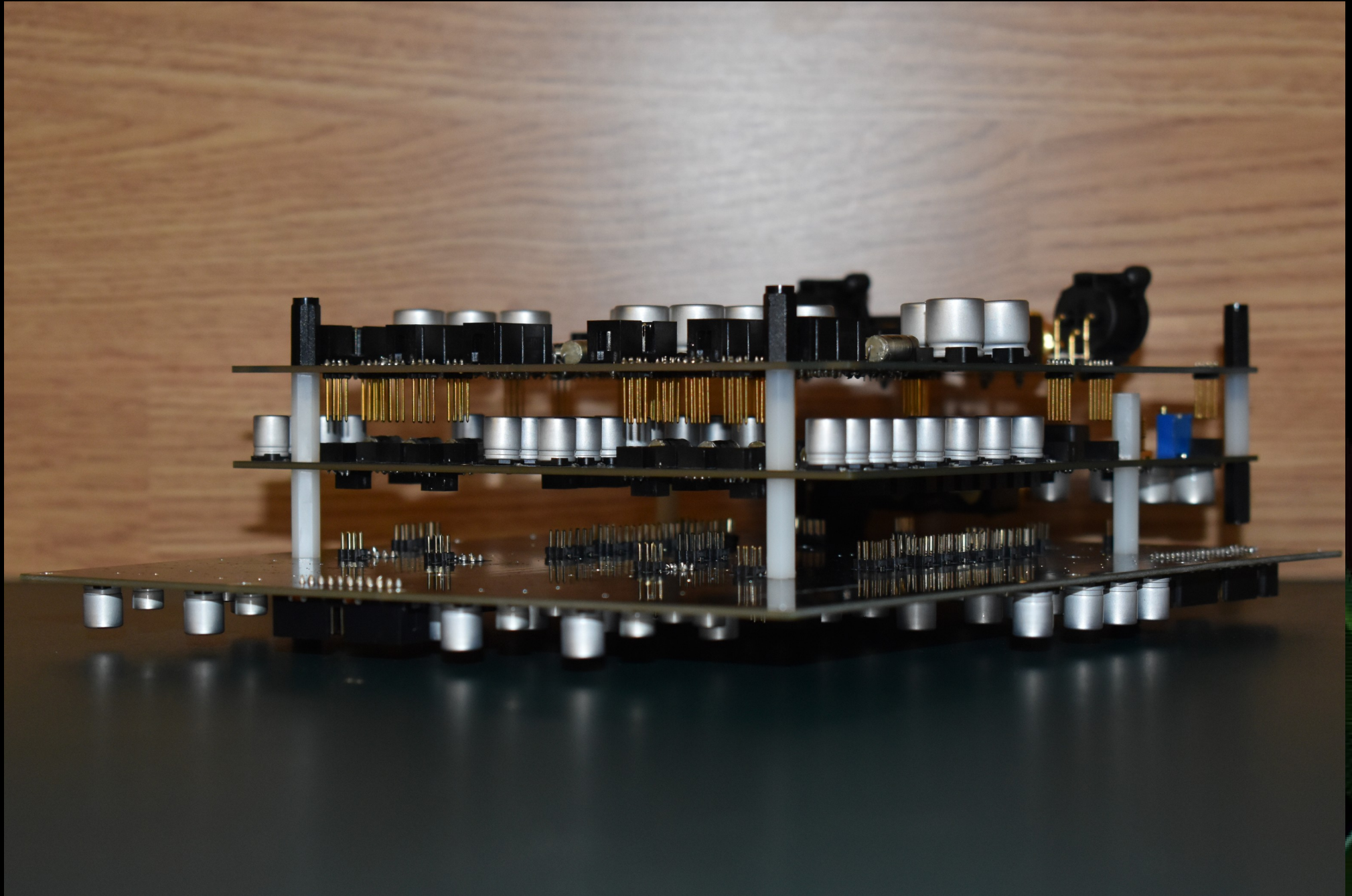
In this DAC construction we used AKM manufacturer highest quality DAC chips of the manufacturer AKM . This DAC chip is one of the best technology DAC chip in the World. The developed Super DAC working with AK4191 and AK4499EX chips in dual mono construction. The highest musicality and the live sound reproduction were in focus during the design, with using uncompromising technical solutions.



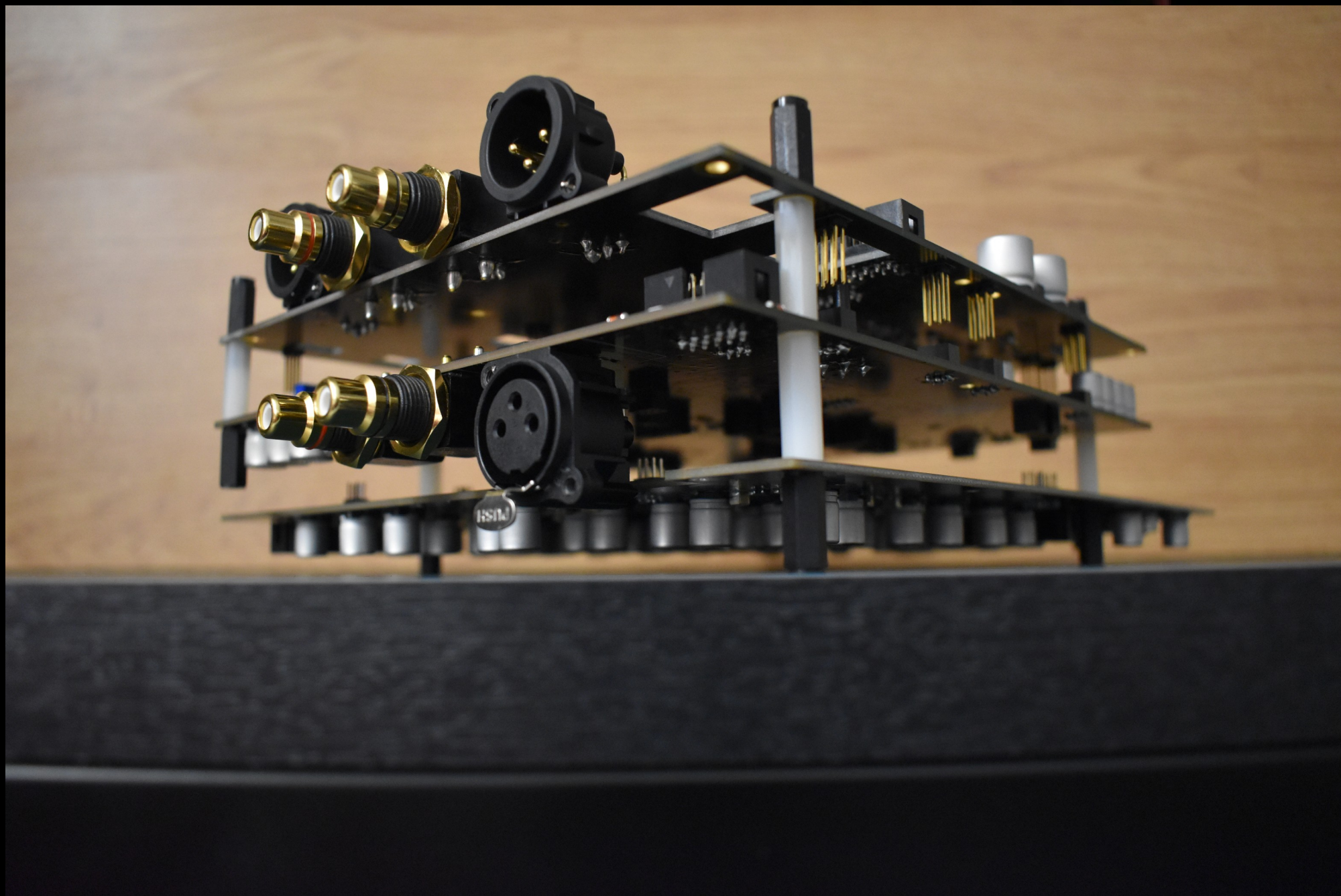
The first consideration was the short signal paths



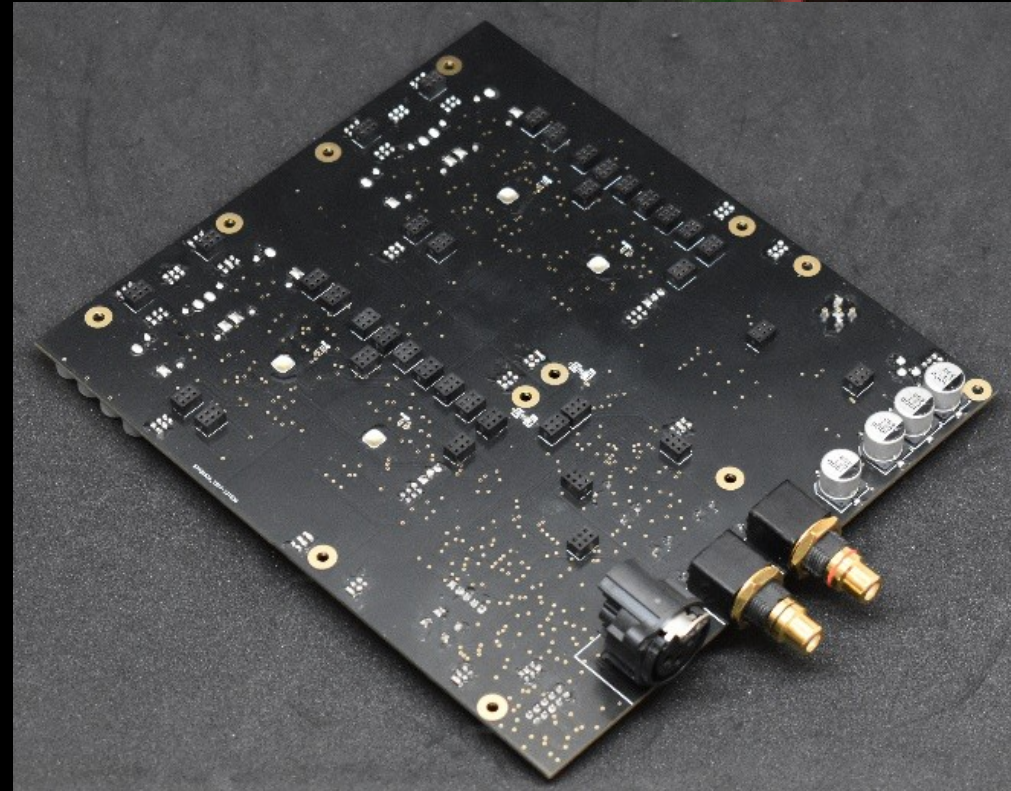
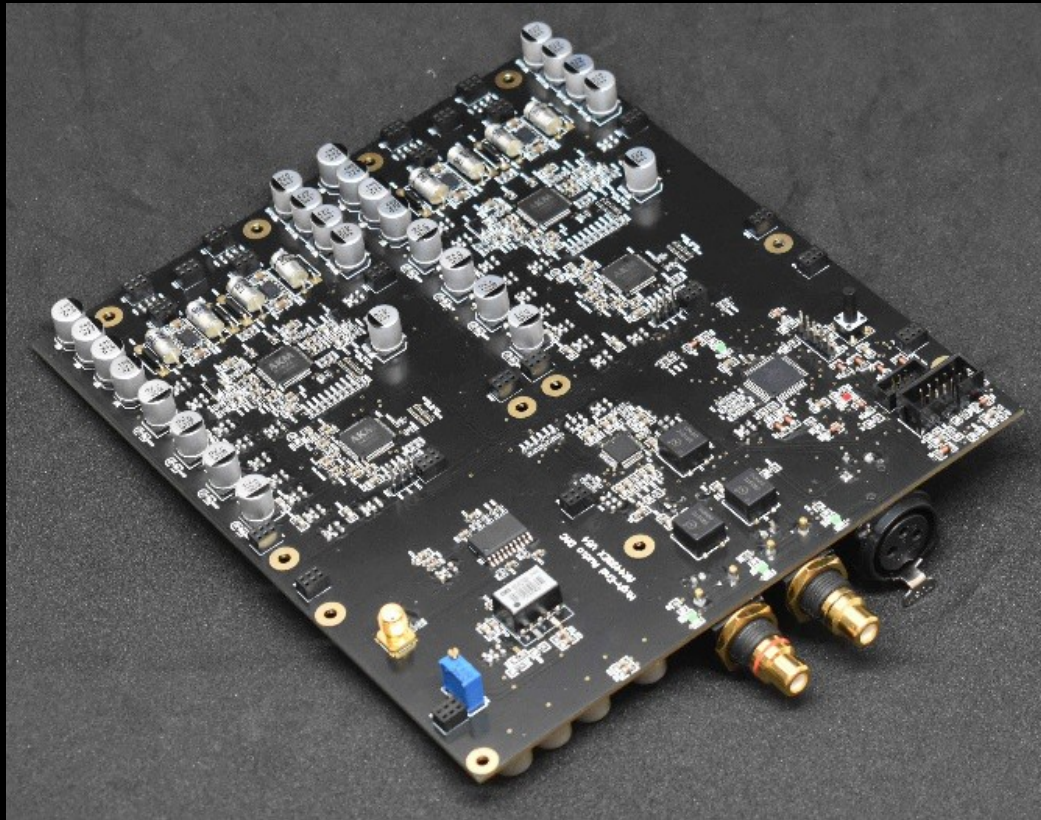
For this purpose we developed a stacked structure.



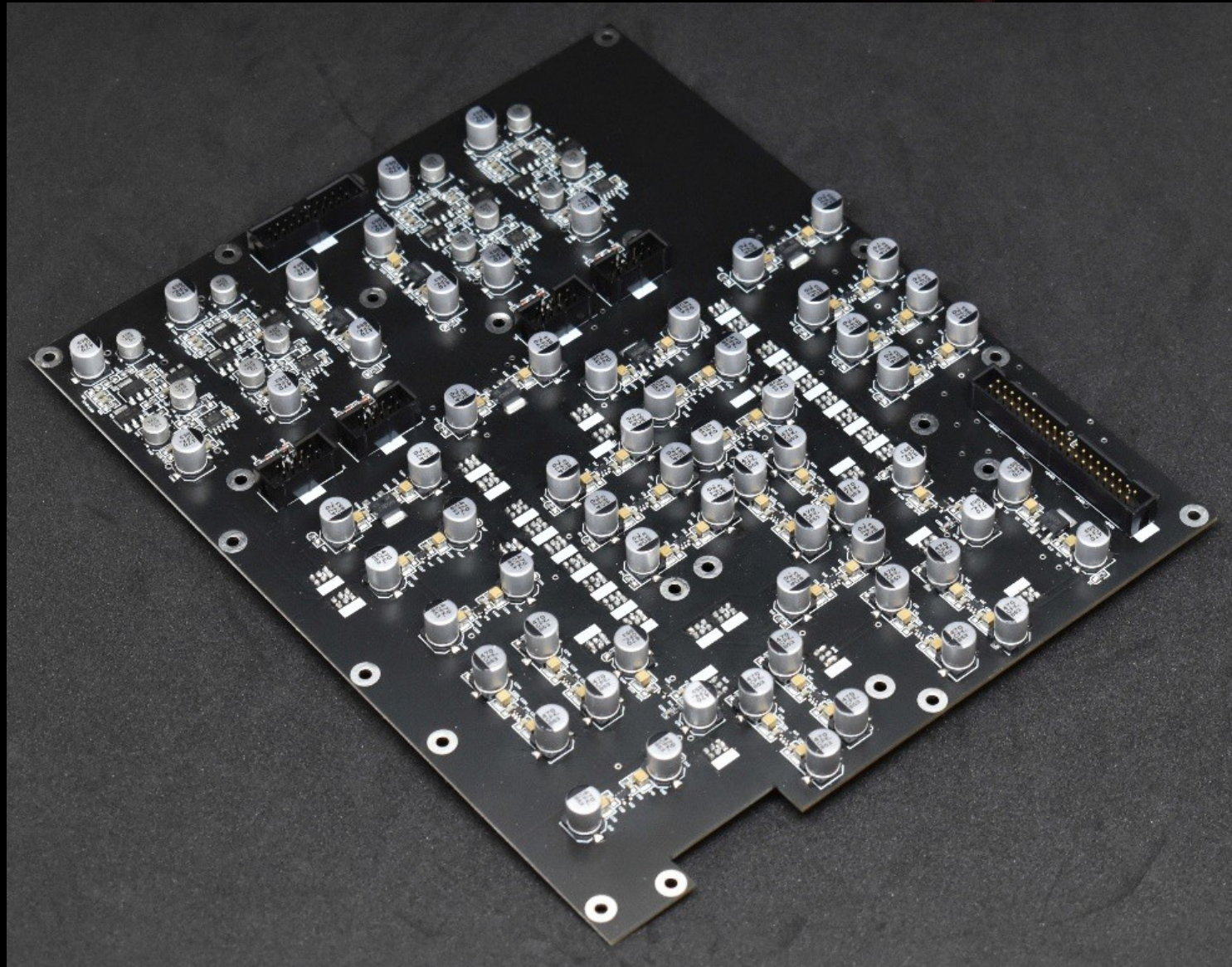
The stacked design contains three main unit. The DAC board, the DAC power supply board, and the Audio output board. On the boards we carefully designed the layout with very short and round traces.



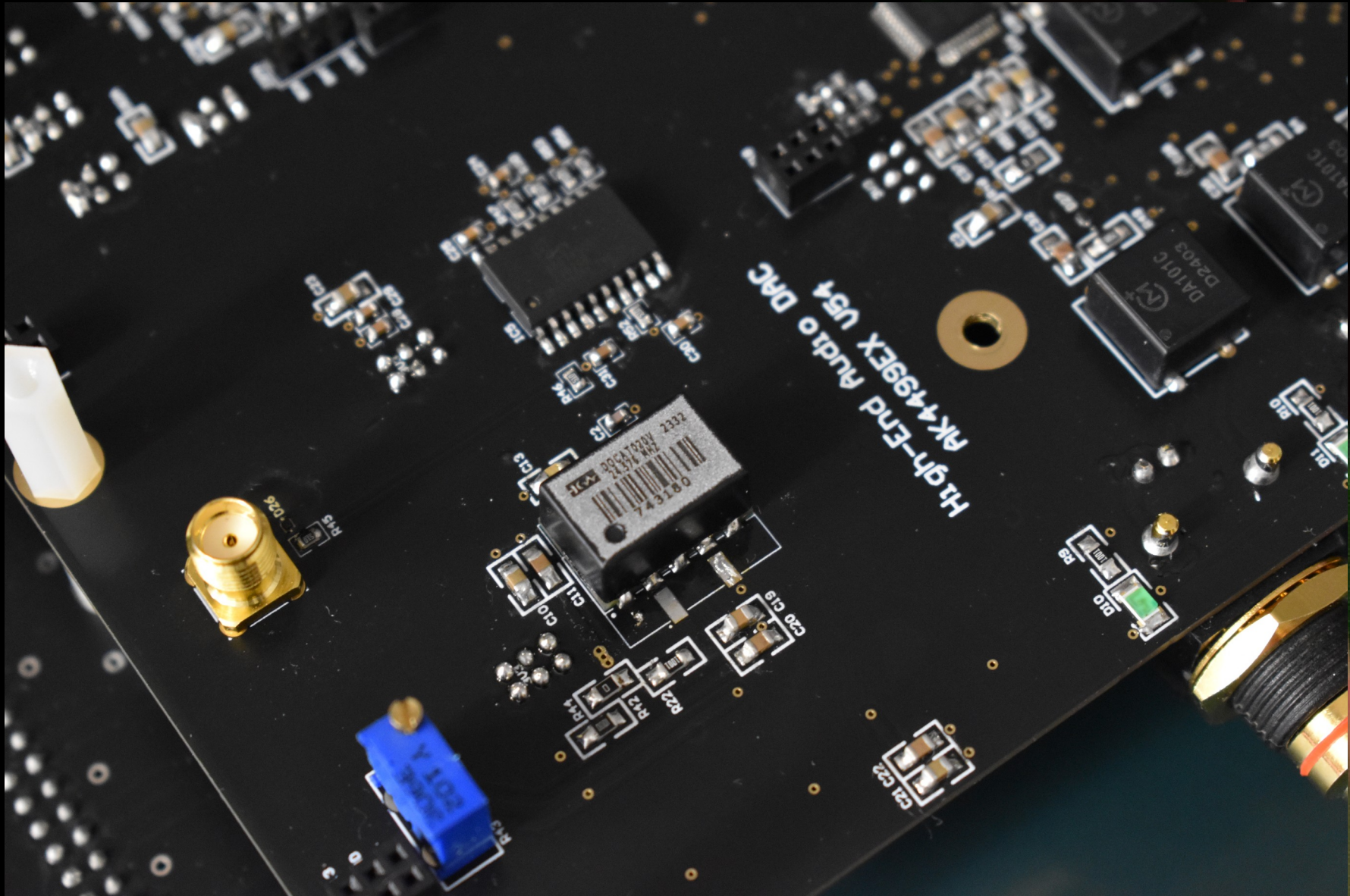
The middle part of the stack is the DAC board, this is the heart of this instrument.



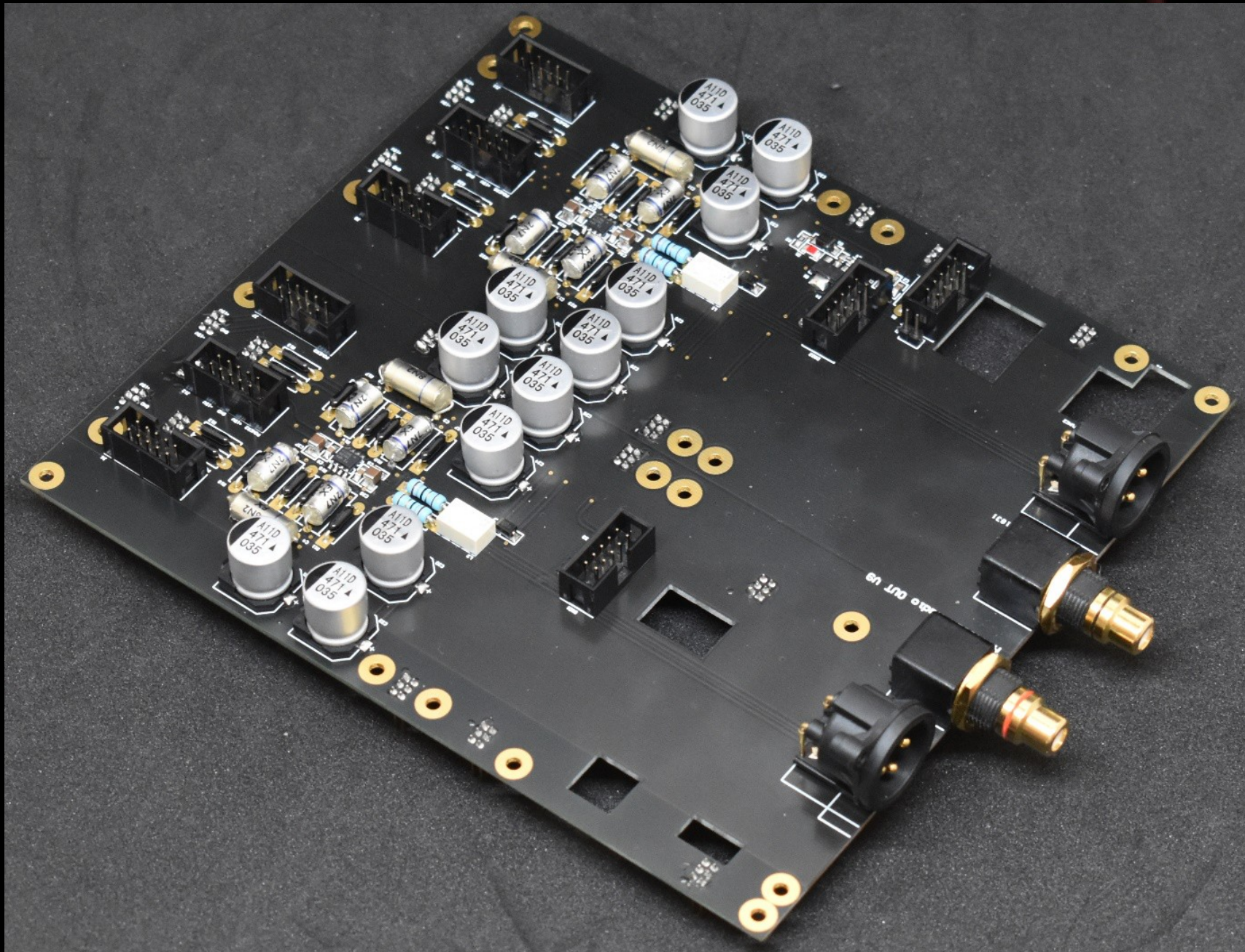
On the stacked boards the short signal path also played an important role individually. Almost all IC pins have an own separated low noise power supply stage, what is injected directly into the circuit via gold-plated legs. This technique enable radically shrinking the board space and the signal paths length, because the power supplies don't take places on the DAC board. -The separated power supplies placed under the bottom side of the DAC. In this case we used 33 pieces separated local low noise power supply under the DAC board for the best noise performance. The supply lines are very short, and all of these have a low impedance.



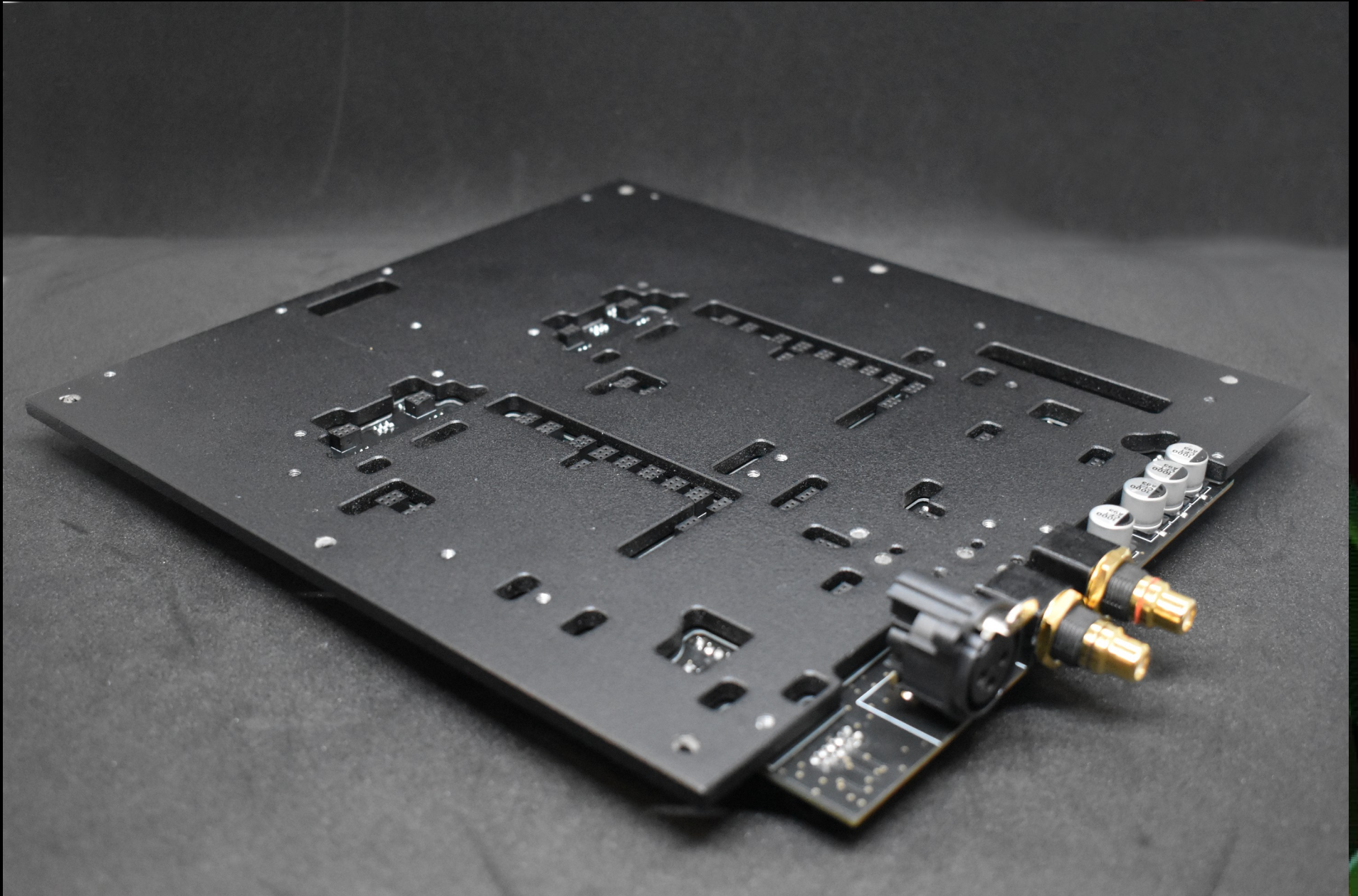
The design contains OCXO for the master Clock source, and separated clock lines for distributing the clock signal for the devices. All stages synchronised for the low jitter master clock. -The clock distribution traces were placed on an own separated pcb layer.



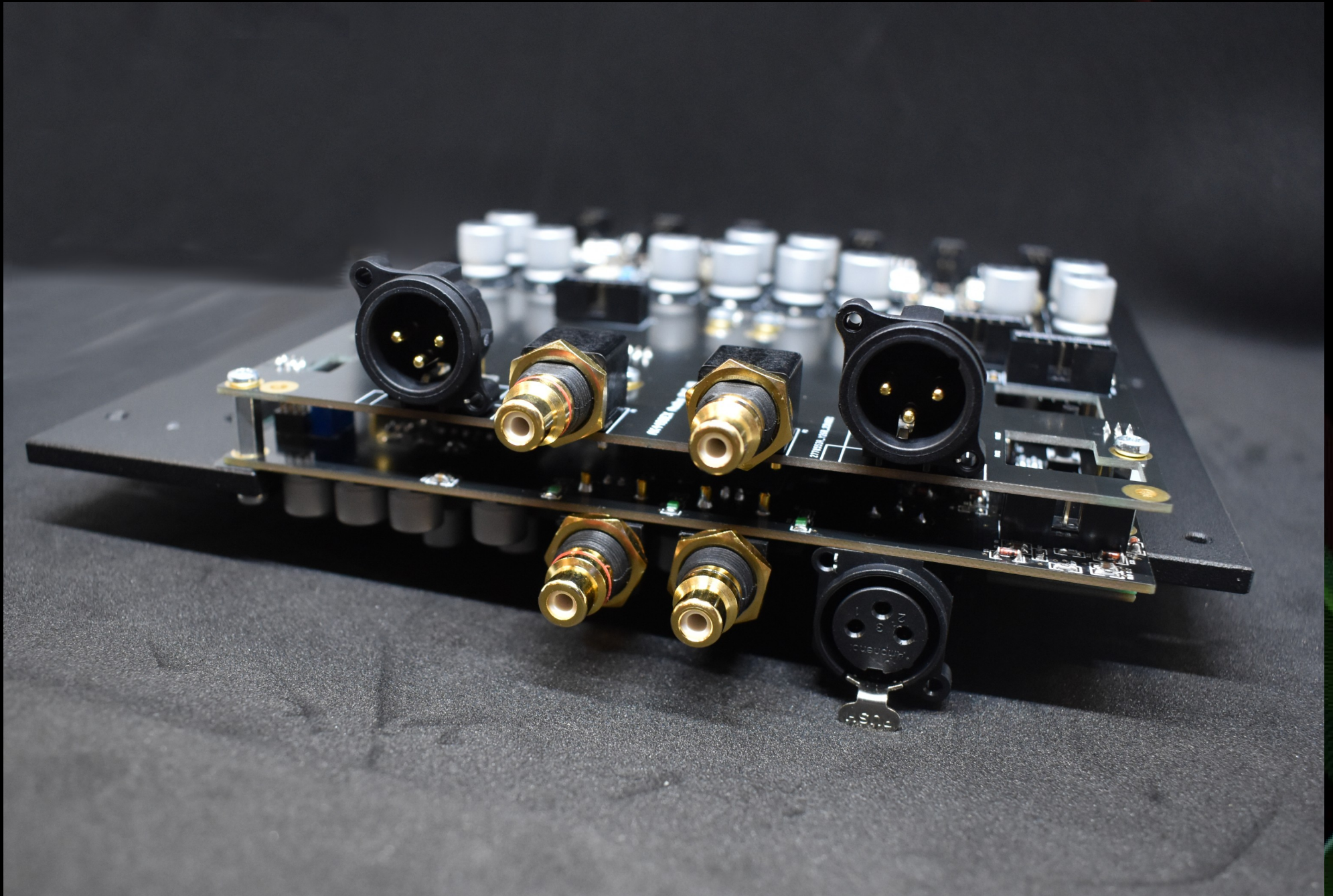
The audio output stage was placed at the top of the DAC board. So the signal paths are very short, the signal flow is limited into a small amount of area.



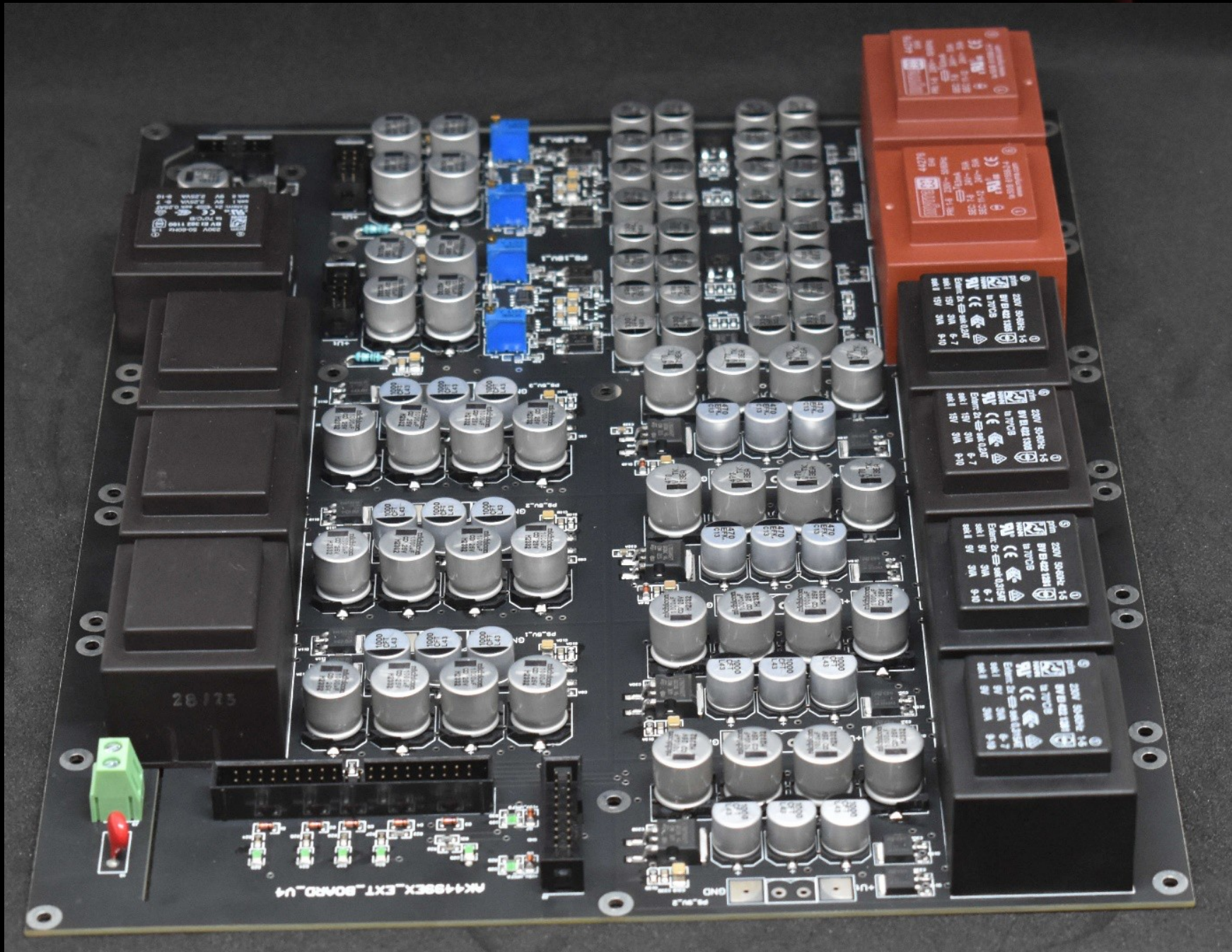
Between the DAC and Power supply board we use a thick and heavy aluminium plate for the heat equalization and reduce the mechanical resonance.



The completely assembled stack with the aluminum plate.



The external power supplies have ten DC separated stages, for avoid the ground loops.



The electronic built into a heavy aluminium housing, which also results a resonance free construction.

Audio Machines Design

