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Semi Autonomous Market For Passenger Car By Type (Adaptive Cruise Control, Lane Keep Assist, Autonomous Park Assist & Adaptive Lights), By Technology, By Geography, & Autonomous Car (Qualitative Trends & Technologies) – Global Trends & Forecast To 2018

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Abstracts

Automotive industry was one of the key industries affected by the economic downturn in 2008 (global sales 68.1 million units) and 2009 (global sales 65.4 million units). However, the scenario has changed since 2010 (global sales 74.6 million units). This upward trend continued in 2011 and 2012. The present global demand for automobiles is increasing at a significant rate, indicating the pace at which the industry is heading out of the recovery phase. As stated in the recent publication of Organisation Internationale des Constructeurs d' Automobiles (OICA), the global vehicle sales in 2012 reached to 81.7 million units, of which, passenger car sales were 60.5 million units. With the escalation in the vehicle fleet all over the globe, there is an increase in the number of road accidents, casualties, and deaths. In addition, the increase in the global vehicle fleet is increasing exhaust emissions, and thereby greenhouse gases (GHGs). Thus, challenging environmental regulations.

According to the WHO's Global Status Report on Road Safety (2013), total number of deaths due to road accidents is 1.24 million per year. This has diverted the focus of governments and automobile manufacturers towards R&D of the near-autonomous and autonomous car features/systems. The governmental agencies are studying various vehicle safety features for their feasibility, some of which would be included as mandates in the upcoming safety regulations across the world. The automobile manufacturers have started focusing on the manufacture of passenger cars installed

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with advanced safety features. Investments in the R&D centers, collaborations with the technology manufacturers and launching new passenger cars with default safety features are indicative of the same.

According to a group of industry experts, a near-autonomous or an autonomous vehicle is the common solution for all these aforesaid concerns. The term ‘near-autonomous’ or ‘autonomous’ is not confined to just vehicle safety. However, the scope has been broadened to passengers, pedestrians and overall road safety. As these cars are automated, they will drive and direct themselves without human manipulation, in response to the external conditions, hence leading to a decrease in chances of accidents. Near-autonomous or autonomous driving would also lead to better fuel efficiency and reduction in GHG emissions. However, autonomous cars are either in their R&D stage or available in prototypes.

The near-autonomous cars have proven their safety and other benefits over the normal passenger cars. The factors such as improved lifestyle, changing buyer’s preferences, increased average miles driven per year and increase in the development of compatible infrastructure has increased the need for near-autonomous cars. In addition to aforesaid reasons, due to changing governmental safety regulations, various safety features are installed in vehicles from manufacturers as OEM. This trend is estimated to continue in the next five years, where maximum number of vehicles would be available with pre-installed near-autonomous features.

The autonomous vehicle is any vehicle capable of sensing the external environment with the help of technological systems installed (such as GPS-Satellite, mobile infrastructure, data from other cars or roadside features etc.) and navigate the car to the desired destination with minimal human intervention. They are also known as driverless cars or self-driving cars, informally. The vehicle automation involves multidisciplinary streams of engineering such as mechanical, electrical, control and computer in combination with artificial intelligence. The fundamental reasons such as increasing concerns about vehicle & road safety, increasing traffic congestion, volatile fuel prices, stringent environmental regulations, changing buyer’s preferences as a result of improved lifestyles etc., have diverted the attention of governments as well as automotive manufacturers, towards autonomous cars. According to some of the industry experts and studies, driver error is the most common reason for accidents, and hence autonomous cars are said to be the best solution. These cars can be used on sharing basis, as taxis, thus, reducing traffic load, and increasing road capacity. There would be removal of redundant passenger – driver as the car is autonomous.

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The penetration of near-autonomous and autonomous passenger cars would majorly depend on the technological advancements; cost effectiveness of the technology, public awareness, acceptance of the technology, and legal aspects of these technologies such as safety regulations, vehicular mandates etc.

SCOPE OF THE REPORT

Near-Autonomous Passenger Cars Market

NEAR-AUTONOMOUS PASSENGER CARS: MARKET REVENUE, BY TYPES, 2013 VS 2018 ($MILLION)

Near-Autonomous Passenger Cars Market

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8.5 Continental AG
8.6 Delphi Automotive Plc.
8.7 Denso Corporation
8.8 Ford Motor Company

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8.9 Hitachi Ltd.
8.10 Hyundai Mobis
8.11 Magna International
8.12 Mando Corp.
8.13 Mercedes-Benz
8.14 Mobileye NV
8.15 Nissan Motor Company
8.16 Robert Bosch GmbH
8.17 Toyota Motor Corporation
8.18 TRW Automotive Holdings Corp.
8.19 Valeo
8.20 Velodyne Lidar Inc.
8.21 Volkswagen
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About

The near-autonomous passenger car market is witnessing lot of technological advancements and developments in the recent years. On-going studies on the feasibility of the introduction of some of the near-autonomous features (such as Adaptive Cruise Control, Adaptive Front Lights, Lane Keep Assist etc.) has triggered an intense competition amongst the near-autonomous passenger car and system manufacturers. This competition would lead to the development & manufacturing of the innovative, as well as advance car safety and driving systems. Government agencies, such as NTSB and NHTSA, in U.S. are studying the prospects of mandating Adaptive Cruise Control, LKA/LDWS. Other reasons such as concerns regarding safety, changing buyers' preferences, enhanced driver experience, increasing demand for premium passenger cars will also benefit the near-autonomous passenger car industry to grow in the next five years.

The near-autonomous passenger car market is projected to be $10.6 billion in 2013 and is estimated to reach $21.4 billion by 2018, growing at CAGR of 15.08% over the same period. The flourishing demand for premium cars across the globe, along with existing as well as upcoming stringent safety regulations, will drive the market for near-autonomous passenger cars. The near-autonomous passenger car market in 2013 is projected to be dominated by Adaptive Cruise Control and Adaptive Front Lights, in terms of revenue.

The major automobile manufacturers such as Audi (Germany), BMW (Germany), Mercedes-Benz (Germany), Volvo (Sweden), and others are manufacturing passenger cars installed with near-autonomous features to provide better vehicle, driver & passenger safety& comfort, better handling, high performance, and environment friendly cars. The near-autonomous passenger car system market is dominated by the key players such as Continental (Germany), Robert Bosch (Germany), Denso (Japan), Magna (Canada), and Valeo (France). These five significant companies, together, held about 70% of the total market in 2011.

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