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V2X Communication & Network Market Forecasts to 2032 – Global Analysis By Communication Type (Vehicle-to-Vehicle (V2V), Vehicle-to-Infrastructure (V2I), Vehicle-to-Pedestrian (V2P) and Vehicle-to-Network (V2N)), Component, Connectivity, Application and By Geography

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Abstracts

According to Stratistics MRC, the Global V2X Communication & Network Market is accounted for $1.44 billion in 2025 and is expected to reach $5.33 billion by 2032 growing at a CAGR of 20.5% during the forecast period. V2X Communication & Network involves advanced connectivity systems that allow vehicles to interact with surrounding entities, including other vehicles, roadside infrastructure, pedestrians, and cloud platforms. This technology is essential for enhancing traffic safety, optimizing traffic flow, and supporting autonomous and connected vehicle operations. Through wireless technologies like cellular-based V2X and short-range communication protocols, vehicles share real-time information such as movement patterns, environmental conditions, and potential hazards. These networks form the backbone of smart transportation systems, helping minimize traffic delays, prevent collisions, and enable efficient, intelligent mobility across modern transport environments.

According to IIETA (International Information and Engineering Technology Association), V2X and V2V communication are critical in the evolution toward 6G networks, addressing challenges like latency, interoperability, and large?scale deployment. Their survey emphasizes V2X as a foundational technology for future intelligent transport systems.

Market Dynamics:

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Driver:

Road safety regulations and government initiatives

Increasing road accident rates have prompted governments to introduce stronger safety norms and prioritize smart mobility solutions. V2X communication supports these goals by allowing vehicles and infrastructure to share real-time alerts about traffic conditions, risks, and pedestrian movement. Policies promoting connected vehicle technologies and advanced safety systems are boosting demand for V2X networks. Additionally, government funding for smart roads, intelligent traffic management, and digital transportation infrastructure is strengthening market expansion. As reducing traffic fatalities becomes a global priority, V2X communication is emerging as a vital technology within national road safety strategies and transportation modernization initiatives.

Restraint:

High infrastructure and deployment costs

The substantial cost associated with deploying V2X communication systems is a key barrier to market growth. V2X implementation involves expensive components, including network infrastructure, roadside communication equipment, and advanced in-vehicle hardware. Upgrading legacy traffic systems and integrating 5G connectivity demand heavy public and private investment. For automakers, adding V2X capabilities increases manufacturing expenses, which can impact vehicle pricing. In emerging economies, budget constraints limit large-scale rollout. Ongoing operational and maintenance costs also add financial pressure, slowing adoption and delaying full-scale deployment of V2X communication networks.

Opportunity:

Expansion of Smart Infrastructure and Smart Cities

Growing investments in smart city development are opening new opportunities for V2X communication networks. Cities are deploying connected infrastructure to manage traffic more efficiently and enhance road safety. V2X systems allow vehicles to communicate directly with smart traffic signals, monitoring equipment, and urban control systems. This enables dynamic traffic optimization and improved urban mobility

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outcomes. As governments prioritize sustainable and technology-driven transportation frameworks, the role of V2X communication becomes increasingly important. Continued expansion of smart infrastructure projects worldwide is expected to accelerate adoption of V2X-enabled transportation solutions.

Threat:

Cybersecurity attacks and system vulnerabilities

The risk of cyber threats represents a major challenge for the V2X communication market. Since V2X relies on constant data transmission, it becomes vulnerable to hacking, signal interference, and malicious data manipulation. Such incidents could endanger road safety, disrupt traffic operations, and damage public confidence in connected vehicle technologies. As digital integration deepens, ensuring system security becomes increasingly complex. Without advanced cybersecurity frameworks and continuous threat detection, stakeholders may hesitate to invest in V2X solutions. These concerns could significantly hinder market growth and delay widespread implementation of V2X networks.

Covid-19 Impact:

COVID-19 created both challenges and opportunities for the V2X Communication & Network Market. Initial impacts included factory shutdowns, component shortages, and delayed infrastructure rollouts, limiting adoption of connected vehicle solutions. Declines in automotive demand and deferred smart transportation projects slowed market progress during the crisis. At the same time, the pandemic accelerated interest in digitalization, automation, and smart mobility frameworks. Policymakers and companies emphasized safer, more efficient transport systems with minimal human interaction. As economies reopened, investment momentum returned toward 5G, intelligent transport infrastructure, and V2X-enabled connectivity, driving recovery and long-term growth prospects across global automotive and mobility ecosystems worldwide.

The vehicle-to-vehicle (V2V) segment is expected to be the largest during the forecast period

The vehicle-to-vehicle (V2V) segment is expected to account for the largest market share during the forecast period because of its strong safety and operational advantages. V2V allows vehicles to directly share critical driving information, including sudden braking events, lane changes, and accident warnings. This direct exchange

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improves driver awareness and reduces the risk of collisions. Since V2V does not depend heavily on roadside infrastructure, it is easier and faster to deploy across vehicle fleets. Automakers emphasize V2V capabilities to strengthen safety systems and cooperative driving functions, making it the most established and influential segment in the overall V2X communication landscape.

The services segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the services segment is predicted to witness the highest growth rate as demand rises for operational support and intelligent data-driven solutions. V2X services cover areas such as network supervision, security management, cloud processing, and real-time system optimization. As connected vehicle networks scale, continuous service support becomes essential for maintaining performance and reliability. The growing adoption of subscription-based and managed service models also contributes to rapid expansion. With increasing emphasis on seamless connectivity and lifecycle management, services are emerging as the most rapidly expanding segment in the overall V2X communication ecosystem.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share as a result of its mature automotive ecosystem and rapid integration of connected mobility solutions. Strong investments in smart transportation infrastructure, combined with expanding 5G networks, support widespread V2X deployment. Automakers and technology companies in the region actively collaborate to advance connected and autonomous vehicle technologies. Supportive government policies focused on traffic safety and innovation further encourage adoption. With high consumer acceptance of advanced vehicle technologies and well-established digital connectivity, North America continues to lead the market in V2X communication implementation and technological advancement.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR driven by accelerating urban growth and rapid development of connected transportation systems. The region is witnessing increased focus on smart cities, digital road infrastructure, and advanced mobility solutions. Expanding automotive manufacturing and improving 5G connectivity create favorable conditions for V2X adoption. Governments are encouraging intelligent traffic systems to improve road

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safety and efficiency. With rising vehicle connectivity and large-scale infrastructure modernization, Asia Pacific is emerging as the most dynamic region, showing the highest growth potential in V2X communication networks.

Key players in the market

Some of the key players in V2X Communication & Network Market include Delphi Automotive Plc, Aptiv PLC, Autotalks Ltd., Continental AG, Qualcomm Inc., Infineon Technologies AG, Robert Bosch GmbH, Harman International Industries Inc., Cisco Systems Inc., Mobileye NV, Huawei Technologies Co., Ltd., NXP Semiconductors, Denso Corporation, Cohda Wireless and Quectel Wireless.

Key Developments:

In November 2025, Aptiv PLC announced that it inked a strategic cooperation deal with Robust.AI to co-develop AI-powered collaborative robots. The partnership combines Aptiv's (APTV) industry-leading portfolio, including Wind River platforms and tools, with Robust.AI's robotics expertise and human-centered design to accelerate innovation in warehouse and industrial automation.

In June 2025, Qualcomm Incorporated announced that it has reached an agreement with Alphawave IP Group plc regarding the terms and conditions of a recommended acquisition by Aqua Acquisition Sub LLC, an indirect wholly-owned subsidiary of Qualcomm Incorporated, for the entire issued and to be issued ordinary share capital of Alphawave Semi at an implied enterprise value of approximately US$2.4 billion.

In September 2024, Continental and Vitesco Technologies have reached an agreement based on their corporate separation agreement regarding the appropriate allocation of costs and liabilities from the investigations in connection with the supply of engine control units and engine control software. Accordingly, Vitesco Technologies will pay Continental €125 million.

Communication Types Covered:

Vehicle-to-Vehicle (V2V)

Vehicle-to-Infrastructure (V2I)

Vehicle-to-Pedestrian (V2P)

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Vehicle-to-Network (V2N)

Components Covered:

Hardware

Software

Services

Connectivities Covered:

DSRC

Cellular

Hybrid

Applications Covered:

Safety

Traffic Management

Infotainment & Telematics

Autonomous Driving Support

Regions Covered:

North America

US

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- 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

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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 2024, 2025, 2026, 2028, and 2032
- 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

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Comprehensive profiling of additional market players (up to 3)

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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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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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