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Truck Platooning - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-06-01 | 100 pages | Mordor Intelligence

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Report description:

Truck Platooning Market Analysis

The Truck Platooning market size reaches USD 0.81 billion in 2025 and is forecast to reach USD 2.20 billion by 2030, advancing at a 22.25% CAGR. Stricter greenhouse-gas rules, well-funded corridor programs, and 5 G-enabled V2X standards now frame platooning as a core decarbonization lever rather than an optional efficiency add-on. The Federal Communications Commission cleared the path for sub-50 millisecond C-V2X links in December 2024, satisfying the safety latency threshold for multi-truck formations, the FCC. Parallel EU grants under Horizon Europe support 19 cooperative automated-mobility pilots that shorten validation cycles and align cross-border protocols. Heavy-duty fleets capture immediate 8-12% fuel savings, compressing payback periods as diesel prices hover above USD 4.50 per gallon.

Global Truck Platooning Market Trends and Insights

Stringent Global GHG Mandates & Fuel-Economy Standards

Revised EU heavy-duty CO? rules demand 45% cuts by 2030 and 90% in 2040 from 2019 baselines. These targets outpace pure electrification economics, making platooning a bridge that yields immediate 10-15% fuel savings while fleets transition to zero-emission trucks. UNECE's common safety code for automated systems trims homologation costs across markets. Fines attached to non-compliance reposition the truck platooning market from a cost-saving option to a regulatory necessity.

Government-Funded Multi-State / Trans-EU Pilot Corridors

The U.S. DOT's USD 60 million ADS grant scheme anchors the I-70 corridor, where 11,486 pilot miles validated platooning uptime at commercial speeds. In Europe, Horizon Europe earmarked EUR 500 million for 19 cross-border CAM projects that furnish harmonized testbeds. Japan's Shin-Tomei Expressway dedicates a 100 km lane to Level 4 autonomy by 2026. Joint infrastructure build-outs de-risk early adoption and amplify network effects for first movers.

High Retrofit & Sensor-Suite Cost Per Truck

A full radar-lidar-camera suite still costs USD 15,000-25,000 per unit, absorbing 3-5% of a new Class 8 purchase price. Smaller carriers face cash-flow strain, and older trucks often lack electrical backbones for seamless upgrades. New FMCSA rules mandating Automatic Emergency Braking narrow the incremental spend gap by bundling shared sensors.

Other drivers and restraints analyzed in the detailed report include:

Rising Diesel Prices Widening ROI Gap / Commercial Launch of 5G-C-V2X Enabling Sub-50 ms Latency / Cross-Border Liability & Data-Ownership Uncertainty /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Driver-assistive truck Platooning held 61.34% of the truck platooning market share in 2024, mainly because fleets favor keeping a driver in the loop during mixed-traffic maneuvers. Its proven field record on the Ohio I-70 test, which logged 11,486 incident-free miles, reinforces confidence. Autonomous Truck Platooning, however, is scaling at a 22.72% CAGR as legislation matures and dedicated lanes emerge.

Regulators in Japan aim for Level 4 driverless convoys on the Shin-Tomei Expressway by 2026. Cost curves on high-precision sensors are falling, and harmonized cybersecurity standards are easing insurer concerns. As corridors multiply, the truck platooning market sees a clear progression from supervised formations to fully automated strings that operate around the clock.

Adaptive Cruise Control supplied 30.53% of the 2024 segment revenue and remains the entry-level anchor for platooning functionality. The truck platooning market size attached to ACC also benefits from its inclusion in most new long-haul tractors. C-V2X Active Brake Assist is advancing at 27.53% CAGR because fleets prioritize collision avoidance to satisfy internal safety KPIs and insurer mandates.

Forward Collision Warning, Lane Keep Assist, and mandated AEB create a layered safety stack that lowers the incremental cost of full platooning packages. SAE J3016 definitions provide a common framework encouraging suppliers to integrate modules without lock-in. As component bundling improves, the total hardware footprint per truck shrinks.

Vehicle-to-Vehicle communication carried a 49.43% share in 2024 and still underpins string integrity. The FCC's green light for national C-V2X fuels further expansion. Meanwhile, Vehicle-to-Infrastructure links are rising at 19.61% CAGR on the back of USD 60 million in U.S. grants that tie 750 roadside units to 400 onboard devices.

V2I layers provide real-time speed limit, weather, and work zone alerts that let convoys maintain tighter gaps without compromising safety. Collision-mitigation algorithms gain redundancy from infrastructure messages, enhancing the reliability perception of the truck platooning market.

The Truck Platooning Market is Segmented by Platooning Type (DATP, and More), Technology Type (Adaptive Cruise Control, and More), Infrastructure Connectivity (Vehicle-To-Vehicle, and More), Truck Class (Class-8 and Class 6-7), Fleet (Private Fleets, and More), Application (Long-Haul Line-Haul, and More), Ownership (OEM, and More) and Geography. The Market Forecasts are Provided in Terms of Value (USD) and Volume (Units).

Geography Analysis

North America controls 41.23% of the truck platooning market in 2024, leveraging a 48,000-mile interstate grid, supportive federal pilots, and fast-tracking regulation. Ohio's I-70 corridor logged 5,050 platooning miles with zero incidents, giving regulators confidence. FMCSA's 5-year foreign-driver exemption for Daimler Trucks North America demonstrates openness to cross-border test talent. State bills such as Pennsylvania Act 117 permit up to three-unit platoons on public roads, though divergent state-level rules still require harmonization. A potential rollback of federal emissions targets in 2025 introduces policy volatility, yet existing investments in C-V2X corridors keep momentum high.

Asia-Pacific posts the fastest 26.32% CAGR through 2030 as driver shortages and strategic freight corridors converge. Japan projects a 745,000-driver gap by 2028 and is trialing Level 4 platoons on the Shin-Tomei Expressway. China's five-ministry demonstration integrates vehicle-road-cloud tech across several provinces, standardizing protocols for nationwide rollouts. South Korea uses ubiquitous 5G to test platoons on smart highways, while Australia's Transurban automates heavy trucks on toll corridors. Security rules on cross-border data sharing remain a key friction that international suppliers must navigate.

Europe advances with Horizon Europe's EUR 500 million CAM budget and new CO? norms that demand a 90% cut in heavy-duty emissions by 2040. The C-Roads platform is unifying Cooperative ITS deployments from Scandinavia to the Mediterranean. Revision of the Weights and Dimensions Directive lets zero-emission trucks exceed standard loads, but member-state rollout speeds vary, creating patchwork compliance. UNECE's global technical regulations give manufacturers one set of design rules, trimming engineering costs. Economic headwinds and uneven infrastructure funding slow smaller countries, though Germany, the Netherlands, and Spain continue to green-light large-scale pilots.

List of Companies Covered in this Report:

Daimler Truck AG / AB Volvo / Paccar Inc (DAF Trucks) / Volkswagen Group / Hyundai Motor Company / Iveco Group / ZF Friedrichshafen AG / Continental AG / Robert Bosch GmbH / Knorr-Bremse AG / NXP Semiconductors N.V. / Waymo LLC (Waymo Via) / TuSimple Holdings Inc. / Aurora Innovation Inc. / Plus AI Inc. / Einride AB / Locomation Inc. /

Additional Benefits:

The market estimate (ME) sheet in Excel format /
3 months of analyst support /

Table of Contents:

5.6.2 Regional / Hub-to-Hub
5.6.3 Port & Intermodal Drayage
5.7 By Ownership / Business Model
5.7.1 OEM-Integrated Subscription
5.7.2 Third-Party Technology Provider
5.8 Geography
5.8.1 North America
5.8.1.1 United States
5.8.1.2 Canada
5.8.1.3 Rest of North America
5.8.2 South America
5.8.2.1 Brazil
5.8.2.2 Mexico
5.8.2.3 Rest of South America
5.8.3 Europe
5.8.3.1 Germany
5.8.3.2 United Kingdom
5.8.3.3 France
5.8.3.4 Spain
5.8.3.5 Italy
5.8.3.6 Russia
5.8.3.7 Rest of Europe
5.8.4 Asia-Pacific
5.8.4.1 China
5.8.4.2 Japan
5.8.4.3 India
5.8.4.4 South Korea
5.8.4.5 Rest of Asia-Pacific
5.8.5 Middle East and Africa
5.8.5.1 United Arab Emirates
5.8.5.2 Saudi Arabia
5.8.5.3 Egypt
5.8.5.4 Turkey
5.8.5.5 South Africa
5.8.5.6 Rest of Middle East and Africa

6 Competitive Landscape
6.1 Market Concentration
6.2 Strategic Moves
6.3 Market Share Analysis
6.4 Company Profiles (Includes Global level Overview, Market Level Overview, Core Segments, Financials as Available, Strategic Information, Market Rank/Share, Products and Services, Recent Developments)
6.4.1 Daimler Truck AG
6.4.2 AB Volvo
6.4.3 Paccar Inc (DAF Trucks)
6.4.4 Volkswagen Group
6.4.5 Hyundai Motor Company

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