



ActiveSound
Boost your emotions

Sound Design made in Herrenberg

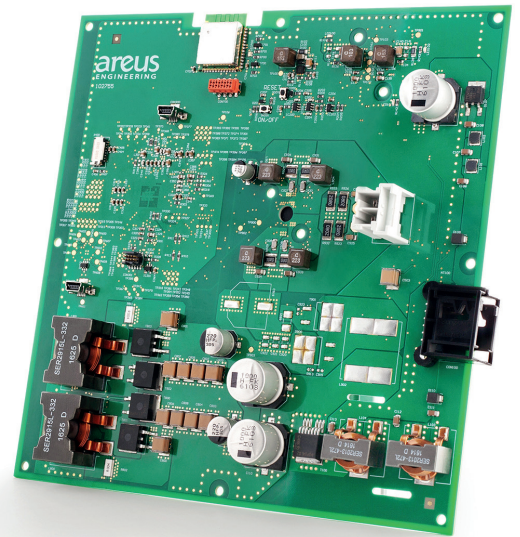
Emotional Engine Sound

Due to downsizing of modern combustion engines, the driving experience lacks more and more the emotional factor. The acoustic recognition value of a car – often an important customer request – is negatively affected thereby. This is why we at Areus Engineering have developed an active sound system which synthesizes, as a function of car specific data such as rpm and speed a sporty engine sound which is then rendered towards the outside of the car by a loudspeaker. That way the emotional experience of driving a powerful, sonorous sounding combustion engine is being preserved.

State of the art technology



In cooperation with STMicroelectronics we developed a fully integrated system around the microprocessor STA1079 out of the powerful Telemaco2 family, which provides for central controlling as well as for audio signal processing. The engine sounds created by the DSP are consecutively fed into the power amplifier FDA2100LV which then drives the loudspeaker with up to 120 Watts. The logic part of the system is powered by the L5963 switching voltage regulator from ST.



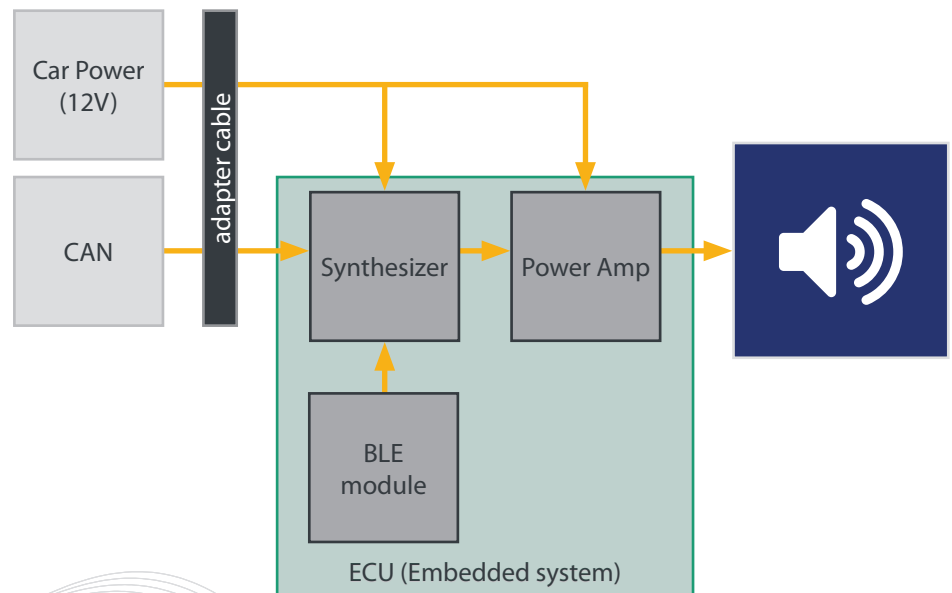
Your reliable full service partner

With our multidisciplinary teams of specialists we consolidate all added value at Areus, beginning with hard- and software development, sound design, loudspeakers and acoustics, up to series production of complete systems.

The result is a compact unit consisting of loudspeaker, enclosure and PCB including structural heatsink, which can be mounted easily inside a car.

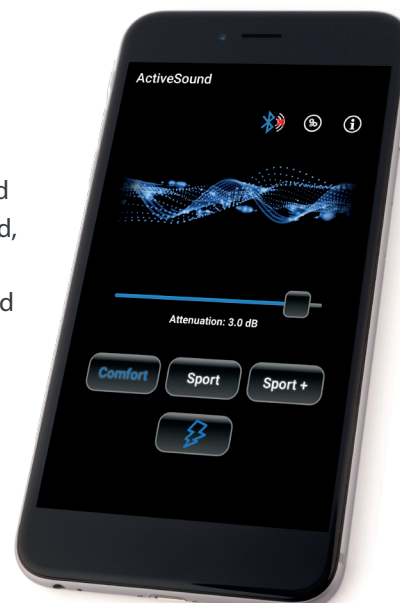
The ActiveSound Generator – audible innovation

The CAN signals as well as the supply voltage from the vehicle are routed onto the PCB by means of a custom made wiring harness. The relevant CAN messages are being filtered, processed and evaluated and then pass through complex algorithms. Based on these computations, the digital signal processor (DSP) generates lifelike engine sounds in real-time and routes them towards the integrated power amplifier. The power amp provides for the amplification of the signal together with the digital to analog conversion. A very long-stroke high-power loudspeaker finally emits deep, euphonic and rich motorsounds – just as a real V6, V8 or V12 engine.



Connectivity with your smartphone

By means of the Areus Bluetooth Low Energy module integrated on the PCB, together with a custom designed smartphone app, different sound presets can be recalled, the volume can be changed and miscellaneous information about both the vehicle and the ActiveSound system can be presented.





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