MICRO-ELECTROMECHANICAL SENSING SYSTEMS & PROCESSORS

HARDWARE, CIRCUITS, & SENSORS

Micro-electromechanical sensors for the detection of low magnetic fields and radiofrequencies using less than 10 nW of power.

TECHNOLOGY TYPE
Biosensors
MEMS
Internet of Things

STAGE OF DEVELOPMENT
- Proof of concept established through performance verification of initial prototype.
- Ongoing research to optimize the sensor.

IP PROTECTION
U.S. Utility Patent Pending

- Very Low Power Microelectromechanical Devices for the Internet of Everything
US20170148592A1

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TECHNOLOGY SUMMARY

Sensors based on micro-mechanical devices typically have small stand-by power consumption, which makes them ideal for use in the Internet of Things, where a multitude of sensors are required to monitor the status of every system. These sensors continue to decrease in size, use less energy, and cost less.

The Micro-electromechanical Sensing Systems & Processors sense low magnetic and electric fields, as well as small vibrations. The devices can also perform amplification, logical operations, spectral analysis, rectification, and detection of radiofrequency signals using less than 10 nW of power. Due to their low power usage and high sensitivity, these sensors are well-suited for remote sensing and implantable medical device applications.

FEATURES AND BENEFITS
- Decreases power usage.
- Improves sensitivity for magnetic fields and radiofrequency signals.
- Increases resolution.
- Demonstrates potential for use in pacemakers, brain mapping, security, and detection systems.

INVENTOR PROFILE
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