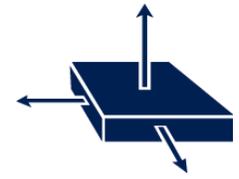**LONGEVITY 10 YEARS COMMITMENT**

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IIS2ICLX
High-accuracy inclinometer

Advantages and benefits

Inclinometers in industrial applications
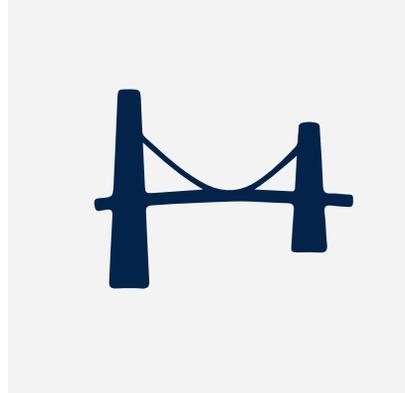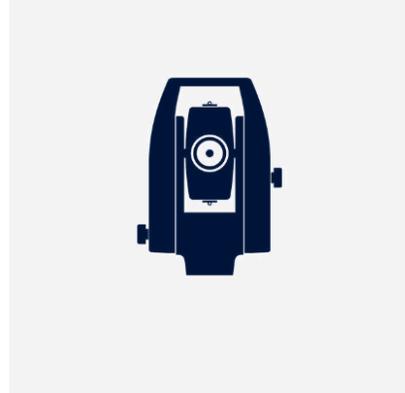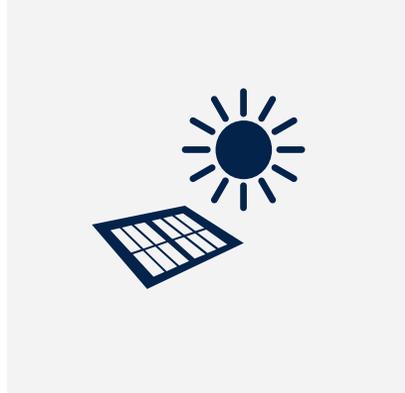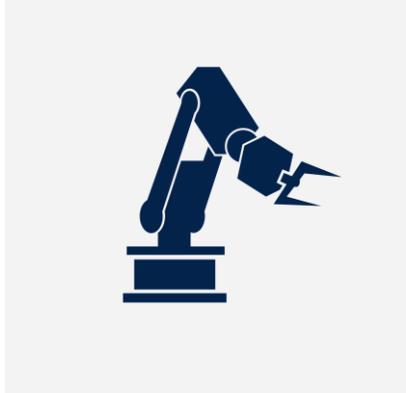
| Pointing, levelling and stabilization	Robotics and IIoT	Inclinometers for industrial vehicle	Equipment installation and monitoring	Leveling instruments	Structural health monitoring
Antenna pointing, platform leveling and stabilization	Robotics and Industrial automation	Industrial vehicles, forklifts and construction machines	Installation and monitoring of equipment, trackers for solar panels	Precise leveling instruments	Buildings, towers and infrastructures condition monitoring
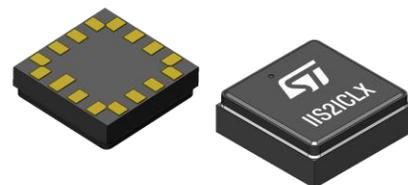
**IIS2ICLX**

2-axis digital inclinometer
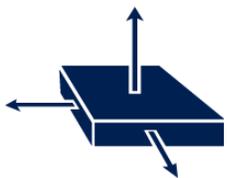
IIS2ICLX
High-accuracy 2-axis digital inclinometer

**Ultra-high-accuracy, high-resolution, low-power,
2-axis digital inclinometer with embedded Machine Learning Core**

Key Features

- 2-axis, digital plug & play inclinometer
- Top notch performance: resolution, accuracy, stability over temperature and time
- Accuracy better than 0.5° over full temperature range and over time
- Ultra-low noise (15 µg/√Hz)
- Low power
- Programmable Machine Learning Core & Finite State Machines to integrate AI algorithms and reduce power consumption at system level
- Extended operating temperature range: from -40 to +105 °C

Parameter	Value
N. of axes	**2-axis**
Full Scale [g]	± 0.5/1.0/2.0/3.0
Output i/f	Digital I2C/SPI
Bandwidth (-3dB) [Hz]	Programmable, up to 260
ODR [Hz]	2.5 to 833
Noise Density [µg/√Hz]	**15**
Offset change vs Temp [mg/°C]	**<0.075**
Current consumption [mA]	0.42
Features	**MLC (Machine Learning Core)** FSM (Finite State Machine) Sensor HUB FIFO (3kbyte), Interrupts Embedded Temp. Sensor
Operating Temp [°C]	**-40 ; +105**
Operating Voltage [V]	1.71 ÷ 3.6
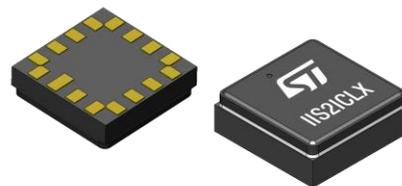
Ceramic Cavity LGA 5x5x1.7 16L

Inclinometers for Structural Health Monitoring

Measuring inclination and low-frequency, low-level vibrations with high resolution and repeatability
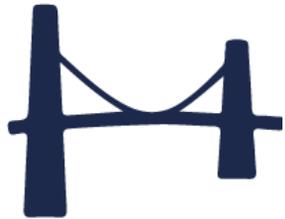
Buildings

Towers

Monuments, geophysics civil structures
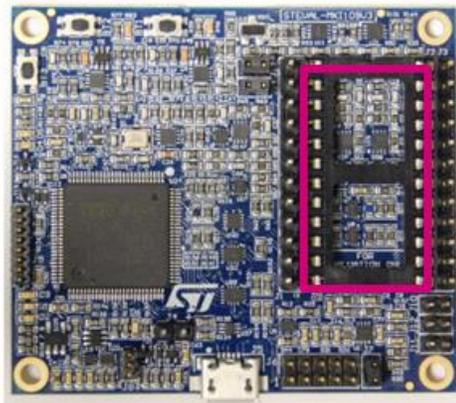
Dams, tunnels

Roads & Bridges

Evaluation Tools and GUI
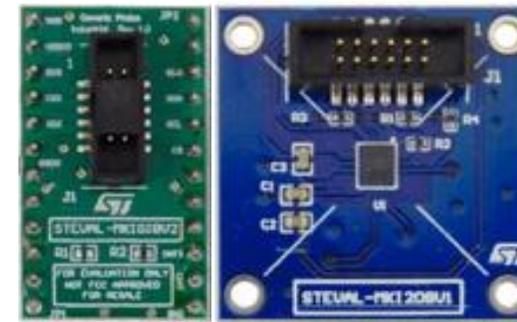
In-depth evaluation of sensor performance

A powerful development tool and GUI to capture and process data and assess the performance of any sensor in our portfolio

Professional MEMS motherboard	Evaluation board (adapter)

Professional MEMS motherboard
STEVAL-MKI109V3

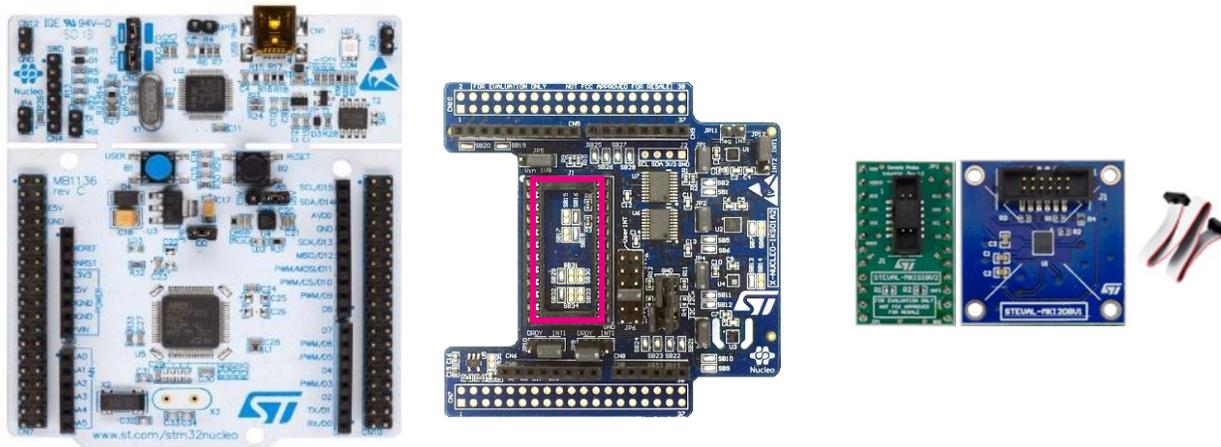| Device	Adapter Order Code
IIS2ICLX	STEVAL-MKI209V1K

UNICO

Software package:
UNICO-GUI

Linux → STSW-MKI109L,
Mac OS X → STSW-MKI109M,
Windows → STSW-MKI109W

STM32 Nucleo with Expansion board and Unicleo GUI

Software package:
UNICLEO GUI with X-CUBE-MEMS1

STM32 NUCLEO with X-NUCLEO EXPANSION
X-NUCLEO-IKS02A1
and optional dedicated adapter board

Sense

Connect

Power
Drive

Move
Actuate

Translate

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Thank you

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