

USOUND TECHNOLOGY GmbH (AUSTRIA)

COMPANY

USound GmbH is a fast growing audio start-up, founded with the mission of developing and producing the most advanced audio systems for mobile applications based on MEMS technology. The technological platform developed by USound is enabling the production of a revolutionary generation of MEMS micro speakers that will be deployed in the world's top mobile applications.

USound is a Fabless company: process R&D and manufacturing operations are outsourced to world class industrial partners.

PHILOSOPHY

With the introduction of innovative MEMS technology USound is reinventing the audio industry and is setting new standards in term of Audio Quality and Low Power consumption.

We believe that our products will increase the effectiveness of our customer's products and maximize the degree of freedom of the end users. After all, the life soundtrack of each person should have a unique acoustic fingerprint.

We aim to reach market leadership of advanced acoustic solutions in the mobile communications and consumer electronics by developing revolutionary system solutions that augment and enhance the sound experience and create new ways to interact with sound.

USound is a system provider that works closely with its customers to overcome the challenges which raise from the integration of complex components in to even more complex systems. We are aware that the "sum of the parts does not equal the whole", we resist the temptation to oversimplify and brake down complex products into simple components.

TECHNOLOGY

Silicon is one of the most versatile materials available in terms of electrical and mechanical properties; the success of microelectronic CMOS and of MEMS devices in the recent years testify its importance in modern technology evolution.

The innovations in materials, silicon integration and packaging make it possible to produce a very new generation of MEMS acoustic transducers. Piezoelectric materials on silicon have been optimized in their properties and performances, combining linear response with high energy density; the integration in tridimensional MEMS architectures is the key to reach unprecedented manufacturing precision and repeatability for an electro mechanical audio device; modern semiconductors packaging solutions enable us new, very effective ways for interfacing complex microelectronic systems with the analog world.

USound is leading this technological convergence by designing novel audio smart systems that integrate electronics circuits (ASIC), MEMS micro speakers and passive components in one device with thin and compact form factors.

USound solutions

USound micro speakers are designed to fit into modern audio and communications products, they are available in several sizes and form factors and their performance can be precisely tuned to meet the most demanding requirements. They can be fitted inside ear molds, integrated into earpieces or fitted into speaker boxes.

Our products are delivered with integrated amplifiers, additional electronics can be added on customer demand; our team will help you in designing, and implementing the optimal design to meet your requirements.

APPLICATIONS:

- **MOBILE MULTIMEDIA**

USound is enabling a new paradigm for audio smart systems in portable devices.

SMARTPHONES USound MEMS micro speakers are smart components designed to fit seamlessly into Smartphone main boards, they are power management friendly and programmable for the best efficiency in a wide range of working conditions. The components can include audio amplifiers, audio codecs and passive components embedded into an acoustic package with complex 3D features; this allows for designing products that are thin, light, power efficient and smart in nature.

HEADPHONES USound is committed to improve the consumer experience by providing a better sound within a compact form factor. Our MEMS transducers are miniaturized at levels only reachable by the precision of silicon batch processing and microelectronics assembly. They fit well into the ear canal and show an intrinsically low heat dissipation. USound sub-miniature smart components are perfectly positioned to fit into the next generation smart headphones.

- **HEALTHCARE**

Helping people enjoy life by supporting the hearing sense with innovative healthcare solutions. USound sub-miniature speakers deliver an innovative technology to the market of hearing aids.

The acoustic performances are married with the intrinsic capability to interface to modern healthcare sensors monitoring for example blood parameters or movement information. Our offer include transducers and electronic components designed and developed at system level directly with the customer: the collaboration ranges from system definition to transducer design, development and prototyping to custom manufacturing.

- **INNOVATION**

We are exploring new frontiers to bring the audio consumer experience to the next level.

integration with smart Microphones MEMS Microphones have already changed the audio innovation landscape in portable devices. We imagine a future where speakers are digitally connected with microphones into smart audio systems. A further step toward audio augmented reality functionalities.

Acoustic Beamforming with MEMS Arrays Focusing sound into a specific area in space is a great challenge that can profit from the availability of a high number of miniaturized, integrated micro speakers. In the future, communication applications will allow consumers to enjoy the advantages of acoustic personal spaces.