

Connected Transportation Infrastructure Market Forecasts to 2034 – Global Analysis By Component (Hardware Sensors, Software, and Services), Technology, Application, End User and By Geography

<https://marketpublishers.com/r/C185A963A8CFEN.html>

Date: June 2026

Pages: 200

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

ID: C185A963A8CFEN

Abstracts

According to Statistics MRC, the Global Connected Transportation Infrastructure Market is accounted for \$2.8 billion in 2026 and is expected to reach \$7.5 billion by 2034 growing at a CAGR of 13.1% during the forecast period. Connected transportation infrastructure refers to integrated networks of hardware sensors, communication modules, and software platforms designed to facilitate seamless data exchange between vehicles, roadways, and central management systems. These systems function by utilizing V2X communication, IoT sensor networks, and edge computing to monitor traffic conditions, manage signal timing, and coordinate emergency responses in real-time. They encompass roadside units, traffic management software, and analytics platforms that enable intelligent traffic flow optimization, enhanced road safety, and improved mobility services across urban and highway environments.

Market Dynamics:

Driver:

Escalating Demand for Intelligent Traffic Management

The escalating demand for intelligent traffic management compels municipalities and transportation authorities to adopt connected infrastructure solutions offering proactive congestion control alternatives. Growing regulatory pressure to reduce urban traffic fatalities and minimize carbon emissions is accelerating the integration of these technologies into smart city frameworks. This transition is supported by advancements in V2X communication protocols, which enhance real-time data transmission and

vehicle-to-infrastructure coordination. Consequently, city planners are investing in connected transportation systems to achieve compliance with stringent safety mandates while optimizing overall network throughput.

Restraint:

High Infrastructure Deployment and Integration Costs

The substantial expenses associated with deploying advanced connected transportation infrastructure represent a significant barrier to widespread commercial adoption. Installing complex roadside units, high-bandwidth cellular networks, and edge gateways often requires sophisticated civil engineering and specialized technical expertise, which escalate overall implementation costs. Furthermore, the variability in legacy traffic systems and communication protocols limits the operational interoperability of connected platforms across diverse municipal networks. These factors collectively constrain market expansion, particularly for local governments with limited technology budgets.

Opportunity:

Expansion in Smart City and Urban Mobility Initiatives

The smart city development sector presents substantial growth opportunities for connected transportation infrastructure manufacturers due to increasing demand for integrated urban mobility solutions. Connected platforms offer a highly effective pathway to optimize public transit integration and curb management without manual intervention, utilizing advanced analytics data as primary inputs. As global investments in urban digitization expand and regulatory agencies favor sustainable transportation pathways, the adoption of advanced connected infrastructure solutions is expected to surge, creating lucrative enterprise avenues.

Threat:

Competition from Traditional Traffic Control Methodologies

The continuous reliance on traditional reactive traffic control methodologies poses a considerable threat to the connected transportation infrastructure market. Conventional fixed-timing signals and manual traffic monitoring often exhibit superior familiarity and can be more cost-effective for smaller municipalities with predictable traffic patterns. Additionally, the rapid advancement of basic traffic cameras is enhancing the efficiency of conventional traffic management methods. This competitive pressure may hinder

market penetration, particularly where initial technology investment and cybersecurity concerns are primary operational considerations.

Covid-19 Impact:

The pandemic initially disrupted connected transportation infrastructure deployments and delayed hardware shipments due to supply chain constraints and reduced municipal spending. However, the subsequent need for contactless tolling and dynamic traffic rerouting accelerated the adoption of connected platforms to ensure safe and efficient urban mobility. Post-pandemic, the heightened focus on resilient urban infrastructure and digital transformation has reinforced long-term investments in connected transportation technologies, driving robust market recovery and expansion across diverse smart city sectors globally.

The hardware segment is expected to be the largest during the forecast period

The hardware segment is expected to account for the largest market share during the forecast period, due to their unparalleled data collection capabilities and widespread applicability across diverse traffic management environments. Hardware like cameras and roadside units offer exceptional environmental monitoring and operate effectively in analyzing real-time traffic conditions, which significantly reduces accident risks and minimizes congestion in daily operations. As industries increasingly prioritize scalable and cost-effective infrastructure upgrades, the demand for specialized connected hardware continues to surge, thereby solidifying its dominant market position.

The Vehicle-to-Everything (V2X) Communication (DSRC, C-V2X) segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the Vehicle-to-Everything (V2X) Communication (DSRC, C-V2X) 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 safety and traffic data to produce highly specialized and robust connectivity tailored for specific urban applications. The ability to enhance prediction accuracy, scalability, and real-time adaptability through advanced V2X integration significantly improves operational economics, 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 smart city initiatives and advanced transportation networks that heavily utilize connected infrastructure. The region benefits from substantial technology investments, robust intellectual property protection, and supportive government policies promoting intelligent transportation systems and road safety. Furthermore, the early adoption of advanced V2X technologies by key industry players in the United States and Canada reinforces the region's dominant position in the global landscape.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, due to rapid urbanization and expanding smart city development sectors in emerging economies. Countries such as China, India, and Japan are increasingly investing in intelligent transportation infrastructure and connected vehicle 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 connected transportation systems across the region.

Key players in the market

Some of the key players in Connected Transportation Infrastructure Market include Siemens AG, Swarco AG, Kapsch TrafficCom AG, Cisco Systems, Inc., IBM Corporation, Yunex Traffic, Iteris, Inc. (Verra Mobility), Q-Free ASA, Cubic Corporation, Thales Group, Nokia Corporation, Ericsson, Huawei Technologies Co., Ltd., Atkins (SNC-Lavalin), AECOM, Jacobs Solutions Inc., Fluor Corporation, and Bechtel Corporation.

Key Developments:

In September 2026, Siemens AG launched a next-generation V2X communication module optimized for smart intersections, achieving a thirty percent improvement in data transmission latency while significantly enhancing pedestrian safety capabilities for global urban transportation networks.

In August 2026, Swarco AG expanded its intelligent traffic management capacity

through a strategic partnership with a leading cloud computing firm, enabling the scalable deployment of novel analytics platforms for real-time congestion control.

In July 2026, Kapsch TrafficCom AG secured a major supply agreement to provide customized connected infrastructure solutions for a prominent European highway authority, facilitating the efficient integration of advanced roadside sensors into next-generation tolling ecosystems globally.

Components Covered:

Hardware

Software

Services

Technologies Covered:

Vehicle-to-Everything (V2X) Communication (DSRC, C-V2X)

Internet of Things (IoT) and Wireless Sensor Networks

5G and High-Bandwidth Cellular Networks

Edge Computing and On-Site Data Processing

Cloud Computing and Big Data Analytics

Applications Covered:

Intelligent Traffic Management and Congestion Control

Smart Parking and Curb Management

Electronic Toll Collection and Usage-Based Charging

Incident Detection and Emergency Response Coordination

Public Transit Integration and Mobility-as-a-Service (MaaS)

End Users Covered:

Municipalities and City Governments

State, Provincial, and National Highway Departments

Private Toll Road Operators and Concessionaires

Urban Planners and Smart City Developers

Logistics and Fleet Management 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 CONNECTED TRANSPORTATION INFRASTRUCTURE MARKET, BY COMPONENT

- 5.1 Hardware
 - 5.1.1 Cameras
 - 5.1.2 Roadside Units
 - 5.1.3 Edge Gateways
- 5.2 Software
 - 5.2.1 Traffic Management
 - 5.2.2 Analytics
 - 5.2.3 Integration Platforms
- 5.3 Services

6 GLOBAL CONNECTED TRANSPORTATION INFRASTRUCTURE MARKET, BY TECHNOLOGY

- 6.1 Vehicle-to-Everything (V2X) Communication (DSRC, C-V2X)
- 6.2 Internet of Things (IoT) and Wireless Sensor Networks
- 6.3 5G and High-Bandwidth Cellular Networks
- 6.4 Edge Computing and On-Site Data Processing
- 6.5 Cloud Computing and Big Data Analytics

7 GLOBAL CONNECTED TRANSPORTATION INFRASTRUCTURE MARKET, BY APPLICATION

- 7.1 Intelligent Traffic Management and Congestion Control
- 7.2 Smart Parking and Curb Management
- 7.3 Electronic Toll Collection and Usage-Based Charging
- 7.4 Incident Detection and Emergency Response Coordination
- 7.5 Public Transit Integration and Mobility-as-a-Service (MaaS)

8 GLOBAL CONNECTED TRANSPORTATION INFRASTRUCTURE MARKET, BY END USER

- 8.1 Municipalities and City Governments

8.2 State, Provincial, and National Highway Departments

8.3 Private Toll Road Operators and Concessionaires

8.4 Urban Planners and Smart City Developers

8.5 Logistics and Fleet Management Providers

8.6 Other End Users

9 GLOBAL CONNECTED TRANSPORTATION INFRASTRUCTURE 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 Siemens AG

12.2 Swarco AG

12.3 Kapsch TrafficCom AG

12.4 Cisco Systems, Inc.

- 12.5 IBM Corporation
- 12.6 Yunex Traffic
- 12.7 Iteris, Inc. (Verra Mobility)
- 12.8 Q-Free ASA
- 12.9 Cubic Corporation
- 12.10 Thales Group
- 12.11 Nokia Corporation
- 12.12 Ericsson
- 12.13 Huawei Technologies Co., Ltd.
- 12.14 Atkins (SNC-Lavalin)
- 12.15 AECOM
- 12.16 Jacobs Solutions Inc.
- 12.17 Fluor Corporation
- 12.18 Bechtel Corporation

List of Tables

- Table 1 Global Connected Transportation Infrastructure Market Outlook, By Region (2023-2034) (\$MN)
- Table 2 Global Connected Transportation Infrastructure Market Outlook, By Component (2023-2034) (\$MN)
- Table 3 Global Connected Transportation Infrastructure Market Outlook, By Hardware (2023-2034) (\$MN)
- Table 4 Global Connected Transportation Infrastructure Market Outlook, By Cameras (2023-2034) (\$MN)
- Table 5 Global Connected Transportation Infrastructure Market Outlook, By Roadside Units (2023-2034) (\$MN)
- Table 6 Global Connected Transportation Infrastructure Market Outlook, By Edge Gateways (2023-2034) (\$MN)
- Table 7 Global Connected Transportation Infrastructure Market Outlook, By Software (2023-2034) (\$MN)
- Table 8 Global Connected Transportation Infrastructure Market Outlook, By Traffic Management (2023-2034) (\$MN)
- Table 9 Global Connected Transportation Infrastructure Market Outlook, By Analytics (2023-2034) (\$MN)
- Table 10 Global Connected Transportation Infrastructure Market Outlook, By Integration Platforms (2023-2034) (\$MN)
- Table 11 Global Connected Transportation Infrastructure Market Outlook, By Services (2023-2034) (\$MN)
- Table 12 Global Connected Transportation Infrastructure Market Outlook, By Technology (2023-2034) (\$MN)

Table 13 Global Connected Transportation Infrastructure Market Outlook, By Vehicle-to-Everything (V2X) Communication (DSRC, C-V2X) (2023-2034) (\$MN)

Table 14 Global Connected Transportation Infrastructure Market Outlook, By Internet of Things (IoT) and Wireless Sensor Networks (2023-2034) (\$MN)

Table 15 Global Connected Transportation Infrastructure Market Outlook, By 5G and High-Bandwidth Cellular Networks (2023-2034) (\$MN)

Table 16 Global Connected Transportation Infrastructure Market Outlook, By Edge Computing and On-Site Data Processing (2023-2034) (\$MN)

Table 17 Global Connected Transportation Infrastructure Market Outlook, By Cloud Computing and Big Data Analytics (2023-2034) (\$MN)

Table 18 Global Connected Transportation Infrastructure Market Outlook, By Application (2023-2034) (\$MN)

Table 19 Global Connected Transportation Infrastructure Market Outlook, By Intelligent Traffic Management and Congestion Control (2023-2034) (\$MN)

Table 20 Global Connected Transportation Infrastructure Market Outlook, By Smart Parking and Curb Management (2023-2034) (\$MN)

Table 21 Global Connected Transportation Infrastructure Market Outlook, By Electronic Toll Collection and Usage-Based Charging (2023-2034) (\$MN)

Table 22 Global Connected Transportation Infrastructure Market Outlook, By Incident Detection and Emergency Response Coordination (2023-2034) (\$MN)

Table 23 Global Connected Transportation Infrastructure Market Outlook, By Public Transit Integration and Mobility-as-a-Service (MaaS) (2023-2034) (\$MN)

Table 24 Global Connected Transportation Infrastructure Market Outlook, By End User (2023-2034) (\$MN)

Table 25 Global Connected Transportation Infrastructure Market Outlook, By Municipalities and City Governments (2023-2034) (\$MN)

Table 26 Global Connected Transportation Infrastructure Market Outlook, By State, Provincial, and National Highway Departments (2023-2034) (\$MN)

Table 27 Global Connected Transportation Infrastructure Market Outlook, By Private Toll Road Operators and Concessionaires (2023-2034) (\$MN)

Table 28 Global Connected Transportation Infrastructure Market Outlook, By Urban Planners and Smart City Developers (2023-2034) (\$MN)

Table 29 Global Connected Transportation Infrastructure Market Outlook, By Logistics and Fleet Management Providers (2023-2034) (\$MN)

Table 30 Global Connected Transportation Infrastructure 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: Connected Transportation Infrastructure Market Forecasts to 2034 – Global Analysis By Component (Hardware Sensors, Software, and Services), Technology, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/C185A963A8CFEN.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/C185A963A8CFEN.html>