

# Automated Valet Parking Feasibility Market Forecasts to 2034 – Global Analysis By Vehicle Type (Passenger Cars, Luxury & Premium Vehicles, Commercial Fleets and Autonomous Shuttles), Parking Infrastructure, Technology, End User and By Geography

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## Abstracts

According to Statistics MRC, the Global Automated Valet Parking Feasibility Market is accounted for \$4.1 billion in 2026 and is expected to reach \$24.2 billion by 2034 growing at a CAGR of 24.8% during the forecast period. Feasibility of automated valet parking is being explored as autonomous driving and smart infrastructure evolve within modern transportation systems. This technology allows cars to park independently by relying on integrated sensors, cameras, and vehicle-to-infrastructure communication systems. Its practicality is influenced by regulatory approval, urban infrastructure compatibility, safety assurance, and implementation costs. Dense urban regions are the primary beneficiaries due to limited parking availability and congestion issues.

Nevertheless, obstacles such as cybersecurity threats, system interoperability, and high setup expenses remain significant. Ongoing pilot implementations in smart cities indicate promising outcomes for efficiency, reduced congestion, and better utilization of parking resources overall.

According to MDPI, Over 500 AVP algorithms have been tested using OnSite and Unity3D platforms. The evaluation framework showed that top-performing algorithms achieved high completion rates and accuracy, proving AVP's technical feasibility while noting limitations in complex dynamic environments.

Market Dynamics:

Driver:

Increasing parking space scarcity and cost efficiency

The shortage of parking spaces combined with high urban land prices significantly supports the adoption of automated valet parking systems. Conventional parking

layouts require large areas, which is inefficient in crowded cities. Automated systems improve space utilization by eliminating the need for wide lanes and manual parking access, allowing more cars to fit within limited space. This increases revenue potential for operators and reduces long-term infrastructure expenses. It also helps reduce fuel usage and emissions from vehicles searching for parking spots. As urban land becomes more expensive, automated parking emerges as a practical and economical solution.

#### Restraint:

##### High implementation and infrastructure costs

One of the major limitations affecting automated valet parking feasibility is the high cost of installation and infrastructure development. Implementing such systems requires advanced technologies like sensors, AI-based software, and connected communication systems, which demand significant financial investment. Existing parking structures often need major modifications or complete redesigns to support automation, further increasing costs. Regular maintenance, system upgrades, and technical support also contribute to ongoing expenses. These financial challenges make it difficult for smaller operators to adopt the technology. As a result, high initial and operational costs act as a barrier to widespread implementation, particularly in cost-sensitive markets.

#### Opportunity:

##### Expansion of smart cities and intelligent infrastructure

Growing smart city initiatives create strong opportunities for automated valet parking systems. Many governments are developing advanced digital infrastructure and intelligent transport networks to improve urban mobility. Automated parking aligns well with these developments by reducing traffic congestion and improving parking efficiency. The use of IoT devices, sensors, and connected communication systems enhances its performance. As urban areas become more technologically integrated, demand for automated solutions rises. This supports deployment in locations such as airports, malls, and housing complexes. Overall, smart city expansion provides a strong foundation for the growth and widespread adoption of automated valet parking technology.

#### Threat:

##### High competition from alternative parking solutions

One major threat to automated valet parking systems is competition from other parking technologies. Existing solutions like smart parking apps, assisted parking features, and sensor-based slot management already improve parking efficiency without full automation. These systems are less expensive and easier to deploy, making them more appealing to many operators. Because of this, there is less pressure to adopt fully automated valet systems. The presence of these cost-effective alternatives reduces market demand and slows adoption. As a result, automated valet parking must compete

with simpler, more affordable innovations that already address many urban parking challenges effectively.

#### Covid-19 Impact:

The COVID-19 pandemic created both challenges and opportunities for the automated valet parking feasibility market. Initially, restrictions on movement and lockdowns significantly reduced traffic activity, lowering the need for parking solutions and delaying infrastructure projects. Disruptions in global supply chains and construction activities further slowed system installations. However, as recovery began, demand shifted toward contactless and automated mobility systems. Health concerns increased preference for solutions that reduce human interaction, boosting interest in automated valet parking at airports, malls, and smart cities. The pandemic also accelerated digitalization in transport systems, encouraging long-term investments in autonomous parking and reshaping future mobility adoption patterns worldwide.

The public parking garages segment is expected to be the largest during the forecast period

The public parking garages segment is expected to account for the largest market share during the forecast period because they handle large volumes of vehicles and require efficient space management. These facilities are mostly situated in crowded urban locations where parking demand is high and congestion is frequent. Automated valet systems improve efficiency by increasing parking density and reducing the time vehicles spend locating spaces. They also streamline traffic movement within parking structures, enhancing user experience. Support from public infrastructure development and smart mobility initiatives further encourages adoption. Therefore, public parking garages continue to lead in the implementation of automated valet parking solutions globally.

The LiDAR-based systems segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the LiDAR-based systems segment is predicted to witness the highest growth rate because of their high precision and strong environmental sensing capabilities. They provide detailed three-dimensional mapping, which is crucial for accurate navigation and safe parking in complex urban settings. Since automated valet parking depends on reliable object detection and spatial awareness, LiDAR technology significantly improves system efficiency. Ongoing improvements in compact and affordable LiDAR sensors are driving wider adoption. Additionally, their integration with autonomous driving platforms and intelligent infrastructure solutions is expanding rapidly, making LiDAR-based systems the most rapidly growing technology segment in this market.

#### Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share because of its highly developed automotive industry and early integration

of autonomous vehicle technologies. The region has strong investment in intelligent transportation systems, digital infrastructure, and AI-based mobility solutions. Major technology firms and automobile manufacturers located in the region drive continuous innovation and deployment. Dense urban centers in the U.S. and Canada experience significant parking challenges, increasing demand for automated solutions. Supportive government initiatives and active smart city pilot programs also contribute to growth.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR because of rapid urban development, rising car ownership, and heavy investment in smart infrastructure projects. Key countries like China, Japan, South Korea, and India are advancing intelligent transport systems and autonomous mobility technologies. Increasing congestion in urban centers and limited parking availability are driving demand for automated parking solutions. Government support for digitalization and electric vehicle expansion further supports market acceleration. Growth in commercial real estate, airports, and residential complexes is also boosting adoption.

Key players in the market

Some of the key players in Automated Valet Parking Feasibility Market include Valeo, Bosch, Motovis Intelligent Technology, Huawei, Apollo, UISEE, Momenta, Tesla, Voyager Technology, Continental AG, Denso Corporation, Parkofon, Standard Parking, Smart Parking Limited, Aptiv PLC, BMW Group, ZF Friedrichshafen AG and Mercedes-Benz.

Key Developments:

In December 2025, Denso Corporation announced that it signed a joint development agreement with MediaTek Inc., a leading semiconductor design company, to accelerate the development of next-generation automotive system-on-chips. As automotive systems become increasingly intelligent and spur advancements in autonomous driving and vehicle connectivity, the importance of automotive SoCs as high-performance computing platforms capable of executing complex processing tasks continues to grow. 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 October 2025, Valeo and LIDEO have signed a strategic partnership. For the first time, an independent expert network has formed a structured partnership with a global equipment manufacturer. The partnership will launch a training program for LIDEO experts via Valeo Tech Academy, sharing cutting-edge technological knowledge.

Vehicle Types Covered:

Passenger Cars

Luxury & Premium Vehicles

Commercial Fleets

Autonomous Shuttles

#### Parking Infrastructures Covered:

Public Parking Garages

Private & Residential Complexes

Commercial Hubs

Smart City Integrated Parking

#### Technologies Covered:

Camera-based Systems

LiDAR-based Systems

Ultrasonic Sensor-based Systems

Integrated AVP Platforms

#### End Users Covered:

Individual Consumers

Fleet Operators

Real Estate Developers

## Municipal Authorities

### 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

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