



# Staying on track

**Driver assist systems can help save lives by alerting driver of potential danger.**

The majority of traffic accidents are caused by human error. In the future, computer-controlled cars will significantly reduce the number of such accidents. Driver assist systems, such as adaptive cruise control (ACC), brake assist systems, or lane departure warning systems (LDW), can save lives. Lane departure warning systems warn the driver if the vehicle is drifting out of its lane. The LDW determines the vehicle's position in the lane with the use of various optical sensor systems and computers. If the car is in danger of drifting out of the lane, the system activates an electric motor in the steering wheel that causes the wheel to vibrate, warning the driver.

A luxury car manufacturer has engaged maxon motor to supply the motors for this application. The base DC brushed motor is maxon's A-max 16 (precious metal brushes, 2 W), modified for the application with an eccentric weight and a specified bearing. In order to prevent the other vehicle systems from being affected by the electromagnetic fields of the motor, it has been equipped with special EMI suppression for automotive applications. The small drive system must meet specific requirements: It needs to be low-noise, dynamic, feature high power density, and fit in a narrow space – requirements that maxon motor's small A-max 16 easily masters.



**maxon A-max 16 brushed DC motor** – This drive with a diameter of 16 millimeters (precious metal brushes, 2 Watt) was developed for use with an eccentric weight and a specified bearing.

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