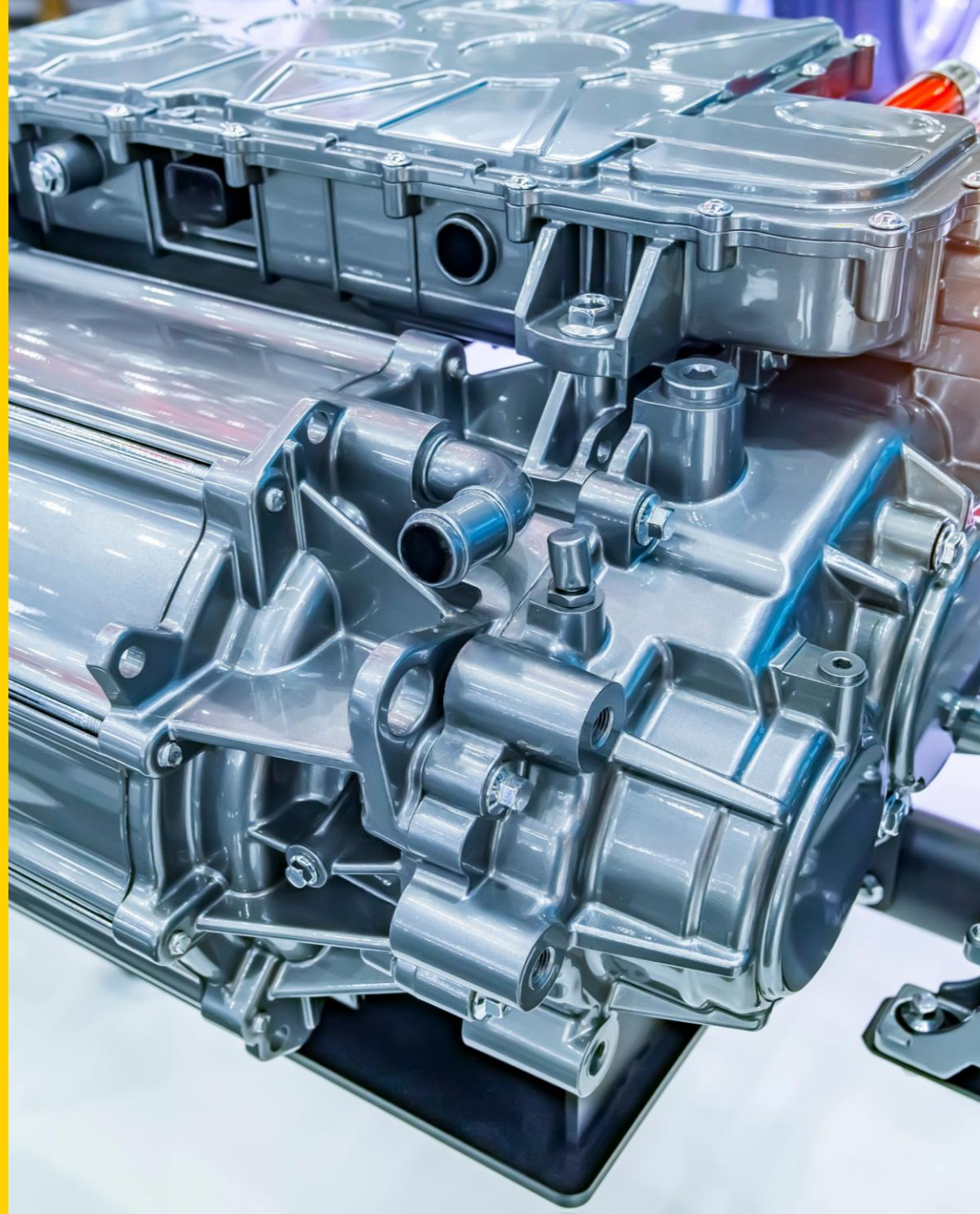




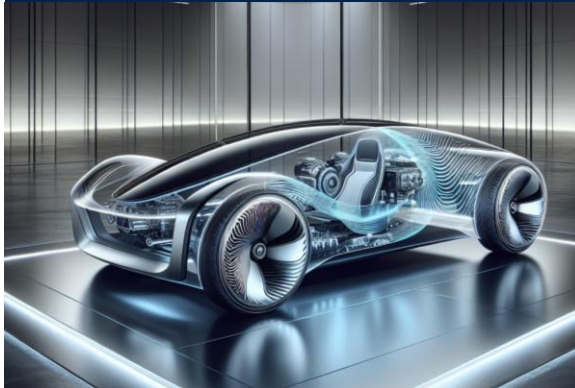
IIS3DWBG1

Capture subtle high frequency vibrations in harsh environment



A sensor which helps predict the future

Vibration monitoring in EV



Predict failure in traction inverter which is the heart of electric vehicles

Predictive maintenance



Identify wearing and anomalies early avoiding downtime with proactive maintenance

Condition monitoring

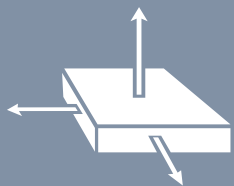


Monitor industrial equipment for vibration and shock

Addressing a plethora of use cases with a single sensing solution

Why use IIS3DWBG1?

IIS3DWBG1 delivers robust, reliable sensing to help ensure every subtle vibration is detected



Accurate vibration sensing made easy & affordable

3-axis digital, wide bandwidth & flat frequency response sensor makes vibration monitoring plug & play



Delivers cleaner, more reliable sensing data

The low-noise performance improves signal quality, helping distinguish earlier real signature of wearing



Operates reliably in demanding conditions

Operating up to 125°C and guaranteed for Long-term market availability as needed for harsh industrial applications

IIS3DWBG1 overview

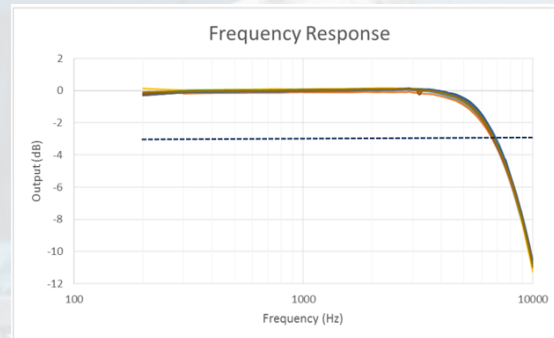
Wide bandwidth, low-noise 3-axis digital vibration sensor for harsh environment



LGA 14 Lead
2.5x 3.0 x 0.83 mm

Performance and ease of use

- FS: $\pm 2\text{ g}$ / $\pm 4\text{ g}$ / $\pm 8\text{ g}$ / $\pm 16\text{ g}$
- 6.4kHz bandwidth (-3dB) with flat frequency response & anti-aliasing all built in, plug and play
- Low Noise: down to $60\mu\text{g}/\sqrt{\text{Hz}}$



Native digital

- Embedded large FIFO (3kbyte)
- Embedded low pass and high pass filters with selectable cutoff frequency
- ODR 26.6 kHz
- SPI interface

Low current consumption

- 1.1 mA in HP @ 26.6 kHz ODR
- FIFO, interrupt, smart wake up to reduce system level power consumption

Extended operating conditions

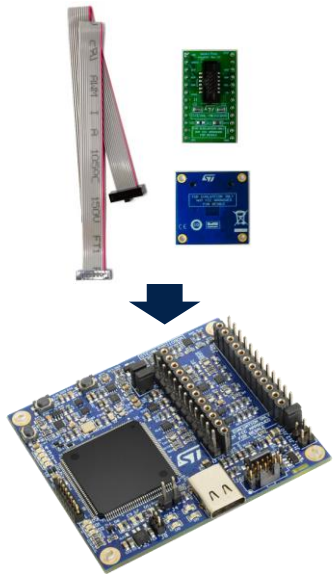
- Extended operating temperature range: -40 to $+125\text{ }^{\circ}\text{C}$
- Supply voltage: 2.1 to 3.6 V with independent I/O supply

Ecosystem for IIS3DWBG1

Hardware

Evaluate

STEVAL-MKI252KA



STEVAL-MKI109D

Develop



X-NUCLEO-IKS5A1

Prototype

STEVAL-MKI252KA



STEVAL-STWINBX1
STEVAL-MKBOXPRO

Software

Desktop software solution



MEMS
Studio

Mobile application



STBLESensor



Ready-to-go application examples



X-CUBE-MEMS1
FP-SNS-STBOX1
FP-SNS-DATALOG2

A vibration sensor designed for performance, durability, and longevity

Capture even subtle vibration events thanks to wide bandwidth and low noise

Accurate vibration sensing with wide bandwidth and low noise
Its 3-axis digital, 6.5 kHz wide bandwidth, and flat frequency response enable reliable vibration monitoring

Designed for harsh industrial environment
It supports reliable operation up to 125°C, making it suitable for demanding applications

Long-term component availability
ST offers long-term availability, aligned with the needs of the industrial product lifecycle

Our technology starts with You



Find out more at www.st.com

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