

# Global ADAS Market Expected Growth from USD 33.16 Billion in 2023 to USD 100.82 Billion by 2030, with a CAGR of 13.12%

According to a research report published by Exactitude Consultancy, Companies covered: Autoliv Inc, Nvidia, Bosh Gmbh, NXP Semiconductors Texas Instruments In



<u>ADAS</u> includes various sensors, cameras, and radar systems to monitor the vehicle's surroundings and detect potential hazards, such as other vehicles, pedestrians, cyclists, and obstacles on the road. DAS includes features like automatic emergency braking (AEB), which can



Increasing demand for ADAS is driven by the need for enhanced vehicle safety, regulatory mandates, and the rise of autonomous driving technologies"

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intervene to prevent or mitigate collisions by applying brakes if the system detects an imminent collision with another vehicle or object. DAS systems use sensors and cameras to keep an eye on lane lines and alert drivers when a car inadvertently strays from its designated lane. By gently guiding the car back into its lane, lane-keeping assistance can also step in. Adaptive Cruise Control (ACC) keeps the car moving at a predetermined speed while automatically modifying its speed to keep a safe distance from cars in front of it. By using radar or cameras to

measure the proximity and velocity of adjacent automobiles, it eliminates the necessity for human acceleration and deceleration. To help reduce lane-change accidents, this technology uses sensors to monitor the vehicle's blind spots and warns the driver if there is a car or other obstruction in the adjacent lane.

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ADAS systems can help drivers park by giving them aural or visual cues to help them navigate into parking spots. Automated parking is a feature of certain sophisticated systems that allows the car to park itself with little assistance from the driver. Advanced driver assistance systems (ADAS) are a category of electronic components installed in automobiles that provide a more intelligent driving experience for the driver. Unique sensors found in these systems include image, ultrasonic, radar, infrared, laser, and LiDAR sensors. One of the biggest trends in the automotive industry is expected to be the use of ADAS in cars to improve comfort and guarantee safety while driving. Customers' need for an assisted driving system rises in response to the growing need for safer driving conditions, which in turn fuels the ADAS market's expansion.

The advanced driver assistance system has several benefits, including a lower risk of accidents, less loss of life and property, and more. By reducing the number and severity of motor vehicle accidents, ADAS's safety features aim to increase pedestrian and passenger safety. In order to prevent accidents and, if possible, lessen their severity, advanced driver assistance systems alert drivers to impending danger and support them in maintaining control of their vehicle. The market for advanced driver assistance systems is growing as a result of factors such the rising demand for safety features and comfort while driving. Furthermore, strict safety laws and regulations are expected to fuel market expansion. Nevertheless, the market expansion for advanced driver assistance systems is hampered by their high initial cost, intricate structure, and reduced effectiveness in inclement weather.

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Magna International, Rensesas Electronics Corporation, Autoliv Inc, Nvidia Corporation, Robert Bosh Gmbh, NXP Semiconductors Texas Instruments In, Panasonic Hildings Corporation, Continental Ag, ZF Friedrichshafen AG., Aptiv Plc

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In May 2024, Bosch announces a partnership with HERE Technologies to develop high-definition (HD) live maps for autonomous driving applications.

In April 2024, Continental AG unveils its new long-range radar sensor with enhanced capabilities for detecting objects at greater distances.

In May 2024, Aptiv Plc announced a collaboration with a leading ride-hailing company to develop self-driving taxi fleets equipped with Aptiv's ADAS technology.

In May 2024, NXP Semiconductors announced its new radar processing software specifically designed for next-generation ADAS features.

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Reduced human error that could result in auto accidents is the goal of ADAS technology. ADAS steers and brakes the car and warns the driver of impending collisions. It functions both actively and passively. Because ADAS is dynamic, controlling it is an ongoing problem on a worldwide scale. Consequently, to keep up with the advancement of ADAS technologies, safety requirements must continue to be adaptable. For instance, research and expansion in the field of partially and fully autonomous vehicles have been encouraged by the regulatory climate in the United States. Some ADAS technology's safety hasn't been well examined, though. Because of this, authorities are concentrating on making sure that ADAS features added to cars enhance both comfort and safety.

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As a result of growing demand, numerous automakers are substantially investing in the development of autonomous vehicles, which are now a reality thanks to technological developments. Assuring a fully driverless experience, autonomous cars are entirely controlled by electronics and sensors. These vehicles must have advanced driver assistance systems (ADAS) installed in order to enable features like blind-spot monitoring, lane-keep assistance, lane-departure warning, and collision warning, which can reduce the growing number of accidents caused by human error.

The development of new and better LiDAR sensors, which are crucial parts of ADAS, is being fuelled by the rise of autonomous vehicles, programs like demonstrations, and OEM relationships with sensor manufacturing businesses. It is anticipated that all cars will be autonomous. Therefore, it is anticipated that the development of autonomous vehicles would present growth prospects for the ADAS market's participants.

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Modern driver assistance technologies are constrained by environmental changes. This is due to the fact that in inclement weather, ADAS-related sensors and cameras have trouble monitoring moving objects. Inclement weather hinders the effectiveness of advanced driver assistance system applications. Specifically, vision-based systems perform poorly in inclement weather and low light. Furthermore, the market's growth is also impacted by other environmental elements like thunderstorms and lightning, as well as persistent rain. Therefore, poor performance in inclement weather prevents sophisticated driver assistance systems from being widely adopted.

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To make cars more comfortable for customers and boost sales, automakers are adding a greater

variety of amenities and technologies. Additionally, enhanced environmental information and consumer safety are provided by technical advancements in electronic components, such as sensors and smartphones that support wireless connection and cloud systems. The automotive industry's sales have increased as a result of dynamic technological advancements like lane departure systems, intelligent parking assist systems that help cars park smoothly without the need for a guide to give directions, and night vision systems that are useful in areas with little to no light. The ADAS market forecast indicates significant growth, attributed to technological advancements and the rising need for improved vehicle safety.

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North America is significantly dominating the Advanced Driver Assistance Systems (ADAS) Market and is expected to continue its growth throughout the forecast period, owing to several variables.

North America has a robust automotive sector with established manufacturers and a well-developed supply chain, laying the groundwork for the widespread adoption of ADAS technologies.

The region leads the way in technical innovation, with numerous corporations investing extensively in ADAS system research and development. This ongoing development keeps North America at the forefront of the ADAS market.

North American countries have severe vehicle safety rules, which encourage automakers to incorporate sophisticated safety systems such as ADAS into their automobiles to fulfill compliance standards.

Customers in North America value safety above all else and are willing to pay extra for cars that include ADAS features. Because of this enormous demand, automakers are being forced to equip their vehicles with ADAS systems as standard or optional.

North America is home to various significant participants in the ADAS market, including as automobile manufacturers, technology companies, and suppliers. Their presence and impact contribute to the region's leadership in ADAS implementation and innovation.

The region's well-developed infrastructure, which includes road networks and connectivity, provide an enabling environment for the effective deployment and use of ADAS technologies.

Asia Pacific is anticipated to be the fastest-growing region in Advanced Driver Assistance Systems (ADAS) Market. The Asia Pacific area is experiencing rapid economic growth, which has resulted in a rise in disposable income and consumer expenditure on automobiles equipped with modern safety systems such as ADAS.

Countries such as China and India have thriving automotive markets with rising demand for passenger vehicles, generating considerable prospects for the adoption of ADAS technologies.

Governments in the Asia Pacific area is undertaking initiatives to promote road safety, including rules requiring the installation of safety systems such as ADAS in automobiles, which is driving market growth.

In nations such as China and India, urbanization is causing traffic congestion and increasing road accident rates, driving consumers to seek automobiles with ADAS capabilities for added safety.

Asian countries are making significant investments in automotive technology research and development, including ADAS systems, to address the growing demand for safer and more efficient automobiles.

As customers in the Asia Pacific area become more aware of the benefits of ADAS technologies, demand for vehicles equipped with these features grows.

The Tire Pressure Monitoring System keeps an eye on tire air pressure and notifies drivers when tires are underinflated, helping to reduce blowouts and increase fuel economy. The Drowsiness Monitor System monitors the eye and steering motions of drivers in order to identify indicators of sleepiness. It then sends out alarms to stop accidents that result from drowsy driving. To ensure safe and accurate parking, intelligent parking assist systems use sensors and cameras to help drivers with steering and obstacle detection. Using radar sensors, a blind spot object detection system helps identify cars or other items in an automobile's blind spots and warns the driver of potential dangers when changing lanes.

To prevent unintended lane departure, the Lane Departure Warning System employs cameras to monitor lane lines and notifies the driver if the vehicle starts to drift out of its lane without signalling. By modifying the headlights' direction and range in response to steering input and vehicle speed, the Adaptive Front-Lighting System enhances visibility in inclement weather and at night. Every one of these ADAS systems helps to improve overall road safety by lowering the number of accidents that occur.

Using real-time image processing, image sensors process visual data to provide features like traffic sign recognition and lane departure warnings. For object recognition and collision avoidance systems, lidar sensors employ laser light to produce high-resolution 3D maps of their surroundings. The Ultrasonic Sensor Ultrasonic sensors, which send out sound waves and measure the reflection, are frequently employed in parking assistance to identify things at close range. In low light, these sensors' ability to discern heat signatures helps night vision systems recognise objects, people, and animals. Blind spot detection and adaptive cruise control are made possible by radar sensors, which employ radio waves to measure an object's speed, direction, and distance. High accuracy applications like autonomous emergency braking and obstacle recognition rely on lasers for their accurate distance readings.

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Tire Pressure
Monitoring System
Drowsiness Monitor System
Intelligent Parking Assist System
Blind Spot Object Detection System
Lane Departure Warning System
Adaptive Front-Lighting System

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Image Sensor Lidar Sensor Ultrasonic Sensor Infrared Sensor Radar Sensor Laser

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Passenger Car Light Commercial Vehicle

#### **Buses And TRUCS**

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North America
Asia Pacific
Europe
South America
Middle East and Africa

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Which are the top companies to hold the market share in ADAS?
What is the projected industry size of ADAS?
Which is the largest regional market for ADAS?
What are the forthcoming trends of ADAS market in the world?
Which are the top key companies to hold the market share in ADAS?
What is the leading application of ADAS market?

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The Automotive Smart Display market is expected to grow at 4.88% CAGR from 2023 to 2029. It is expected to reach above USD 18.59 billion by 2029 from USD 12.7 billion in 2022.

https://exactitudeconsultancy.com/reports/12963/automotive-smart-display-market/

The global connected car devices market is expected to grow at 18.5% CAGR from 2024 to 2030. It is expected to reach above USD 59.70 billion by 2030 from USD 50.09 billion in 2023.

https://exactitudeconsultancy.com/reports/13049/connected-car-devices-market/

The connected truck market is expected to grow at 16.7% CAGR from 2024 to 2030. It is expected to reach above USD 98 billion by 2029 from USD 17.9 billion in 2023.

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The Driving Simulator Market is expected to grow at 7.02% CAGR from 2024 to 2030. It is expected to reach above USD 2.77 billion by 2030 from USD 1.5 billion in 2023.

https://exactitudeconsultancy.com/reports/13099/driving-simulator-market/

The adaptive cruise control (ACC) systems market is expected to grow at 6.5% CAGR from 2024 to 2030. It is expected to reach above USD 54.99 billion by 2030 from USD 31.2 billion in 2023.

https://exactitudeconsultancy.com/reports/13200/adaptive-cruise-control-acc-systems-market/

The global automotive gesture recognition system market is expected to grow at a 17% CAGR from 2024 to 2030. It is expected to reach above USD 990.4 million by 2030 from USD 10,326.46 million in 2023.

https://exactitudeconsultancy.com/reports/13318/automotive-gesture-recognition-system-market/

The global Automotive Carbon Thermoplastics market was valued at 712.3 million in 2023, and is projected to reach 4386.02 million by 2030, growing at a CAGR of 29.65% from 2024 to 2030

https://exactitudeconsultancy.com/reports/12932/automotive-carbon-thermoplastics-market/

The global automotive high-voltage battery market is expected to grow at 36.67% CAGR from 2024 to 2030. It is expected to reach above USD 126.60 billion by 2030 from USD 7.61 billion in 2023.

https://exactitudeconsultancy.com/reports/13029/automotive-high-voltage-battery-market/

The global Automotive Exhaust Heat Recovery (EHR) System market is expected to grow at 10.4% CAGR from 2024 to 2030. It is expected to reach above USD 93.44 billion by 2030 from USD 39.63

billion in 2023.

https://exactitudeconsultancy.com/reports/13039/automotive-exhaust-heat-recovery-ehr-system-market/

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The hyper car market is expected to grow at 31.1% CAGR from 2024 to 2030. It is expected to reach above USD 132.64 billion by 2030 from USD 11.7 billion in 2023.

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