IoT in Transportation Market to Reach $495.57 Bn by 2030, Driven by Connected Mobility Demand

IoT in transportation boosts fleet efficiency, safety, and real-time operations, driving strong growth across logistics, public transit, and automotive sectors.

WILMINGTON, DE, UNITED STATES, November 18, 2025 /EINPresswire.com/ -- According to a new report published by Allied Market Research IoT in Transportation Market Size, Share, Competitive Landscape and Trend Analysis Report, by Type (Hardware, Software, and Services), Mode of Transport (Roadways, Railways, Airways, and Maritime), and Application (Traffic Congestion Control Systems; Automotive Telematics; Reservation, Toll, & Ticketing Systems; Security & Surveillance Systems; Remote Monitoring; and Others): Global Opportunity Analysis and Industry Forecast, 2021-2030, The global IoT in transportation market size was valued at $83.25 billion in 2020, and is projected to reach $495.57 billion by 2030, registering a CAGR of 19.9% from 2021 to 2030.

The IoT in transportation market is transforming how fleets, public transport systems, and logistics networks operate by integrating sensors, connectivity platforms, and real-time analytics. These technologies enable operators to track assets, monitor driver behavior, reduce fuel consumption, and automate traffic or routing decisions. As governments and enterprises strive to modernize transportation infrastructure, IoT adoption continues to accelerate across freight, rail, maritime, and aviation segments.

Furthermore, the shift toward intelligent mobility and connected ecosystems is reinforcing demand for IoT-enabled systems. Advancements in 5G, cloud computing, and edge analytics provide the foundation for these innovations by enabling low-latency communication and more reliable data processing. As a result, IoT technologies are becoming essential for supporting smart city initiatives, enhancing passenger experience, and ensuring efficient, sustainable transportation operations.

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The primary driver of the IoT in transportation market is the growing need for real-time visibility of fleet operations. Companies are increasingly deploying telematics, GPS tracking, and sensor-based monitoring solutions to optimize routing, reduce idle time, and lower fuel consumption.

These solutions provide actionable intelligence that boosts productivity while cutting operational costs.

Another major growth factor is the rise of smart city initiatives worldwide. Municipalities are adopting IoT-based traffic management systems, connected infrastructure, and automated tolling solutions to minimize congestion and improve commuter experiences. This widespread adoption is creating strong opportunities across both public and private sectors.

Technological advancements such as AI-powered predictive maintenance are further propelling growth. IoT sensors enable continuous monitoring of vehicle health, allowing operators to prevent breakdowns and extend asset life cycles. As transportation assets become increasingly digitized, predictive maintenance has emerged as a critical value driver.

Despite the growth prospects, the market faces challenges related to data privacy and cybersecurity. With massive volumes of location and operational data being transmitted across networks, transportation operators must invest heavily in cybersecurity solutions to safeguard against breaches and unauthorized access.

Additionally, the high cost of IoT deployment—particularly for smaller transportation companies—remains a restraint. Upfront investment in devices, connectivity, integration, and data management platforms can be substantial. However, declining sensor prices and the growing availability of cloud-based solutions are gradually addressing this barrier.

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The IoT in transportation market is segmented by component (hardware, software, and services), mode of transport (road, rail, air, and maritime), and application (fleet management, traffic management, asset tracking, predictive maintenance, and passenger information systems). Fleet management remains the dominant segment due to widespread adoption of telematics and vehicle monitoring solutions, while predictive maintenance is growing rapidly as operators prioritize uptime and operational efficiency.

By type, the hardware segment accounted for the largest share of the IoT in transportation market in 2020 and is expected to maintain its lead in the coming years. This dominance is driven by the rising adoption of IoT devices, the need for low-cost and scalable hardware, and the widespread integration of sensors and chips in smart transportation systems. Meanwhile, the software segment is projected to grow at the fastest rate, supported by the expanding IoT ecosystem, increasing use of cognitive intelligence, advanced analytics, and the growing deployment of smart device applications.

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Regionally, North America dominated the IoT in transportation market in 2020, propelled by the

strong demand for real-time weather monitoring, performance optimization, and advanced fleet management solutions. However, Asia-Pacific is anticipated to record the highest growth rate, driven by its large population base, rapid urbanization, and the presence of disaster-prone regions in countries such as China, India, Japan, and Australia, which accelerates the adoption of IoT-enabled monitoring and transportation technologies.

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Key players operating in the global IoT in transportation industry include Alcatel-Lucent, AT&T Inc., Garmin International Inc., IBM Corp., Denso Corp., Thales Group, General Electric, Verizon Communications Inc., Cisco Systems, Inc., and TomTom N.V. These companies have adopted several strategies such as product launches, partnerships, collaborations, mergers & acquisitions, and joint ventures to strengthen their foothold in the global IoT in transportation market.

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- By type, the hardware segment accounted for the largest IoT in transportation market share in 2020.
- By application, traffic congestion control system generated highest revenue in 2020.
- By region, the North America segment generated the highest revenue in IoT in transportation market forecast.

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David Correa
Allied Market Research
+ +1 800-792-5285
email us here