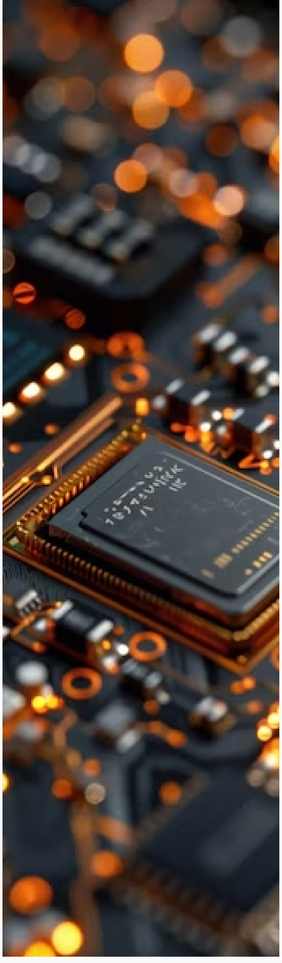

The automotive semiconductor market is expected to maintain its growth trajectory, driven by an increasing demand for Advanced Driver Assistance Systems (ADAS) and infotainment system

OVERVIEW

Rapid growth and innovation have led to a surge in new supply chain participants. New automakers, technology startups, electronics manufacturing services companies and software suppliers are all competing in the automotive industry. The market for automotive semiconductor products has already shown tremendous growth, wherein four interconnected trends namely autonomy, electrification, connectivity, and mobility as a service (MaaS) will significantly change the characteristics of the automobile. Vehicles with their electronics-based convenience, performance, and safety features, are considered to be a huge transition in automobile engineering. Software and electronics, as well as the seamless integration of hardware and software, will increasingly replace mechanical elements in terms of functionality and value. This will increase semiconductor demand and disrupt the ties between automakers, Tier 1 suppliers, and chipmakers.

The two most important drivers of expanding semiconductor demand in automotive applications, autonomy and electrification, continue to play major roles in the entire automotive sector. However, this will change quickly as technology capabilities and costs increase, people embrace new types of vehicles, and laws catch up. Additionally, numerous automotive-related applications will also fuel semiconductor demand. This rise will be driven by applications in advanced driving assistance systems (ADAS), infotainment and telematics, and electric powertrains. For autonomous driving to be safe, both ADAS and telematics sub-applications will be required. Furthermore, with their focus freed from driving, passengers in self-driving vehicles are likely to spend more time utilizing more powerful and expensive in-vehicle entertainment systems, accelerating the expansion of infotainment applications.

CLIENT CHALLENGES

The client is a manufacturer of automotive components and also wanted to enter into the semiconductor component including microcontrollers, procecessor, sensors, MEMS, power management ICs for which they needed an analysis on the overall market scenario. Following are the requirements asked by the client:

- Market size in terms of USD and units considering FY 2022-2031 along with growth rate
- Regulatory requirements and standards
- Current and future technological trends
- Supply chain analysis and value addition
- Company comparative analysis in terms of market share, product offering, strength & weakness, technological facet, strategical aspect and others of both leading players and market disruptors
- Pricing analysis of top products and model preferred

DBMR APPROACH/RESEARCH METHODOLOGY

Data Bridge Market Research approach involved the usage of both primary and secondary research methodologies to estimate, analyze and validate the data. The market size has been derived considering both top-down and bottom-up approaches. The bottom-up approach includes tracking down the trackable revenue such as, revenue earned by the different companies through its focused products/solutions along with its geographical sales. Moreover, strategic initiatives, pricing, and other factors were also studied. The entire data was collectively analyzed and summarized to get the market numbers on the country and regional level. The same data is validated by using top top-down approach. Top-down approach starts with a broader view in which we examined the focused and parent market on a global level first. This is further followed by breaking it down into segmental and on the regional level.

For this, we conducted a literature survey where we referred to different secondary sources such as the company's annual report & SEC filing, whitepapers, government associations, press releases, journals and others. We also considered data from various paid sources such as Hoovers, Factiva, and others. The entire secondary study has been bifurcated into market assessment, technology assessment and company assessment.

Finally, data validation was done through primary research by different primary respondents, which include key industry participants, subject-matter experts (SMEs), C-level executives of key market players, and industry consultants, to obtain and verify critical qualitative and quantitative information, and assess future market prospects. The primary method involves e-mail interactions, LinkedIn and telephonic interviews with others to finalize the number.

Hence, by following the above-mentioned approach, market insights were provided to the client accordingly.

OUTCOME AND BUSINESS IMPACT

DBMR have an extensive experience building data-intensive and goal-oriented methodologies to ensure the optimal use of semiconductors in autos. In addition to developing a semiconductor component, our analysts gave an insightful assistance and consulting services to maximize the possibilities of semiconductors in cars.
Company competitive analysis helped the client to analyze the market strategies and also to identify the market trends considering several parameters such as strategic development, product positioning, application reach, growth rate, technological aspect, strength or weaknesses and others. This has ultimately helped the client towards accelerating their product development with increased efficiency
DBMR also suggested to form strategic alliances with raw material supplier, software vendors and other important members of the semiconductor components for new commercial prospects. Despite sanctions and export limitations, regulating the global circulation of semiconductor components remains a hard problem. Thus, the large network of distributors makes it nearly impossible to accurately track the transfer of these components.
Thus, technology alliances, supply contracts, and joint ventures helped in expanding the market penetration, stimulating innovation, and in generating profitable growth opportunities.
Highlights on the latest developments such as AI, Machine Learning, connectivity technology, 5G, vehicle electrification, safety and others in automotive semiconductors were stated to incorporate the same while producing the same products.
DBMR also showcased all the relevant rules and regulations on country level which are offering the legal protection, lowering the likelihood of fines, penalties, lawsuits, and regulatory consequences. This will enable the client to operate within legal limitations.

Conclusion

Data Bridge Market Research has provided in-depth insights in relation with the power electronics and automotive software to cater each requirement. Adding to this, the report's factual and consolidated information will help the client to evaluate the company's growth in terms of technology, penetration and can also be further utilized for decision making and future planning. Apart from this, the client can even access/capture the business opportunities from the reports' information.