Automotive Smart Antenna Market Assessment, By Type [Shark Fin, Fixed Mast, Others], By Component [Transceivers, Electric Control Unit, Others], By Vehicle Type [Passenger Vehicles, Commercial Vehicles], By Sales Channel [Original Equipment Manufacturer, Aftermarket], By Region, Opportunities and Forecast, 2018-2032F

Market Report | 2025-02-19 | 227 pages | Market Xcel - Markets and Data

AVAILABLE LICENSES:

- Single User License $4500.00
- Muti-User/Corporate Licence $5700.00
- Custom Research License $8200.00

Report description:

Global automotive smart antenna market is projected to witness a CAGR of 10.05% during the forecast period 2025-2032, growing from USD 3.04 billion in 2024 to USD 6.54 billion in 2032. The automobile smart antenna market is poised to grow rapidly due to increasing demand for connectivity, technological advancements, and the rising popularity of electric vehicles. Consumers seek advanced vehicles equipped with enhanced navigation tools, infotainment systems, and connectivity features. This increases the requirement for antenna systems to support multiple functionalities, such as GPS, Wi-Fi, Bluetooth, and cellular communication. The emergence of connected cars and the development of Vehicle-to-Everything (V2X) adds strength to this requirement, as these technologies require smart antennas to facilitate seamless communication and high-speed data transmission. Technically advanced components are the significant driver for such developments, and the shift towards 5G connectivity allows high-speed data and reduced latency. The most recent innovations in antenna design have produced diverse functionalities for smart antennas that can include various capabilities into one unit, minimizing complexities and overall efficiency of vehicle communication systems. More regulatory requirements for vehicle safety and emissions standards are opening avenues for the next generation of smart antenna systems. The rising popularity of electric vehicles (EVs) has also contributed to the demand for smart antennas because most applications require over-the-air updates and remote diagnostics. Autonomous car development also increases the demand for better communication services that manage extensive data generated by different vehicle sensors. Market dynamics, including a high level of innovations among key players, further contribute to this growth as companies seek to expand their technological capabilities and global presence to meet evolving consumer demands.
For instance, in December 2023, LG Electronics unveiled a transparent antenna for vehicles in partnership with Saint-Gobain Sekurit at the Consumer Electronics Show (CES) 2024. This transparent antenna is available as an on-glass or in-glass solution.

The broad surface application of the film-type antenna guarantees reliable telecommunications performance and provides scalability to handle increased network traffic.

Increasing Demand for Integrated Communication Systems is Expanding the Market Scope

The significantly increasing demand for integrating communication systems is widely expanding the scope of the automotive smart antenna market. Such advanced communication technology facilitates seamless interaction among vehicles, infrastructures, and external networks, and as vehicles become more and more connected, the requirements for such technology grow. The proliferation of connected cars has further enhanced the internet connectivity of car-software communication technologies for a better driving experience through improved safety features and convenience. Modern vehicles increasingly require data exchange and functionality integration, depending upon different communication protocols such as Controller Area Network (CAN), Local Interconnect Network (LIN), and Ethernet. These advancements allow Vehicle-to-Everything (V2X) communication, improving road safety and traffic efficiency by enabling vehicles to exchange information with other vehicles and their surroundings. Moreover, the rush toward electric vehicles (EVs) and autonomous driving technologies and building all sorts of complex systems would require very sophisticated communications that support high data demands. As manufacturers focus on creating centralized vehicle architectures to streamline communication and reduce complexity, the demand for smart antennas that can handle multiple functions simultaneously continues to rise.

For instance, in January 2022, SGS SA purchased Microwave Vision, SA's MVG SG 3000, a multi-probe antenna measurement and over-the-air (OTA) test system for component to full-scale vehicle testing. This test system will be the first in the world to support 5G FR1 (Frequency Range 1) NSA(Non-standalone) and SA (Standalone Mode) and C-V2X OTA (cellular-vehicle-to-everything) measurements for automobiles in compliance with the 5GAA Vehicular Antenna Test Methodology (VATM) Standard, as well as the emerging Ultra-wideband (UWB) technology.

Technological Advancements Propel the Global Automotive Smart Antenna Market Growth

Technological advancements are significantly propelling the growth of the global automotive smart antenna market due to integrating multiple functions into a single antenna unit, including capabilities such as GPS navigation, cellular communication, satellite radio reception, Wi-Fi connectivity, and Vehicle-to-Everything (V2X) communication. This integration reduces vehicle antenna systems' complexity and physical footprint, enhancing overall efficiency and performance. Also, as smart antennas are designed to support higher data speeds and lower latency, the expansion of 5G technology enables advanced applications like real-time HD video streaming and augmented reality navigation. Moreover, advancements in antenna technologies, such as beamforming and Multiple Input Multiple Output (MIMO), enhance performance and reliability, making them increasingly appealing for automotive applications. As manufacturers focus on developing compact, integrated, and cost-effective smart antennas, the market is set to expand further. The ongoing innovation in antenna designs aligns with the growing reliance on in-car connectivity and communication technologies, making technological advancements a critical factor driving the automotive smart antenna market's growth.

For instance, in January 2022, DENSO Corporation announced that it had developed Global Safety Package 3, an active safety system designed to improve vehicle safety by giving them high sensing capability of their surroundings. Product improvement features include upgrading the antenna design, reducing size and cost, and using MIMO technology for smaller antennas for higher radio wave efficiency.

Dominance of Passenger Vehicles in Global Automotive Smart Antenna Market

The dominance of passenger vehicles in the global automotive smart antenna market is a significant trend fueled by the increasing integration of advanced connectivity features embedded in vehicles, attracting consumers and leading to improved demand for in-car technologies. With a major market share, passenger vehicles rely on smart antennas that enable GPS, Wi-Fi, Bluetooth, and 5G connection capabilities. The improved infotainment systems and safety features are the main priorities for most consumers, boosting the demand for more advanced antenna systems in passenger vehicles. With the growing number of electric vehicles (EVs), autonomous driving, and technologically advanced vehicles, communication needs are getting more sophisticated due to their reliance on seamless communication systems to make things much easier. Overall, the dominance of the passenger vehicle segment in the automotive smart antenna market marks its critical role in shaping future automotive technologies as vehicles become more connected and reliant on sophisticated communication systems.

For instance, in February 2023, Qualcomm Technologies International, Ltd launched its latest version of the Snapdragon

automotive 5G platform for smart cars. The Snapdragon 5G uses a modem-to-antenna 5G solution, which is expected to elevate the wireless data transmission process further.

Asia-Pacific Dominates the Global Automotive Smart Antenna Market

Due to China's robust automotive production and usage, Asia-Pacific dominates the global automotive smart antenna market. This can largely be attributed to the region's enormous automotive manufacturing capabilities, which have grown rapidly due to technological advancements and an increasing consumer preference for connected vehicles. China, projected to lead the market, Japan, and South Korea also contribute significantly to production volumes, further driving demand for automotive components like smart antennas. This growth is also attributed to the progress of 5G networks within the Asia Pacific region; projections show that by 2025, the region will have become the largest 5G area in the world, facilitating advanced vehicle-to-everything (V2X) communication. In addition, rising electric vehicles (EVs) and autonomous driving technologies in countries like China and India generate a growing demand for multifunctional smart antennas that enable various communications, such as GPS, Wi-Fi, etc. The combination of high vehicle production rates, technological innovation, and an increasing emphasis on connectivity positions the region for sustained growth in this sector over the coming years.

According to the HARADA INDUSTRY CO., LTD.□s quarterly report released in December 2024, Japan had the world's highest net sales, with approximately USD 55.8 million in the second quarter.

Future Market Scenario (2025-2032F)

□□The rise of electric vehicles and autonomous driving technologies is creating a significant need for smart antennas supporting various connectivity features, including GPS, Wi-Fi, Bluetooth, and cellular communication.

□□As consumers seek vehicles equipped with advanced functionalities, manufacturers are compelled to integrate sophisticated antenna systems into their designs.

□□Ongoing investments in 5G infrastructure by telecommunications providers will enhance the capabilities of automotive smart antennas.

Key Players Landscape and Outlook

The global automotive smart antenna market is characterized by a competitive landscape featuring several key players that are driving innovations and growth. The increasing demand for connected vehicles, the advancement of 5G technology, and the increasing integration of smart features into automobiles. The Asia-Pacific region is expected to continue the dominant position in the market, owing to the strong capabilities of automotive production, especially in China. Moreover, fast technological developments in the region are likely to align with rising consumer demand for connected vehicles. Overall, the competitive landscape of the market for automotive smart antennas can be defined on the basis that players are spending a lot on strategic alliances and technological innovations coupled with a strong focus on changing consumer demands on connectivity and safety features in vehicles. As the industry continues toward investments in advanced solutions, the market is expected to grow in the coming years.

For instance, in June 2023, Calian GNSS Ltd. and u-blox AG signed a design partner agreement to develop next-generation PointPerfect PPP-RTK augmented smart antennas. This integration, together with the u-blox AG PointPerfect augmentation service, aims to provide excellent accuracy and precision.

Table of Contents:

1.□Project Scope and Definitions
2.□Research Methodology
3.□Executive Summary
4.□Voice of Customer
4.1.□Product and Market Intelligence
4.2.□Brand Awareness
4.3.□Factors Considered in Purchase Decisions
4.3.1.□Features and Other Value-Added Service
4.3.2.□Compatibility
4.3.3.□Efficiency of Solutions

4.3.4. After-Sales Support
4.4. Consideration of Privacy and Regulations
5. Global Automotive Smart Antenna Market Outlook, 2018-2032F
5.1. Market Size Analysis & Forecast
5.1.1. By Value
5.1.2. By Volume
5.2. Market Share Analysis & Forecast
5.2.1. By Type
5.2.1.1. Shark Fin
5.2.1.2. Fixed Mast
5.2.1.3. Others
5.2.2. By Component
5.2.2.1. Transceivers
5.2.2.2. Electric Control Unit (ECU)
5.2.2.3. Others
5.2.3. By Vehicle Type
5.2.3.1. Passenger Vehicles
5.2.3.2. Commercial Vehicles
5.2.4. By Sales Channel
5.2.4.1. Original Equipment Manufacturer
5.2.4.2. Aftermarket
5.2.5. By Region
5.2.5.1. North America
5.2.5.2. Europe
5.2.5.3. Asia-Pacific
5.2.5.4. South America
5.2.5.5. Middle East and Africa
5.2.6. By Company Market Share Analysis (Top 5 Companies and Others - By Value, 2024)
5.3. Market Map Analysis, 2024
5.3.1. By Type
5.3.2. By Component
5.3.3. By Vehicle Type
5.3.4. By Sales Channel
5.3.5. By Region
6. North America Automotive Smart Antenna Market Outlook, 2018-2032F*
6.1. Market Size Analysis & Forecast
6.1.1. By Value
6.1.2. By Volume
6.2. Market Share Analysis & Forecast
6.2.1. By Type
6.2.1.1. Shark Fin
6.2.1.2. Fixed Mast
6.2.1.3. Others
6.2.2. By Component
6.2.2.1. Transceivers
6.2.2.2. Electric Control Unit (ECU)
6.2.2.3. Others

6.2.3.□By Vehicle Type
6.2.3.1.□Passenger Vehicles
6.2.3.2.□Commercial Vehicles
6.2.4.□By Sales Channel
6.2.4.1.□Original Equipment Manufacturer
6.2.4.2.□Aftermarket
6.2.5.□By Country Share
6.2.5.1.□United States
6.2.5.2.□Canada
6.2.5.3.□Mexico
6.3.□Country Market Assessment
6.3.1.□United States Automotive Smart Antenna Market Outlook, 2018-2032F*
6.3.1.1.□Market Size Analysis & Forecast
6.3.1.1.1.□By Value
6.3.1.1.2.□By Volume
6.3.1.2.□Market Share Analysis & Forecast
6.3.1.2.1.□By Type
6.3.1.2.1.1.□Shark Fin
6.3.1.2.1.2.□Fixed Mast
6.3.1.2.1.3.□Others
6.3.1.2.2.□By Component
6.3.1.2.2.1.□Transceivers
6.3.1.2.2.2.□Electric Control Unit (ECU)
6.3.1.2.2.3.□Others
6.3.1.2.3.□By Vehicle Type
6.3.1.2.3.1.□Passenger Vehicles
6.3.1.2.3.2.□Commercial Vehicles
6.3.1.2.4.□By Sales Channel
6.3.1.2.4.1.□Original Equipment Manufacturer
6.3.1.2.4.2.□Aftermarket
6.3.2.□Canada
6.3.3.□Mexico
*All segments will be provided for all regions and countries covered
7.□Europe Automotive Smart Antenna Market Outlook, 2018-2032F
7.1.□Germany
7.2.□France
7.3.□Italy
7.4.□United Kingdom
7.5.□Russia
7.6.□Netherlands
7.7.□Spain
7.8.□Turkey
7.9.□Poland
8.□Asia-Pacific Automotive Smart Antenna Market Outlook, 2018-2032F
8.1.□India
8.2.□China
8.3.□Japan

8.4.Australia
8.5.Vietnam
8.6.South Korea
8.7.Indonesia
8.8.Philippines
9.South America Automotive Smart Antenna Market Outlook, 2018-2032F
9.1.Brazil
9.2.Argentina
10.Middle East and Africa Automotive Smart Antenna Market Outlook, 2018-2032F
10.1.Saudi Arabia
10.2.UAE
10.3.South Africa
11.Demand Supply Analysis
12.Import and Export Analysis
13.Value Chain Analysis
14.Porter's Five Forces Analysis
15.PESTLE Analysis
16.Pricing Analysis
17.Market Dynamics
17.1.Market Drivers
17.2.Market Challenges
18.Market Trends and Developments
19.Case Studies
20.Competitive Landscape
20.1.Competition Matrix of Top 5 Market Leaders
20.2.SWOT Analysis for Top 5 Players
20.3.Key Players Landscape for Top 10 Market Players
20.3.1.ZHEJIANG JC ANTENNA CO., LTD
20.3.1.1.Company Details
20.3.1.2.Key Management Personnel
20.3.1.3.Products and Services
20.3.1.4.Financials (As Reported)
20.3.1.5.Key Market Focus and Geographical Presence
20.3.1.6.Recent Developments/Collaborations/Partnerships/Mergers and Acquisitions
20.3.2.TE Connectivity Corporation
20.3.3.Harman International Industries
20.3.4.LG Electronics
20.3.5.Calian Group Ltd.
20.3.6.u-blox AG
20.3.7.Qualcomm Technologies, Inc.
20.3.8.DENSO Corporation
20.3.9.Microwave Vision, SA.
20.3.10.HARADA INDUSTRY CO., LTD.
*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.
21.Strategic Recommendations
22.About Us and Disclaimer

Automotive Smart Antenna Market Assessment, By Type [Shark Fin, Fixed Mast, Others], By Component [Transceivers, Electric Control Unit, Others], By Vehicle Type [Passenger Vehicles, Commercial Vehicles], By Sales Channel [Original Equipment Manufacturer, Aftermarket], By Region, Opportunities and Forecast, 2018-2032F

Market Report | 2025-02-19 | 227 pages | Market Xcel - Markets and Data

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4500.00
	Muti-User/Corporate Licence	$5700.00
	Custom Research License	$8200.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	

Date	2025-06-22
Signature	