

The Global Autonomous Systems and Vehicles Market 2027-2037

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Abstracts

Robotaxi / Autonomous Ride-Hailing, Autonomous Trucking / Freight Logistics, Passenger Vehicle Automation (ADAS to L4), Urban Air Mobility (eVTOL), Autonomous Maritime / Shipping, Last-Mile Delivery (Robots & Drones), Autonomous Shuttles / Public Transit, Sensors & Perception Systems, Compute Platforms & AI Chips, Software & Simulation Platforms

The autonomous systems and vehicles market has entered an unprecedented phase of commercial acceleration and technological convergence across multiple transportation domains. Robotaxi services have expanded beyond pilot programmes into sustained commercial operations, with leading operators now conducting millions of driverless trips annually in major metropolitan areas across the United States and China. The competitive landscape has consolidated significantly following the withdrawal of several high-profile players, leaving a smaller cohort of well-capitalised companies commanding dominant market positions while raising the capital intensity barriers for new entrants. Autonomous trucking has reached a critical inflection point, with multiple operators launching revenue-generating freight services on defined highway corridors. The sector's commercial viability has been validated through partnerships with major logistics providers and fleet operators, while regulatory frameworks have evolved to accommodate driverless commercial vehicle operations in multiple US states. Middle-mile delivery and hub-to-hub operations have emerged as the initial deployment use cases, with full-corridor autonomy expanding progressively as operational experience accumulates.

The sensor technology ecosystem has undergone substantial transformation, characterised by aggressive price compression in automotive lidar systems, strategic consolidation among component suppliers, and the emergence of Chinese

manufacturers as dominant forces in global automotive sensor supply chains. Solid-state lidar architectures have achieved series production status, while 4D imaging radar has matured into a commercially viable complementary sensing modality. Computing platform capabilities have scaled dramatically, with purpose-built autonomous driving processors now delivering hundreds of TOPS while meeting automotive-grade thermal and power constraints.

Traditional automotive OEMs have accelerated their autonomous driving programmes, with several manufacturers achieving conditional automation certifications enabling hands-off driving under defined operational conditions. Strategic partnerships between established automakers and autonomous driving technology specialists have intensified, reflecting recognition that the capital requirements and technical complexity of full autonomy exceed the capabilities of individual organisations.

Urban air mobility has advanced from prototype demonstration to certification-ready status, with multiple eVTOL developers completing extensive flight test programmes and pursuing type certification from aviation authorities. Maritime autonomy has progressed through successful transoceanic voyages and the establishment of regulatory frameworks governing remote and autonomous vessel operations.

Looking forward, the market trajectory points toward continued geographic expansion of robotaxi services, progressive extension of autonomous trucking networks, and the commercial launch of urban air mobility services in initial deployment cities. The technological foundations for widespread autonomous mobility deployment are now largely in place, with remaining challenges centred on regulatory harmonisation, public acceptance cultivation, and the establishment of sustainable unit economics across diverse operational contexts.

The Global Autonomous Systems and Vehicles Market 2027–2037 provides an authoritative examination of the global autonomous systems and vehicles industry across all major transportation domains, providing strategic intelligence for investors, industry executives, technology developers, and policy stakeholders navigating this transformative market. The report analyses the full spectrum of autonomous mobility, encompassing robotaxi and autonomous ride-hailing services, autonomous trucking and freight logistics, passenger vehicle automation, urban air mobility, maritime autonomy, and last-mile delivery systems. Drawing upon primary research, proprietary databases, regulatory filings, and extensive industry consultation, the analysis provides granular insight into competitive dynamics, technology evolution trajectories, regulatory frameworks, and commercialisation pathways across key geographic markets.

Strategic company profiles examine more than 90 leading participants across the autonomous vehicle ecosystem, from pure-play robotaxi operators and autonomous trucking specialists to sensor suppliers, computing platform providers, traditional automotive OEMs, and tier-one suppliers. Each profile details corporate strategy, technology capabilities, partnership networks, operational metrics, and competitive positioning within the rapidly evolving market landscape.

The technology analysis addresses critical enablers including automotive lidar systems, 4D imaging radar, high-performance computing platforms, artificial intelligence and machine learning architectures, HD mapping and localisation systems, and vehicle-to-everything communication infrastructure. Market sizing and forecasting spans the complete report timeframe with segmentation by application domain, geography, autonomy level, and technology category.

Regulatory analysis covers the evolving policy landscape across major jurisdictions including the United States, European Union, China, and other key markets, examining type approval frameworks, operational permit structures, liability regimes, and the progression toward harmonised international standards. Investment analysis identifies funding trends, valuation dynamics, and strategic transaction activity shaping industry consolidation.

Report Contents include:

Executive summary with key findings and strategic recommendations

Market definitions, scope, and methodology

Technology landscape analysis covering sensors, compute, software, and connectivity

Robotaxi and autonomous ride-hailing market analysis

Autonomous trucking and freight logistics assessment

Passenger vehicle automation and ADAS market evaluation

Urban air mobility and eVTOL market analysis

Maritime autonomy and autonomous shipping review

Last-mile delivery robots and drones market coverage

Regional market analysis (North America, Europe, China, Asia-Pacific, Rest of World)

Regulatory and policy framework analysis by jurisdiction

Competitive landscape and market share analysis

Strategic company profiles (90+ companies)

Investment trends and funding analysis

Ten-year market forecasts by segment and geography

Companies profiled include Amazon Prime Air, Ambarella Inc., Applied Intuition, Aptiv PLC, Archer Aviation Inc., Aurora Innovation Inc., AutoX Inc., Baidu Apollo Go, Beep Inc., Black Sesame Technologies, BMW Group, BYD Company Limited, CaoCao Inc., Continental AG, Cruise LLC, Deepway, DeepRoute.ai, DENSO Corporation, Didi Autonomous Driving, EasyMile SAS, Einride AB, Ford Motor Company, Gatik AI Inc., General Motors Company, HERE Technologies, Hesai Technology, Honda Motor Co. Ltd., Horizon Robotics, Huawei Technologies, Hyundai Motor Group, Inceptio Technology, Innoviz Technologies, Joby Aviation Inc., Kodiak Robotics Inc., Kongsberg Maritime, Li Auto Inc., Luminar Technologies, Lyft Inc., Magna International Inc., May Mobility Inc., Mercedes-Benz Group AG, Mobileye Global Inc. and more.....

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