

# Vehicle-to-Everything (V2X) Communication Module Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034

<https://marketpublishers.com/r/VA6A903094D0EN.html>

Date: October 2025

Pages: 209

Price: US\$ 4,850.00 (Single User License)

ID: VA6A903094D0EN

## Abstracts

The Global Vehicle-to-Everything Communication Module Market was valued at USD 1.13 billion in 2024 and is estimated to grow at a CAGR of 16.2% to reach USD 4.98 billion by 2034.

The market is experiencing rapid acceleration due to rising demand for connected mobility, increasing safety mandates, and the evolution of autonomous and semi-autonomous vehicle technologies. Automakers and Tier-1 providers are ramping up integration of high-performance V2X modules that enable seamless communication between vehicles, infrastructure, networks, and pedestrians. These advanced modules are being deployed with low-latency 5G and DSRC systems, edge AI processors, and real-time sensor fusion technology to improve safety, traffic efficiency, and driving automation. Governments are strengthening regulations and funding projects that support intelligent transport systems, encouraging the deployment of V2X technologies across global markets. Efforts to reduce road congestion, lower emissions, and enable smart traffic systems continue to fuel demand for embedded V2X solutions in both private and public transportation sectors. The integration of AI-based analytics and telematics into V2X modules is becoming a strategic necessity for automakers and authorities looking to elevate road safety and transport efficiency. These modules are being integrated with autonomous vehicle ecosystems and ADAS platforms to provide real-time environment sensing, fast decision-making, and accurate communication with surrounding infrastructure and road users.

The passenger vehicles segment held a 79% share in 2024 and will grow at a CAGR of 15.8% through 2034. This dominance is driven by the aggressive rollout of intelligent features and connected systems in mass-market and premium cars. Modern passenger

vehicles now rely on high-bandwidth, low-latency modules to support applications such as lane merging assistance, adaptive cruise control, and emergency communication. As automakers continue their push toward safer and smarter driving experiences, the use of embedded V2X systems in passenger cars is expected to see significant scaling.

The OEMs segment held a 73% share in 2024. This leadership is due to the widespread integration of V2X communication modules during the vehicle production phase. Original equipment manufacturers prefer embedding V2X technologies directly into new models to support advanced vehicle features and ensure compliance with global automotive safety standards. Factory-installed systems offer better performance and allow full interoperability with smart infrastructure, connected vehicles, and mobility platforms, giving OEMs a clear edge over aftermarket installations.

United States Vehicle-to-Everything (V2X) Communication Module Market held an 86% share and generated USD 336.2 million in 2024. The country continues to lead with the wide adoption of V2X-based applications in connected and autonomous vehicle platforms. Automotive manufacturers and system providers are rapidly implementing 4G LTE and 5G NR-V2X modules to enable smart vehicle interactions and efficient road safety systems. With strong support from national safety programs and infrastructure modernization initiatives, V2X module deployments are gaining momentum across highways, urban zones, and logistics corridors.

Key players active in the Global Vehicle-to-Everything (V2X) Communication Module Market include NXP, Qualcomm Technologies, Renesas Electronics, ST Microelectronics, Huawei Technologies, Denso, Infineon Technologies, Bosch, Continental, and Autotalks. Companies operating in the Vehicle-to-Everything (V2X) Communication Module Market are expanding their portfolios by developing multi-protocol modules that support DSRC and cellular-V2X technologies simultaneously. They are forming strategic partnerships with automotive OEMs and infrastructure providers to ensure seamless integration and interoperability. Investments in AI-powered edge computing and real-time data processing capabilities are helping improve communication speed and accuracy. Key players are also focusing on achieving compliance with regional and global safety standards while enhancing module reliability and energy efficiency.

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