

# **Sound Sensors Market Forecasts to 2030 – Global Analysis By Type (Microphones, Acoustic Wave Sensors, Ultrasonic Transducers, Vibration Sensors, Piezoelectric Sensors, MEMS Microphones, and Other Types), Sensing Technology, Technology, Application, End User and By Geography**

<https://marketpublishers.com/r/SEB3C7F70F56EN.html>

Date: March 2025

Pages: 150

Price: US\$ 4,150.00 (Single User License)

ID: SEB3C7F70F56EN

## **Abstracts**

According to Statistics MRC, the Global Sound Sensors Market is accounted for \$1630.17 million in 2024 and is expected to reach \$2460.20 million by 2030 growing at a CAGR of 7.1% during the forecast period. Sound sensors are devices that detect sound waves or vibrations and convert them into electrical signals for analysis or processing. These sensors can be used to measure sound intensity, frequency, and direction, and are commonly found in applications such as microphones, noise monitoring systems, and ultrasonic sensors. Sound sensors are crucial in a variety of industries enabling functionalities like voice recognition, noise control, and object detection in smart systems.

According to recent industry data, over 65% of German companies have already implemented Industry 4.0 practices, with another 25% planning to follow suit.

Market Dynamics:

Driver:

Growing demand for consumer electronics

Sound sensors are becoming more and more necessary in products like wearables,

smartphones, and home automation systems as customer preferences move toward more sophisticated and intelligent gadgets. Voice recognition, noise suppression, and other audio capabilities that improve user experience are made possible by these sensors. The need for sound sensors is also being fueled by the growing popularity of voice-activated assistants and smart home appliances. A smooth and engaging user interface is made possible by the incorporation of sound sensors into a variety of consumer electronics.

#### Restraint:

##### Data privacy and security concerns

Sound sensors often collect and transmit sensitive audio data, raising potential risks of data breaches and unauthorized access. With the increasing use of sound sensors in smart devices and home automation, the potential for cyber-attacks and privacy infringements grows. Additionally, the lack of robust security protocols and regulations for sound sensor data exacerbates these concerns. Consumers are becoming more aware of data privacy issues, leading to hesitation in adopting sound sensor-enabled devices. As a result, addressing data privacy and security is crucial for the sustained growth of the sound sensors market.

#### Opportunity:

##### Rising noise pollution awareness

Urbanization and industrialization have led to increased noise levels, adversely affecting public health and well-being. Sound sensors can monitor and measure noise levels, providing valuable data for noise pollution management. Governments and environmental agencies are increasingly focusing on noise pollution control, driving the demand for sound sensors. Additionally, sound sensors are being integrated into smart city projects to monitor and mitigate noise pollution. This growing awareness and regulatory focus on noise pollution create substantial market opportunities for sound sensors.

#### Threat:

##### Limited awareness in developing regions

The expansion of the market is seriously threatened by the low awareness and

acceptance of sound sensors in emerging nations. The adoption of sophisticated sensor technology, such as sound sensors, is still in its infancy in many developing nations. Market penetration is hampered by ignorance about the uses and advantages of sound sensors. The use of sound sensors is further hampered in these areas by a lack of infrastructure and budgetary limitations. To overcome this obstacle, it is crucial to inform stakeholders and prospective consumers about the benefits of sound sensors. Consequently, the market is threatened by emerging countries' sluggish adoption of sound sensor technology.

### Covid-19 Impact

The Covid-19 pandemic has had a mixed impact on the sound sensors market. As individuals grew accustomed to working and playing remotely, there was a greater need for consumer electronics and smart gadgets with sound sensors. Sound sensor production was impacted by manufacturing delays and supply chain interruptions. As a result of the pandemic's increased focus on safety and health, sound sensors have been developed for use in contactless interfaces and health monitoring, among other uses. As economies stabilize, the market is anticipated to rebound and expand despite early hurdles.

The microphones segment is expected to be the largest during the forecast period

The microphones segment is expected to account for the largest market share during the forecast period, due to the widespread adoption of microphones in various consumer electronics. Additionally, the integration of advanced microphone technologies in hearing aids and medical devices further drives market growth. The increasing popularity of video conferencing and virtual meetings also boosts the demand for high-quality microphones. Technological advancements, such as noise-canceling and beamforming microphones, enhance user experience and contribute to market expansion.

The security & surveillance segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the security & surveillance segment is predicted to witness the highest growth rate, due to the increasing use of sound sensors in security systems. The rise in crime rates and security concerns drives the demand for advanced surveillance solutions, including sound sensor-enabled devices. Additionally, the integration of sound sensors with artificial intelligence (AI) and machine learning (ML)

technologies improves the accuracy and efficiency of security systems. The growing adoption of smart city projects and public safety initiatives further supports market growth.

Region with largest share:

During the forecast period, Asia Pacific region is expected to hold the largest market share, due to rapid growth of the consumer electronics industry. Countries like China, Japan, and South Korea are major hubs for electronics manufacturing, driving the demand for sound sensors. Additionally, the increasing adoption of smart home devices and voice-activated assistants in the region contributes to market growth. Government initiatives and investments in smart city projects also boost the demand for sound sensors. The region's large population and rising disposable incomes further support the adoption of advanced consumer electronics.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, owing to the growing adoption of advanced technologies. The region's strong focus on innovation and development of smart devices drives the demand for sound sensors. Additionally, the increasing awareness of noise pollution and implementation of regulatory measures boost market growth. The presence of major technology companies and research institutions in North America further supports the adoption of sound sensors.

Key players in the market

Some of the key players profiled in the Sound Sensors Market include Knowles Corporation, Bose Corporation, STMicroelectronics, Broadcom Inc., Cirrus Logic, Toshiba Corporation, Analog Devices, Inc., Microchip Technology Inc., Texas Instruments, Panasonic Corporation, Samsung Electronics, Honeywell International Inc., Infineon Technologies, Vesper Technologies, and Micro-Epsilon.

Key Developments:

In February 2025, Samsung Electronics announced Digital Key compatibility with select Volvo Cars<sup>1</sup> and Polestar<sup>2</sup> vehicles through Samsung Wallet, offering more drivers a seamless way to use their Galaxy smartphone to unlock, lock and start their vehicle.

In June 2024, Knowles Corporation and RF products, announced a collaboration with Audiido™, a pioneer in personalized sound optimization technology. Knowles balanced armature (BA) drivers and Audiido's sound personalization technology integrate seamlessly to enable manufacturers of over-the-counter (OTC).

#### Types Covered:

Microphones

Acoustic Wave Sensors

Ultrasonic Transducers

Vibration Sensors

Piezoelectric Sensors

MEMS Microphones

Other Types

#### Sensing Technologies Covered:

Optical Sensing

Capacitive Sensing

Laser Doppler Vibrometry

#### Technologies Covered:

Digital Sound Sensors

Analog Sound Sensors

Bluetooth-enabled Sound Sensors

Wireless Sound Sensors

Other Technologies

Applications Covered:

Automotive

Consumer Electronics

Healthcare

Environmental Monitoring

Security & Surveillance

Smart Homes

Other Applications

End Users Covered:

Commercial

Industrial

Government & Defense

Residential

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2022, 2023, 2024, 2026, and 2030
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

#### Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

#### Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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