

CHIPS FOR CARS

## ***Bosch is growing faster than the market***

**The German automotive supplier is also semiconductor manufacturer. In 2016, every new vehicle was equipped in average with more than nine chips from Bosch.**



*Huge investment: Second wafer fab in Dresden planned for 2021  
(Source: Bosch)*

Been making semiconductors for more than 45 years, Bosch today is one of the world's leading manufacturers of chips for mobility applications. "Semiconductors may have been around for a long time, but we have yet to realize their full potential. These components are key to modern-day mobility, and it is impossible to imagine cars today without them," said Jens Fabrowsky, member of the executive management of Bosch's Automotive Electronics division. "When it comes to semiconductors for cars, we have a singular advantage: Bosch is the only company equally at home in both the automotive and semiconductor industries." In 2018, every new vehicle featured semiconductors worth 370 dollars, and due to increasing electrification and automation, demand for chips in vehicles is expected to rise further over the next few years.

The company offers CAN transceivers and CAN stand-alone controllers as well as CAN IP cores. As the originator of the CAN communication technology, Bosch provides these products for Classical CAN and CAN FD. Also the next CAN generation, CAN XL, is supported. Recently, the company launched a [CAN XL web page](#), in order to indicate its commitment. The CiA Special Interest Group (SIG) CAN XL chaired by Dr. Arthur Mutter from Bosch specifies the data link layer. Two related CiA Task Forces develop the physical layer and higher-layer functions. First technical details will be presented at the [17<sup>th</sup> international CAN conference](#) next year.

### **Semiconductors for the auto industry**

The global semiconductor market is worth billions: the market research company Gartner expects global semiconductor sales to reach 451 billion dollars in 2018. By 2019 alone, the market will have grown at an annual growth rate of more than five percent (source: PwC). "The Bosch semiconductor business is growing faster than the market," stated Fabrowsky. In the semiconductor market, the ultimate discipline is making chips for vehicles. Bosch has been making vehicles smart since the 1970s, when it started equipping them with its application-specific integrated circuits (ASICs). In a car, chips are exposed to strong vibrations and extreme temperatures that range from far below zero to far above 100 °C. Developing semiconductors that can withstand these stresses for a vehicle's entire lifetime is an intensive process. "Our comprehensive expertise in semiconductors helps us to both develop new automotive functions and steadily improve the chips themselves," said Fabrowsky. Bosch holds over 1 500 patents and patent applications for engineering and manufacturing its semiconductors. This includes also patents on CAN technology.

Bosch is underpinning its growth strategy for semiconductors with the single largest investment in the company's history: it put some one billion euros into a new wafer fab in Dresden, which will manufacture 300-mm wafers. Following a rollout phase, pilot manufacturing operations are expected to start at the end of 2021. Compared to conventional 150-mm and 200-mm wafers, 300-mm wafer technology offers greater economies of scale. After Reutlingen, the Dresden plant will be Bosch's second wafer fab in Germany.

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