Drone-Based Urban Air Quality Sensor Market Set to Reach $2.57 Billion by 2029

The Business Research Company's Drone-Based Urban Air Quality Sensor Global Market Report 2025 – Market Size, Trends, And Global Forecast 2025-2034

LONDON, GREATER LONDON, UNITED KINGDOM, September 29, 2025 /EINPresswire.com/ -- What Is The Expected Cagr For The Drone-Based Urban Air Quality Sensor Market Through 2025?

In recent times, there has been a swift increase in the size of the drone-based urban air quality sensor market. It is projected to expand from $1.16 billion in 2024, reaching $1.36 billion in 2025, reflecting a compound annual growth rate (CAGR) of 17.6%. Factors contributing to this growth during the historic period include an upsurge in urban air pollution events, stronger regulatory focus on environmental monitoring, and expanding use of drones for environmental appraisal. Additionally, the enlargement of government initiatives for pollution management and heightened public consciousness about air quality matters have also played a role.

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In the upcoming years, the urban air quality sensor market, which is based on drones, is anticipated to expand robustly. By 2029, the market is projected to increase to $2.57 billion, with a compound annual growth rate (CAGR) of 17.2%. The expansion during the forecast period is due to the escalating demand for immediate air quality information in urban areas, the rise in smart city infrastructure investments, heightened attention on public health risk prevention, increase in drone usage for environmental regulation, and the growing acceptance of beyond visual line of sight operations. The forecast period is set to experience significant trends, including drone sensor miniaturization, multi-sensor payload developments, the adoption of cloud-based platform technologies, progressing analytics integration, and advancements in battery and propulsion systems.

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What Are The Key Factors Driving Growth In The Drone-Based Urban Air Quality Sensor Market?
The escalation of air pollution levels is anticipated to stimulate the expansion of the urban air quality sensor market that relies on drones. The term air pollution is used to describe the existence of damaging elements in the atmosphere like gases, particulate matter, or biological molecules. These harmful substances can negatively affect humans, the environment, and the climate. The main cause for this increase in air pollution is vehicular emissions which let out substantial amounts of nitrogen oxides, carbon dioxide, and particulate matter into the atmosphere. Sensors for urban air quality based in drones assist in curtailing air pollution by facilitating live tracking of deleterious emissions throughout cities. They boost environmental management by pinpointing areas with high pollution, refining the accuracy of data collected, and aiding in prompt interventions for a healthier urban lifestyle. For example, the United States Environmental Protection Agency, a US government agency, reported in May 2025 that around 66 million tons of pollutants were discharged into the atmosphere in the United States in 2023. Which is why, the rising levels of air pollution are contributing to the growth of the market for urban air quality sensors based on drones.

What Are The Top Players Operating In The Drone-Based Urban Air Quality Sensor Market?
Major players in the Drone-Based Urban Air Quality Sensor Global Market Report 2025 include:
• ZainTech.
• Met One Instruments Inc.
• Volatus Aerospace Inc.
• Aeromon Oy
• Aeroqual Limited
• Percepto Ltd.
• Soarability Pte. Ltd.
• SoftBlue S.A.
• Oizom Instruments Pvt. Ltd.
• Bridger Photonics Inc.

What Are The Prominent Trends In The Drone-Based Urban Air Quality Sensor Market?
Leading entities in the drone-based urban air quality sensor arena are prioritizing the creation of advanced technological solutions, such as AI-powered autonomous drone systems, geared towards enhancing the precision in detecting emissions as well as their real-time surveillance. Autonomous drone systems that leverage artificial intelligence are capable of operating, navigating, and executing tasks independently from human control. For example, an autonomous inspection and monitoring company based in Israel, Percepto Ltd., rolled out an artificially intelligent emission detector specifically designed for remote, drone-based methane tracking in June 2025. This groundbreaking solution automates Optical Gas Imaging (OGI) inspections by using autonomous drones armed with AI algorithms. These algorithms identify and mark methane emissions immediately, facilitating large-scale, frequent monitoring

throughout vast regions without the need for additional field personnel. The system provides accurate alerts inclusive of geolocation, timestamps, and environmental data. This aids operators in quicker response times, elevates safety measures, reduces operational expenses, and guarantees alignment with forthoming regulations on methane by the Environmental Protection Agency (EPA).

Comprehensive Segment-Wise Insights Into The Drone-Based Urban Air Quality Sensor Market
The drone-based urban air quality sensor market covered in this report is segmented

1) By Product Type: Fixed-Wing Drones, Rotary-Wing Drones, Hybrid Drones
2) By Sensor Type: Gas Sensors, Particulate Matter Sensors, Multi-Sensor Systems, Other Sensor Types
3) By Application: Air Pollution Monitoring, Emission Source Detection, Industrial Monitoring, Research And Academic, Other Applications
4) By End-User: Government And Municipalities, Environmental Agencies, Industrial, Research Institutes, Other End-Users

Subsegments:
1) By Fixed-Wing Drones: Small Fixed-Wing Drones, Medium Fixed-Wing Drones, Large Fixed-Wing Drones, Solar-Powered Fixed-Wing Drones
2) By Rotary-Wing Drones: Single-Rotor Drones, Multi-Rotor Drones, Coaxial Rotor Drones, Tilt-Rotor Drones
3) By Hybrid Drones: Vertical Take-Off And Landing (VTOL) Hybrid Drones, Fixed-Wing + Multi-Rotor Hybrid Drones, Tilt-Wing Hybrid Drones, Convertible Rotor Hybrid Drones

View the full drone-based urban air quality sensor market report:
https://www.thebusinessresearchcompany.com/report/drone-based-urban-air-quality-sensor-global-market-report

Global Drone-Based Urban Air Quality Sensor Market - Regional Insights
In the 2025 global market report on drone-based urban air quality sensors, North America emerged as the leading region for the year 2024. It's anticipated that Asia-Pacific will hold the mantle for the most rapidly developing region within the forecast phase. Regions considered in this study included Asia-Pacific, Western Europe, Eastern Europe, North America, South America, the Middle East and Africa.

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