



MP23ABS1 Analog MEMS microphone for connected devices

**Evaluation tools and software** 

## Audio acquisition evaluation tools

### Different solutions for audio data processing

#### X-Nucleo + Coupons



STM32 NUCLEO with

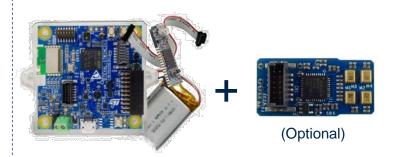
**EXPANSION** board

X-NUCLEO-AMICAM1

Daughterboard containing 4x MP23ABS1 STEVAL-MIC004V1

(Optional)

#### **STWIN**



**Development kit** STEVAL-STWINKT1 Microphone array expansion with 4x MP23ABS1
STEVAL-STWINMAV1

SensorTile.Box



Ready-to-use box kit with wireless IoT and wearable sensor platform STEVAL-MKSBOX1V1

Software package: STBLESensor GUI

**Software package**: X-CUBE-MEMSMIC1

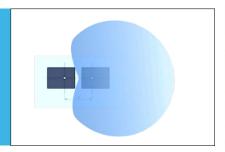


## Beamforming & source localization

## **Exploiting MEMS Microphones Array capability**

X-Nucleo + Coupon board (at least 2 microphones are needed)

**BEAMFORMING:** using a MEMS (omnidirectional) microphone array, it creates a virtual directional microphone





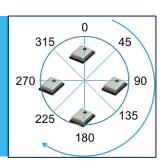




(Optional)

**SOUND SOURCE LOCALIZATION:** 

using a microphone array, it estimates the angle of arrival of audio signal



STM32 NUCLEO with EXPANSION board X-NUCLEO-AMICAM1

Daughterboard containing 4x MP23ABS1 STEVAL-MIC004V1

Software package: X-CUBE-MEMSMIC1

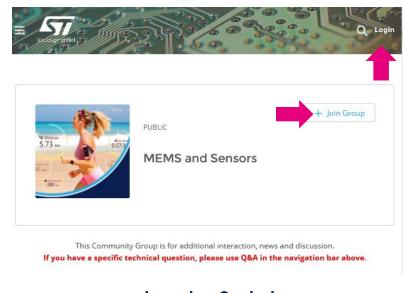


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MEMS and sensors General Q&A section



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