

Smart Building Acoustic Sensor Market 2025-2029: Unveiling Growth Developments with the Latest Updates

The Business Research Company's Smart Building Acoustic Sensor Global Market Report 2025 – Market Size, Trends, And Forecast 2025-2034

LONDON, GREATER LONDON, UNITED KINGDOM, October 6, 2025

/EINPresswire.com/ -- What Is The Expected Cagr For The [Smart Building Acoustic Sensor Market](#) Through 2025?

The market for acoustic sensors in smart buildings has seen rapid expansion in recent years. Projections indicate that the sector, which was valued at \$1.37 billion in 2024, will rise to \$1.60 billion in 2025, exhibiting a compound annual growth rate (CAGR) of 16.8%. Factors contributing



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to this notable growth during the historical period include the heightened demand for wireless, energy-efficient devices, the surge in demand for surface acoustic wave (SAW) temperature sensors, increased environmental awareness driving the push for enhanced monitoring systems, the integration of artificial intelligence (AI) in acoustic wave sensor technology, along with the rising implementation of sophisticated sensing technologies for detecting vibration.

In the coming years, the market size for smart building

acoustic sensors is anticipated to see swift expansion. It's projected to reach \$2.94 billion in 2029, with a compounded annual growth rate of 16.5%. The growth during the forecast period is mainly due to the expansion of smart cities, increased use of AI-powered acoustic sensors, escalating noise pollution, mounting pressure from governments towards noise regulation, and a rise in demand for real-time infrastructure surveillance. Noteworthy trends for the forecast period comprise of incorporation with AI-guided anomaly detection, embracement of cloud-based acoustic analysis platforms, advancement of self-calibrating sensor systems, the application of acoustic sensors for non-contact occupant interaction, and amalgamation with

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blockchain-facilitated building management systems.

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What Are The Driving Factors Impacting The Smart Building Acoustic Sensor Market?

The proliferation of smart cities is anticipated to fuel the expansion of the smart building acoustic sensor market. Smart cities denote urban locales employing a range of digital tools and sensors to accumulate data which facilitates the efficient management of resources, assets, and services. The surge in smart cities stems from escalating global urbanization and government funding for digital infrastructure aimed at enhancing urban living standards and operational efficiency. The augmenting establishment of smart cities is primarily catalyzed by rapid urbanization, as urban habitation hosts over half of the world's population, generating demand for intelligent infrastructure solutions. Smart city expansion ups the demand for acoustic sensors, vital for noise supervision, environmental caliber assessment, and crafting healthier urban life through real-time sound level control. For example, come April 2023, declared the International Institute for Management Development, a business school located in Switzerland, the tally of smart cities around the globe rose from 118 cities in 2021 to 141 cities in 2023. Consequently, the smart city explosion is propelling the growth of the smart building acoustic sensor market.

Which Players Dominate The Smart Building Acoustic Sensor Industry Landscape?

Major players in the Smart Building Acoustic Sensor Global Market Report 2025 include:

- Robert Bosch GmbH
- Siemens AG
- Cisco Systems Inc
- Schneider Electric SE
- Honeywell International Inc
- ABB Ltd
- Johnson Controls International plc
- Texas Instruments Incorporated
- Infineon Technologies AG
- STMicroelectronics N.V.

What Are The Prominent Trends In The Smart Building Acoustic Sensor Market?

Leading firms in the smart building acoustic sensor market are intensifying their efforts to create innovative products like ultra-low-power-operated sensor systems. These systems play a significant role in enhancing energy efficiency and facilitating effortless integration with smart building automation solutions. Ultra-low-power-operated sensor systems are a type of acoustic sensor that consumes minimal energy while consistently monitoring sound levels. They contribute to extending the life of devices, reducing operational costs and promoting energy-efficient smart building automation. For instance, Infineon Technologies, a semiconductor company from Germany, unveiled the battery-powered Smart Alarm System (SAS) in June 2022.

This advanced system, equipped with artificial intelligence or machine learning (AI or ML)-based acoustic event detection and sensor fusion, uses a high signal-to-noise ratio MEMS microphone, a digital pressure sensor, and a PSoC controller to achieve high detection precision with minimal power usage. The AI/ML sensor fusion algorithm accurately distinguishes between different sounds and pressure events, thus significantly lowering false alarms caused by ambient noise. Its compact design provides superior performance and extended battery life compared to conventional acoustic-only alarm systems, making it ideal for smart buildings, homes, and IoT applications.

Global [Smart Building Acoustic Sensor Market Segmentation](#) By Type, Application, And Region

The smart building acoustic sensor market covered in this report is segmented

- 1) By Product Type: Wired Acoustic Sensors, Wireless Acoustic Sensors
- 2) By Distribution Channel: Direct Sales, Distributors Or Wholesalers, Online Retail
- 3) By Application: Noise Monitoring, Security And Surveillance, Heating, Ventilation, And Air Conditioning (HVAC) System Monitoring, Occupancy Detection, Other Applications
- 4) By End-User: Commercial Buildings, Residential Buildings, Industrial Facilities, Educational Institutions, Healthcare Facilities, Other End-Users

Subsegments:

- 1) By Wired Acoustic Sensors: Analog Wired Sensors, Digital Wired Sensors, Networked (Ethernet Or PoE) Wired Sensors
- 2) By Wireless Acoustic Sensors: Wireless Fidelity (Wi-Fi) Enabled Sensors, Bluetooth-Enabled Sensors, Zigbee Or Z-Wave Sensors, Long Range Wide Area Network (LoRaWAN) Or Narrowband Internet of Things (NB-IoT) Sensors

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<https://www.thebusinessresearchcompany.com/report/smart-building-acoustic-sensor-global-market-report>

Which Region Holds The Largest Market Share In The Smart Building Acoustic Sensor Market?

In 2024, North America held the leading position in the smart building acoustic sensor market. However, Asia-Pacific is anticipated to exhibit the fastest growth in the ensuing years. The report comprehensively covers various regions including Asia-Pacific, Western Europe, Eastern Europe, North America, South America, Middle East and Africa.

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