

Drive by Wire Market by Application (Brake, Park, Shift, Steer, Throttle), Sensor (Brake Pedal, Throttle Position, Park, Gearshift, Handwheel, Pinion), Vehicle (On & Off-Highway, BEV, PHEV, FCEV, Autonomous), Component & Region - Global Forecast to 2027

<https://marketpublishers.com/r/DFE7D6F7B26EN.html>

Date: November 2022

Pages: 302

Price: US\$ 4,950.00 (Single User License)

ID: DFE7D6F7B26EN

Abstracts

The automotive drive-by-wire market is projected to grow from USD 20.6 billion in 2022 to reach USD 27.9 billion by 2027 at a CAGR of 6.2% during the forecast period. Increasing EV sales, developments in autonomous vehicles, and growing sales of luxury vehicles are boosting demand for drive-by-wire systems. Implementing stringent safety norms is also driving the adoption of automotive drive-by-wire systems.

'Construction and Mining drive-by-wire segment is expected to be the fastest-growing segment.'

The construction and Mining segment is expected to be the fastest-growing drive-by-wire during the forecast period. Development of infrastructure projects, mining activities, and growth of logistics and freights industry distribution centers are expected to boost off-highway vehicle demand. Moreover, OEMs are shifting focus to introduce drive-by-wire technologies in off-highway equipment for better operational accuracy and fuel economy. In many developing countries like China, India, and other African nations, governments have announced major billion-dollar infrastructure projects to boost overall construction and mining vehicle segments. This will allow vehicle manufacturers to build more drive-by-wire-enabled systems.

'Drive-by-wire Actuators would showcase the largest market during the forecast period.'

Actuators will have the largest market share during the forecast period. The actuator is

an important component of the drive-by-wire system and is used in all drive-by-wire applications considered in the study. Every drive-by-wire application uses one or more actuators. Since multiple actuators are employed in a vehicle, the volume of actuators is expected to grow with the increasing popularity of premium vehicles and the adoption of electronic circuits in ICE vehicles. As there is more innovation towards reducing weight and increasing space, there will be an eventual move towards adopting more and more electromechanical systems, and hence more actuators like hydraulic, electric, pneumatic, and mechanical actuators will find their place inside the vehicles as they are small, efficient, and moderately priced compared to larger mechanical systems.

Asia Pacific is the largest market for the automotive drive-by-wire market

Asia Pacific countries such as China, India, South Korea, and Japan account for a major share of the drive-by-wire market due to the demand for premium vehicles equipped with advanced systems. Many premium vehicles are equipped with drive-by-wire systems. Vehicles like Volvo XC-40, TATA Altroz DCA, and BMWs drive are some examples of vehicles with drive by wire system. Also, with stringent emission norms in the Asia Pacific, the drive-by-wire market is expected to boost. This is because the use of X-by-wire systems reduces the overall weight and hence makes the vehicle lighter, thereby making the engine function more efficiently. The Chinese market is shifting toward the adoption of advanced technologies, such as automated manual transmission in mid-size and economy-class vehicles. As a result, manufacturers are investing in deploying advanced technologies like drive by wire systems into their vehicles like throttle by wire, shift by wire etc. Various developments in drive-by-wire technology, particularly in components such as sensors and actuators, are also popularizing drive-by-wire among various automakers. Thus, considering the aforementioned factors, drive-by-wire adoption is expected to grow significantly in the coming years.

Breakdown of primaries

The study contains various industry experts' insights, from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type: Supply-side – 70%, Demand-side – 30%

By Designation: C level - 20%, Director Level– 20%, Others– 60%

By Region: Asia Pacific - 80%, Europe - 10%, North America - 10%

Note: Others include Design Engineer, Exterior Drive-by-wire Designer, etc.

The key players in the automotive drive-by-wire market are Bosch (Germany), Continental (Germany), ZF (Germany), Infineon Technologies (Germany), Nexteer Automotive (US). The key strategies adopted by major companies to sustain their position in the market are expansions, contracts and agreements, and partnerships.

Research Coverage

The automotive drive-by-wire market By application (throttle-by-wire, steer-by-wire, shift-by-wire, brake-by-wire, and park-by-wire), By sensor type (throttle pedal sensor, throttle position sensor, pinion angle sensor, hand wheel angle sensor, gear shift position sensor, park sensor, and brake pedal sensor), By component (ECU-Electronic Control Unit, ECM-Engine Control Module, actuator, feedback motor, parking pawl, ETCM-Electronic Throttle Control Module, and ETCU, Electronic Transmission Control Unit), By on-highway vehicle type (passenger car, light commercial vehicle, bus, and truck), By off-highway vehicle type (construction & mining equipment, agriculture tractors, and forklift), By electric vehicle type (BEV, HEV/PHEV, and FCEV), Autonomous vehicles by application (throttle-by-wire, steer-by-wire, shift-by-wire, brake-by-wire, and park-by-wire), Electric vehicle drive-by-wire market by sensor type (throttle pedal, sensor, throttle position sensor, pinion angle sensor, hand wheel angle sensor, gear position sensor, park sensor, and brake pedal sensor) , By region (Asia Pacific, Europe, North America and RoW).

Key Benefits of Buying the Report:

The report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall automotive glass market and the sub-segments. This report will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies. The report also helps stakeholders understand the market's pulse and provides information on key market drivers, restraints, challenges, and opportunities.

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