Automotive Power Electronics Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 100 pages | Mordor Intelligence

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Report description:

The Automotive Power Electronics Market was valued at USD 3.12 billion in 2021 and is expected to reach USD 5.20 billion by 2027, registering a CAGR above 4% during the forecast period (2023 - 2028).

The COVID-19 pandemic has severely impacted the automotive industry across the world. The disruptions in supply chain activities, the interruption in large-scale manufacturing, restrictions on travel, and the decreased sales of light vehicles in 2020, are responsible for the declining growth of the market.

Besides, the U.S.-China trade war and halt in exporting raw materials from China have impacted market revenue. However, as economic activities resume in the latter half of 2020, the market is expected to regain momentum during the forecast period.

Compliance with upcoming safety and vehicle emission standards and increasing demand for vehicle connectivity, infotainment, and powertrain electrification will drive the market for automotive power electronics during the forecast period. In addition, the rising need for electric vehicles is likely to drive the market.

Asia-Pacific region is expected to dominate the market, followed by Europe and North America during the forecast period. Europe and North America are expected to witness positive growth during the forecast period, owing to the rising demand for electric vehicles.

Automotive Power Electronics Market Trends

The Passenger Vehicle Segment Anticipated To Hold Largest Market Share

The passenger vehicle segment significantly contributes to the automotive power electronics market. The increased demand for safety systems and fuel-efficient technology associated with vehicle power trains in emerging markets are fueling factors for the dominance of passenger vehicles.

For the past 5 or 10 years, passenger vehicles are getting installed with various safety, comfort, entertainment, and vehicle management features. This is because of factors such as changing preferences of vehicle buyers supported by government legislation towards enhancing vehicle safety. OEMs are also quite active in launching new variants and models of vehicles that will fulfill the need of customers. Increasing populations in developing economies also encourage OEMs to add specific features in new models of passenger vehicles.

This is done to highlight one's products among other products available in the market. OEMs, Tier I, and Tier II also try to deploy new technology or features in the mass-produced vehicle category, i.e., passenger vehicles. These factors are responsible for the dominance of the passenger vehicle segment in the automotive power electronics market.

The Asia-Pacific Region is Likely to Dominate the Market

The Asia-Pacific Automotive Power Electronics Market is expected to hold a significant share in the market during the forecast period. China, South Korea, and Japan account for the largest share of the automotive power electronics market in the Asia-Pacific region. The Asian-Pacific region's market growth can be attributed to the high vehicle production and increased use of advanced electronics in Japan, South Korea, and China.

These countries' governments have recognized the automotive industry's growth potential and have consequently taken different initiatives to encourage major OEMs to enter their domestic markets. For instance,

The Ministry for Road Transport and Highways (India) planned to adopt automotive power electronics features by 2022.

Moreover, the region is home to leading semiconductor suppliers and Tier-1 manufacturers. Hence, adopting electronic components in advanced vehicles post-pandemic is expected to drive market growth over the forecast period.

Automotive Power Electronics Market Competitor Analysis

The automotive power electronics market is moderately consolidated, with major players dominating the market. Companies are focusing on expanding their product portfolio and are investing in R&D activities to develop advanced products. For instance,

In May 2022, STMicroelectronics collaborates with Microsoft to streamline the development of highly secure IoT devices.
In March 2020, Infineon Technologies launched new packages for its 80 V and 100 V MOSFETs with OptiMOS 5 technology to meet the different requirements of different 48 V applications.

Some major companies dominating the automotive power electronics market include NXP Semiconductors, Infineon Technologies AG, Texas Instruments Incorporated, Renesas Electronics Corporation, and STMicroelectronics.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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