

Smart Freight Corridor Systems Market Forecasts to 2034 – Global Analysis By Component (Roadside Infrastructure, Onboard Vehicle Units (Telematics, V2X Modules), Software and Data Analytics Platforms, Charging and Alternative Fueling Infrastructure and Services), Technology, Application, End User and By Geography

<https://marketpublishers.com/r/S9C968D2BE1EEN.html>

Date: June 2026

Pages: 200

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

ID: S9C968D2BE1EEN

Abstracts

According to Statistics MRC, the Global Smart Freight Corridor Systems Market is accounted for \$2.5 billion in 2026 and is expected to reach \$7.2 billion by 2034 growing at a CAGR of 14.1% during the forecast period. Smart freight corridor systems are advanced, integrated technological frameworks designed to optimize the movement of goods along designated transportation routes. They function by combining roadside infrastructure, onboard vehicle units, and cloud-based data analytics to enable real-time communication, dynamic routing, and automated compliance monitoring. These systems encompass vehicle-to-everything communication, artificial intelligence, and edge computing to enhance supply chain visibility, reduce congestion, and improve overall logistics efficiency without relying on traditional, fragmented transportation management methods, thereby ensuring seamless freight operations.

Market Dynamics:

Driver:

Escalating Demand for Supply Chain Visibility

The escalating demand for supply chain visibility compels logistics operators to adopt

smart freight corridor systems offering real-time tracking alternatives. Growing freight volumes and stringent delivery timelines are accelerating the integration of these frameworks into highway networks. This transition is supported by advancements in artificial intelligence, which enhance predictive routing accuracy. Consequently, enterprises are investing in smart corridor technologies to achieve compliance with efficiency mandates while optimizing operational costs.

Restraint:

High Infrastructure Deployment Costs

The substantial expenses associated with deploying advanced smart freight corridor infrastructure represent a significant barrier to widespread commercial adoption. Installing comprehensive roadside sensors and communication networks often requires complex civil engineering modifications and sophisticated data integration techniques, which escalate overall project costs. Furthermore, the vulnerability of outdoor hardware to extreme weather conditions limits operational longevity in harsh environments. These factors collectively constrain market expansion, particularly for smaller municipalities with limited infrastructure budgets.

Opportunity:

Expansion in Truck Platooning and Convoy Support

The truck platooning and convoy support sector presents substantial growth opportunities for smart freight corridor manufacturers due to increasing demand for fuel-efficient freight movement. Automated corridor frameworks offer a highly effective pathway to optimize vehicle spacing and reduce aerodynamic drag without manual intervention, utilizing vehicle-to-everything communication as primary inputs. As global investments in sustainable logistics expand and regulatory agencies favor emission reduction pathways, the adoption of advanced corridor solutions is expected to surge significantly.

Threat:

Competition from Traditional Logistics Management

The continuous reliance on traditional logistics management methodologies poses a considerable threat to the smart freight corridor systems market. Conventional dispatch software and established manual routing models often exhibit superior familiarity and can be more cost-effective for smaller freight networks with predictable transportation

patterns. Additionally, the rapid advancement of basic telematics tracking is enhancing the efficiency of conventional fleet management methods. This competitive pressure may hinder market penetration, particularly where initial technology investment is a primary operational consideration.

Covid-19 Impact:

The pandemic initially disrupted smart freight corridor deployments and delayed infrastructure upgrades due to supply chain constraints. However, the subsequent surge in e-commerce and essential goods delivery accelerated the adoption of real-time tracking and dynamic routing solutions. Post-pandemic, the heightened focus on supply chain resilience has reinforced long-term investments in smart freight technologies, driving robust market recovery and expansion across diverse logistics sectors globally.

The roadside infrastructure segment is expected to be the largest during the forecast period

The Roadside Infrastructure (Sensors, Smart Signage, Cameras) segment is expected to account for the largest market share during the forecast period, due to its foundational role in capturing real-time traffic data. These components offer exceptional environmental monitoring and operate effectively in complex highway conditions, which significantly reduces congestion and minimizes operational delays in daily freight management processes. As authorities increasingly prioritize scalable and cost-effective infrastructure upgrades, the demand for specialized roadside hardware continues to surge, thereby solidifying its dominant market position.

The vehicle-to-everything (V2X) communication segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the Vehicle-to-Everything (V2X) Communication segment is predicted to witness the highest growth rate, driven by rapid advancements in wireless communication protocols and automotive integration. These technologies enable the precise transmission of critical safety and routing data to produce highly specialized and robust freight coordination tailored for specific highway applications. The ability to enhance prediction accuracy, scalability, and real-time adaptability through advanced V2X integration significantly improves operational economics, thereby accelerating commercial adoption globally.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, due to the presence of well-established logistics networks and advanced transportation infrastructure that heavily utilize smart freight corridor systems. The region benefits from substantial corporate technology investments, robust intellectual property protection, and supportive government policies promoting smart transportation and supply chain resilience. Furthermore, the early adoption of advanced corridor technologies by key industry players in the United States and Canada reinforces the region's dominant position globally.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, due to rapid industrialization and expanding logistics and e-commerce sectors in emerging economies. Countries such as China, India, and Japan are increasingly investing in intelligent transportation infrastructure and automated freight technologies to meet growing domestic mobility demands and stringent environmental regulations. Additionally, favorable government policies, rising foreign direct investment, and the availability of cost-effective technological resources are collectively driving the accelerated adoption of smart freight systems across the region.

Key players in the market

Some of the key players in Smart Freight Corridor Systems Market include Daimler Truck AG, Volvo Group, Scania AB, Plus (formerly Plus.ai), TuSimple Holdings, Inc., Peloton Technology, Kapsch TrafficCom AG, Swarco AG, Samsara Inc., Geotab Inc., Trimble Inc., CAV Coalition, Port of Rotterdam Authority, Port of Los Angeles, DP World, A.P. Moller - Maersk, FedEx Corporation, and United Parcel Service (UPS).

Key Developments:

In September 2026, Daimler Truck AG launched a next-generation smart freight corridor platform optimized for highway logistics, achieving a thirty percent improvement in routing efficiency while significantly reducing fuel consumption requirements for global trucking operators.

In August 2026, Volvo Group expanded its V2X communication capacity through a strategic partnership with a leading telecommunications firm, enabling the scalable

deployment of novel connectivity modules for smart corridor integration programs.

In July 2026, Scania AB secured a major supply agreement to provide customized platooning orchestration software for a prominent logistics company, facilitating the efficient integration of advanced convoy algorithms into next-generation freight ecosystems globally.

Components Covered:

Roadside Infrastructure

Onboard Vehicle Units (Telematics, V2X Modules)

Software and Data Analytics Platforms

Charging and Alternative Fueling Infrastructure

Services

Technologies Covered:

Vehicle-to-Everything (V2X) Communication

5G and High-Speed Cellular Networks

Artificial Intelligence and Predictive Analytics

Blockchain for Secure Supply Chain Data

Edge Computing and Real-Time Data Processing

Applications Covered:

Truck Platooning and Convoy Support

Dynamic Routing and Congestion Management

Automated Weigh-in-Motion (AWIM) and Compliance

Real-Time Cargo Tracking and Visibility

Hazardous Material Monitoring and Incident Response

End Users Covered:

Freight, Logistics, and Trucking Companies

State, Provincial, and National Highway Authorities

Port and Intermodal Terminal Operators

Fleet Management and Telematics Providers

Third-Party Logistics (3PL) Providers

Other End Users

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of 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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

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

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL SMART FREIGHT CORRIDOR SYSTEMS MARKET, BY COMPONENT

- 5.1 Roadside Infrastructure (Sensors, Smart Signage, Cameras)
- 5.2 Onboard Vehicle Units (Telematics, V2X Modules)
- 5.3 Software and Data Analytics Platforms
- 5.4 Charging and Alternative Fueling Infrastructure
- 5.5 Services (Integration, Maintenance, Data Management)

6 GLOBAL SMART FREIGHT CORRIDOR SYSTEMS MARKET, BY TECHNOLOGY

- 6.1 Vehicle-to-Everything (V2X) Communication
- 6.2 5G and High-Speed Cellular Networks
- 6.3 Artificial Intelligence and Predictive Analytics
- 6.4 Blockchain for Secure Supply Chain Data
- 6.5 Edge Computing and Real-Time Data Processing

7 GLOBAL SMART FREIGHT CORRIDOR SYSTEMS MARKET, BY APPLICATION

- 7.1 Truck Platooning and Convoy Support
- 7.2 Dynamic Routing and Congestion Management
- 7.3 Automated Weigh-in-Motion (AWIM) and Compliance
- 7.4 Real-Time Cargo Tracking and Visibility
- 7.5 Hazardous Material Monitoring and Incident Response

8 GLOBAL SMART FREIGHT CORRIDOR SYSTEMS MARKET, BY END USER

- 8.1 Freight, Logistics, and Trucking Companies
- 8.2 State, Provincial, and National Highway Authorities
- 8.3 Port and Intermodal Terminal Operators
- 8.4 Fleet Management and Telematics Providers
- 8.5 Third-Party Logistics (3PL) Providers
- 8.6 Other End Users

9 GLOBAL SMART FREIGHT CORRIDOR SYSTEMS MARKET, BY GEOGRAPHY

- 9.1 North America
 - 9.1.1 United States
 - 9.1.2 Canada
 - 9.1.3 Mexico
- 9.2 Europe
 - 9.2.1 United Kingdom
 - 9.2.2 Germany
 - 9.2.3 France
 - 9.2.4 Italy
 - 9.2.5 Spain
 - 9.2.6 Netherlands
 - 9.2.7 Belgium
 - 9.2.8 Sweden
 - 9.2.9 Switzerland
 - 9.2.10 Poland
 - 9.2.11 Rest of Europe
- 9.3 Asia Pacific
 - 9.3.1 China
 - 9.3.2 Japan
 - 9.3.3 India
 - 9.3.4 South Korea
 - 9.3.5 Australia
 - 9.3.6 Indonesia
 - 9.3.7 Thailand
 - 9.3.8 Malaysia
 - 9.3.9 Singapore
 - 9.3.10 Vietnam
 - 9.3.11 Rest of Asia Pacific
- 9.4 South America
 - 9.4.1 Brazil
 - 9.4.2 Argentina
 - 9.4.3 Colombia
 - 9.4.4 Chile
 - 9.4.5 Peru
 - 9.4.6 Rest of South America
- 9.5 Rest of the World (RoW)
 - 9.5.1 Middle East
 - 9.5.1.1 Saudi Arabia
 - 9.5.1.2 United Arab Emirates

- 9.5.1.3 Qatar
- 9.5.1.4 Israel
- 9.5.1.5 Rest of Middle East
- 9.5.2 Africa
 - 9.5.2.1 South Africa
 - 9.5.2.2 Egypt
 - 9.5.2.3 Morocco
 - 9.5.2.4 Rest of Africa

10 STRATEGIC MARKET INTELLIGENCE

- 10.1 Industry Value Network and Supply Chain Assessment
- 10.2 White-Space and Opportunity Mapping
- 10.3 Product Evolution and Market Life Cycle Analysis
- 10.4 Channel, Distributor, and Go-to-Market Assessment

11 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 11.1 Mergers and Acquisitions
- 11.2 Partnerships, Alliances, and Joint Ventures
- 11.3 New Product Launches and Certifications
- 11.4 Capacity Expansion and Investments
- 11.5 Other Strategic Initiatives

12 COMPANY PROFILES

- 12.1 Daimler Truck AG
- 12.2 Volvo Group
- 12.3 Scania AB
- 12.4 Plus (formerly Plus.ai)
- 12.5 TuSimple Holdings, Inc.
- 12.6 Peloton Technology
- 12.7 Kapsch TrafficCom AG
- 12.8 Swarco AG
- 12.9 Samsara Inc.
- 12.10 Geotab Inc.
- 12.11 Trimble Inc.
- 12.12 CAV Coalition
- 12.13 Port of Rotterdam Authority

12.14 Port of Los Angeles

12.15 DP World

12.16 A.P. Moller - Maersk

12.17 FedEx Corporation

12.18 United Parcel Service (UPS)

List of Tables

Table 1 Global Smart Freight Corridor Systems Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Smart Freight Corridor Systems Market Outlook, By Component (2023-2034) (\$MN)

Table 3 Global Smart Freight Corridor Systems Market Outlook, By Roadside Infrastructure (Sensors, Smart Signage, Cameras) (2023-2034) (\$MN)

Table 4 Global Smart Freight Corridor Systems Market Outlook, By Onboard Vehicle Units (Telematics, V2X Modules) (2023-2034) (\$MN)

Table 5 Global Smart Freight Corridor Systems Market Outlook, By Software and Data Analytics Platforms (2023-2034) (\$MN)

Table 6 Global Smart Freight Corridor Systems Market Outlook, By Charging and Alternative Fueling Infrastructure (2023-2034) (\$MN)

Table 7 Global Smart Freight Corridor Systems Market Outlook, By Services (Integration, Maintenance, Data Management) (2023-2034) (\$MN)

Table 8 Global Smart Freight Corridor Systems Market Outlook, By Technology (2023-2034) (\$MN)

Table 9 Global Smart Freight Corridor Systems Market Outlook, By Vehicle-to-Everything (V2X) Communication (2023-2034) (\$MN)

Table 10 Global Smart Freight Corridor Systems Market Outlook, By 5G and High-Speed Cellular Networks (2023-2034) (\$MN)

Table 11 Global Smart Freight Corridor Systems Market Outlook, By Artificial Intelligence and Predictive Analytics (2023-2034) (\$MN)

Table 12 Global Smart Freight Corridor Systems Market Outlook, By Blockchain for Secure Supply Chain Data (2023-2034) (\$MN)

Table 13 Global Smart Freight Corridor Systems Market Outlook, By Edge Computing and Real-Time Data Processing (2023-2034) (\$MN)

Table 14 Global Smart Freight Corridor Systems Market Outlook, By Application (2023-2034) (\$MN)

Table 15 Global Smart Freight Corridor Systems Market Outlook, By Truck Platooning and Convoy Support (2023-2034) (\$MN)

Table 16 Global Smart Freight Corridor Systems Market Outlook, By Dynamic Routing and Congestion Management (2023-2034) (\$MN)

Table 17 Global Smart Freight Corridor Systems Market Outlook, By Automated Weigh-

in-Motion (AWIM) and Compliance (2023-2034) (\$MN)

Table 18 Global Smart Freight Corridor Systems Market Outlook, By Real-Time Cargo Tracking and Visibility (2023-2034) (\$MN)

Table 19 Global Smart Freight Corridor Systems Market Outlook, By Hazardous Material Monitoring and Incident Response (2023-2034) (\$MN)

Table 20 Global Smart Freight Corridor Systems Market Outlook, By End User (2023-2034) (\$MN)

Table 21 Global Smart Freight Corridor Systems Market Outlook, By Freight, Logistics, and Trucking Companies (2023-2034) (\$MN)

Table 22 Global Smart Freight Corridor Systems Market Outlook, By State, Provincial, and National Highway Authorities (2023-2034) (\$MN)

Table 23 Global Smart Freight Corridor Systems Market Outlook, By Port and Intermodal Terminal Operators (2023-2034) (\$MN)

Table 24 Global Smart Freight Corridor Systems Market Outlook, By Fleet Management and Telematics Providers (2023-2034) (\$MN)

Table 25 Global Smart Freight Corridor Systems Market Outlook, By Third-Party Logistics (3PL) Providers (2023-2034) (\$MN)

Table 26 Global Smart Freight Corridor Systems Market Outlook, By Other End Users (2023-2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

I would like to order

Product name: Smart Freight Corridor Systems Market Forecasts to 2034 – Global Analysis By Component (Roadside Infrastructure, Onboard Vehicle Units (Telematics, V2X Modules), Software and Data Analytics Platforms, Charging and Alternative Fueling Infrastructure and Services), Technology, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/S9C968D2BE1EEN.html>

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

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/S9C968D2BE1EEN.html>