Use case brief

Audio zoom and high-quality audio recordings using XENSIV™ MEMS microphones

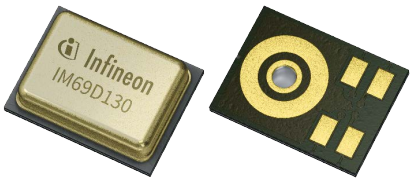
Audio capture so precise and high quality that you'll think it's live

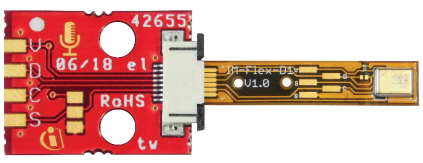
If you want to record audio in crystal clear quality, then the XENSIV™ MEMS microphone is the right choice for your application. Not only does it have ultra-low self-noise and very little distortion, but it also outperforms ECMs on virtually every metric such as size, robustness, temperature stability or drift over time. Because our high-performance MEMS microphones are well matched to each other, they are also very well suited for multi-microphone, that is microphone array, applications. Algorithms use data from such arrays to determine the source of the desired sound and 'zoom in' to it to help eliminate unwanted noises – this is very similar to the way humans use both ears to work out the location of a sound and track it if it moves. The performance of such beam forming algorithms is enhanced using well matched microphones.

The high signal to noise (SNR) ratio of our XENSIV™ MEMS microphones ensures that in audio recordings, only the desired sounds are present – without adding any hiss noise from the electric circuits. High SNR microphones also enable better capture of commands in voice user interfaces, allowing the user to give inputs to their devices even across rooms. Similarly, in a conference system, the speaker's voice can be focused on to help eliminate ambient noises in the room for clear voice pick-up.

Use case's benefits and product's for your application

- Highest SNR supporting beam forming to track and 'zoom in' on sound source
- Ultra-low self-noise and low distortion for crystal clear audio recordings
- High dynamic range
- Microphones are well matched to each other – suitable for arrays
- MEMS technology advantages over electret condenser microphones (ECMs)





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