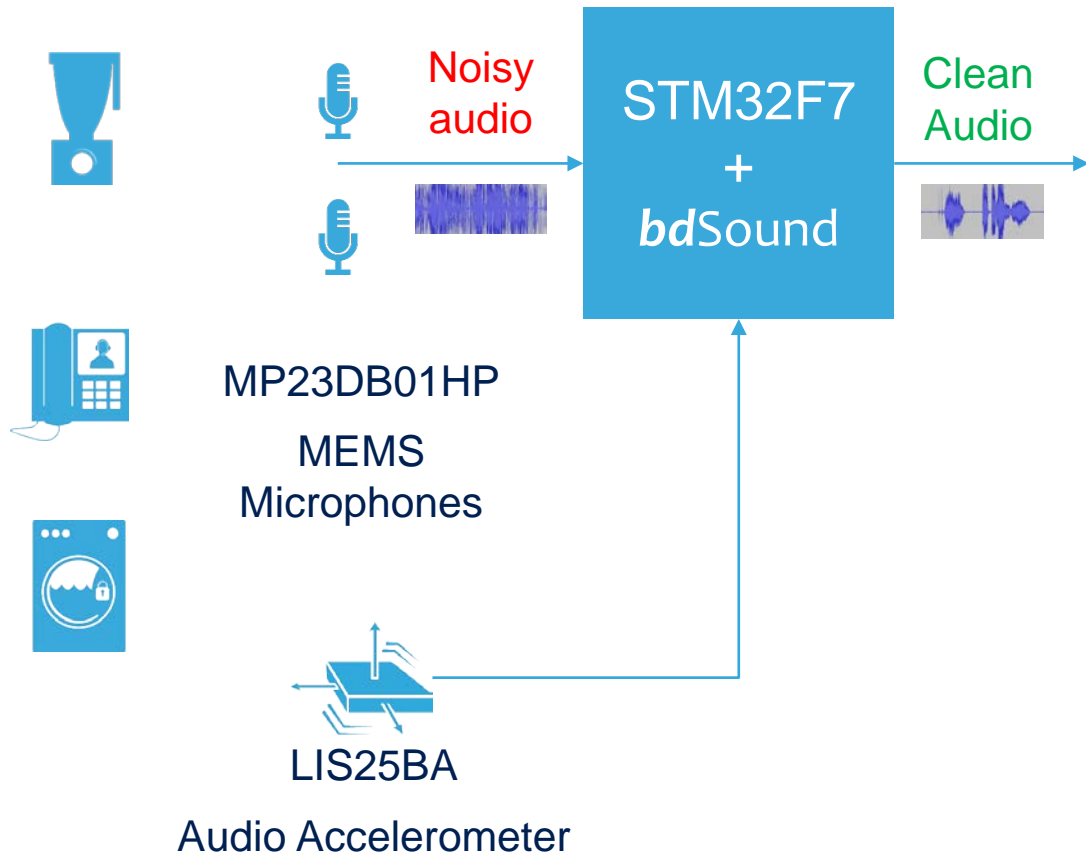


Sensor Fusion for Speech Enhancement



Improve Voice Assistants' Performance and Communications in Noisy Smart Things

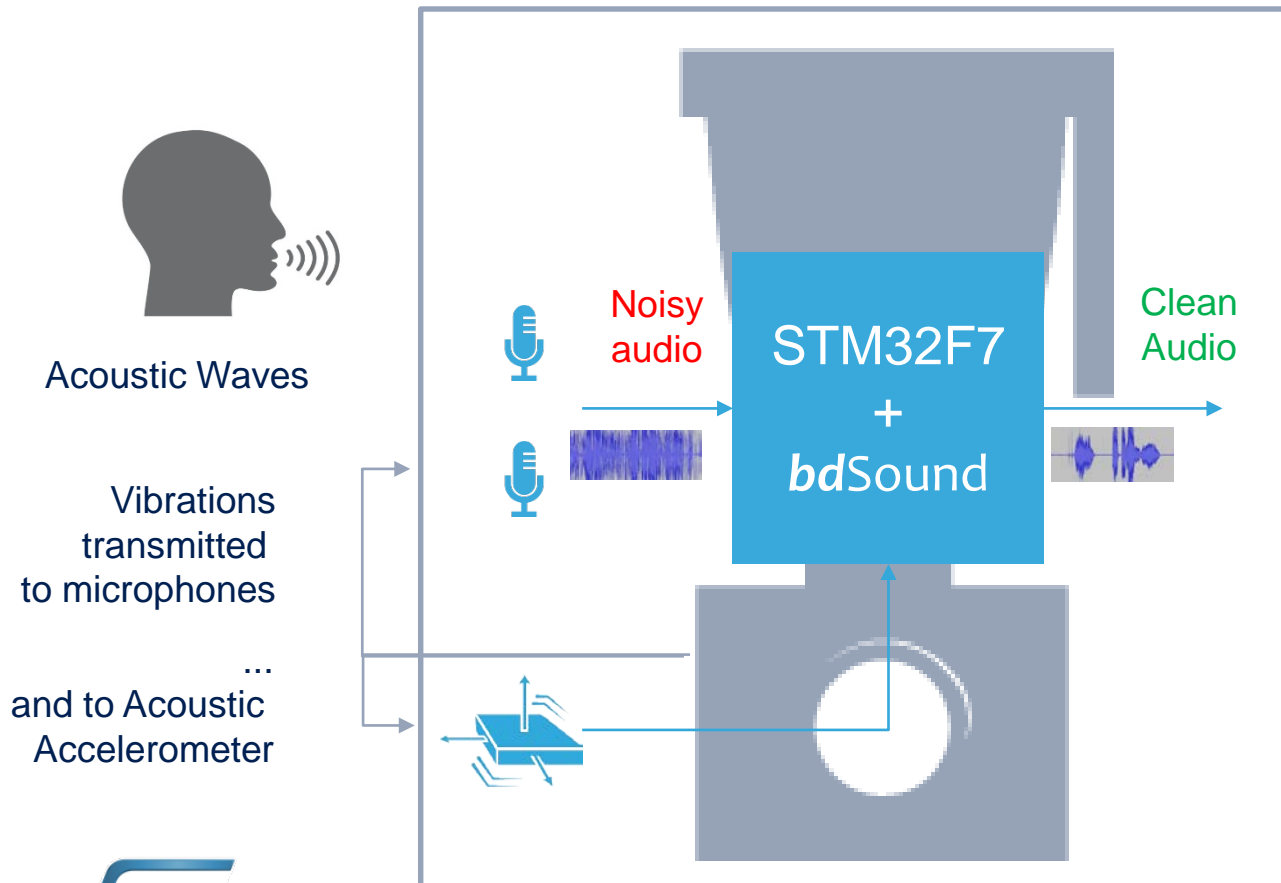
Proprietary Solutions to Enhance the Speech Signal Quality

Algorithms use unique Audio Accelerometer with TDM interface, Ultra Low Noise and High Bandwidth

Small Impact on Exterior Design

Enhanced Noise Reduction

Improve voice assistants performance and communications in noisy smart things

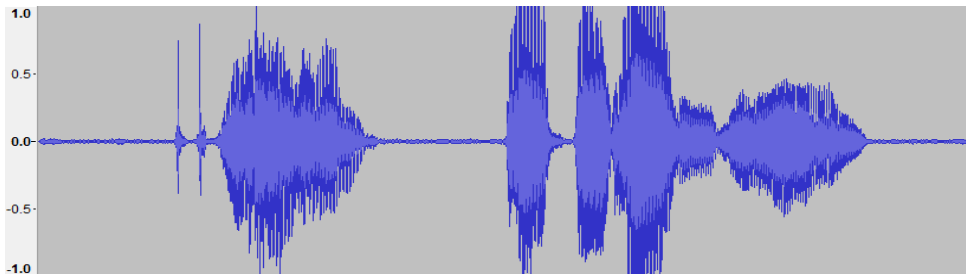
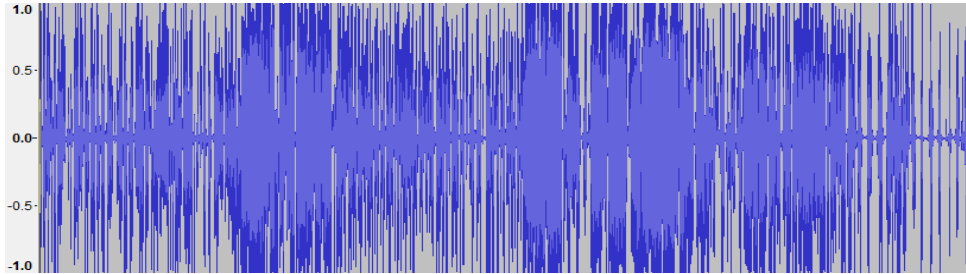


- Vibrational-Acoustic sensors fusion, with bdSound proprietary algorithms
- Enables advanced noise reduction for:
 - Voice commands recognition
 - Voice in communication applications



Fusion Sensing for Speech Enhancement

Proprietary solutions to enhance the speech signal quality



Collecting data from different
sensors boosts noise reduction
effectiveness without adding artifacts

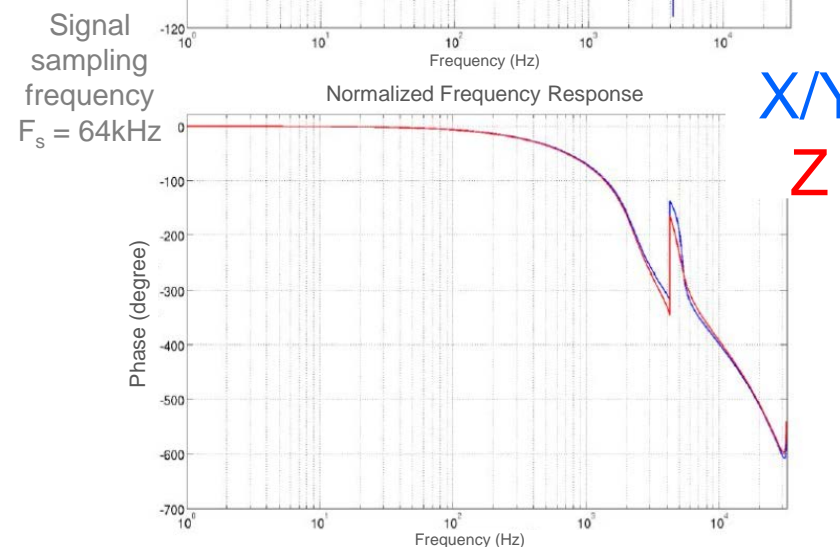
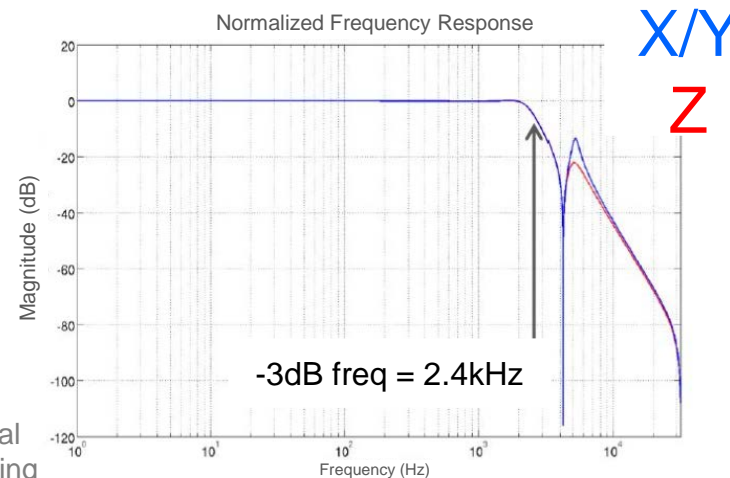


LIS25BA for Speech Processing

Algorithms use unique Audio Accelerometer with TDM interface, ultra low noise and high bandwidth

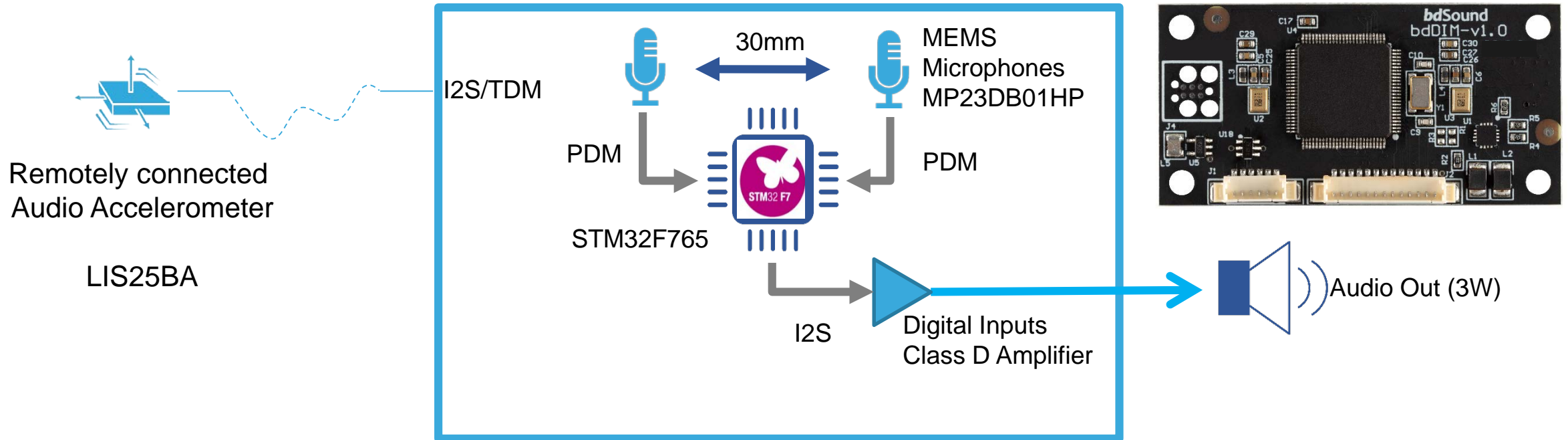


- Full Scale: ± 3.85 g
- TDM Time-Division Multiplexing slave interface
- Low noise: $1 \text{ mg}_{\text{rms}}$ max
- (X-axis, Y-axis, FS= ± 3.85 g, BW = 2340 Hz)
- Signal bandwidth 2340 Hz
- High, flat bandwidth
- 16-bit data output
- Supply voltage: 1.71 to 1.99 V
- Small and thinnest form factor: LGA-14 **2.5x2.5x0.86 mm** package



SMALL IMPACT ON DESIGN

Small impact on exterior design of the final device



- Small size PCB
- Microphone and accelerometers are mounted within the smart object or communication device