

Hands Off Detection (HOD) Sensing System

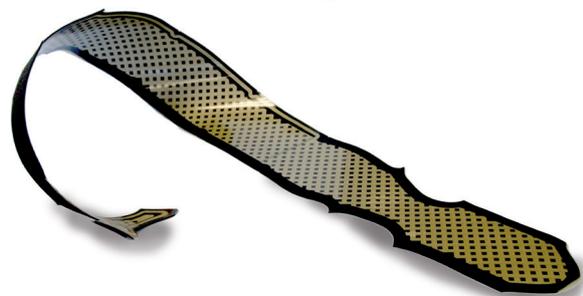
Accurate detection of driver hands on/off steering wheel control

Today, more and more advanced driver assistance and automated driving systems are being offered and developed by vehicle manufacturers. While today's assistance systems require the driver to keep its hands on the steering wheel, the automated driving will give the driver the freedom to cede vehicle control and do other tasks. But even then, there are still situations in which the vehicle needs to give the driving function back to the driver. Hence it is crucial to know via hands on/off detection who controls the vehicle. Vehicle safety regulations nowadays require hands off warning for various functions such as lane keeping assist systems (UN R79).

IEE has developed a capacitive sensing system that integrates into the steering wheel, the solution to monitor whether the driver's hand is on the steering wheel and controls the drive.

HOD capabilities:

- Flexible sensor mat that smoothly integrates into any steering wheel, suitable for any steering wheel supplier
- Detects human contact with the steering wheel.
- Notifies the vehicle within less than half a second when the driver does not have one hand on the wheel.
- Provides input for the vehicle to alert the driver and remind him/her to grab the steering wheel.
- Reliable detection in all traffic circumstances
- Compatible with steering wheel heaters, not impacted by water or humidity
- Helps OMS to be compliant with current regulations



Contact Us

For more information, please visit www.iee-sensing.com or send us an email at transportation@iee.lu.



The HOD system

The HOD system has the potential to support the following:

- Deactivation of automated parking. When it recognizes that the driver placed a hand on the steering wheel, it can alert the automatic parking system, allowing it to deactivate.
- Automated driving. In automated vehicles, knowing whether the driver controls the vehicle (hands on), or if the vehicle is in self-driving control mode (hands off), is crucial. Especially the transition phase between the manual and automated driving modes requires precise hands on/off information.

Awarded technology for superior innovation, technological advancement and business performance

IEE has gathered unparalleled experience in electrical field sensing, and our safety-related devices have equipped millions of cars for major auto manufacturers around the world. More than 1 million cars have already been equipped with our HOD sensor.

Automotive News PACE Award
Driving Systems & Safety Category
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About Us

IEE is a worldwide pioneer in passenger presence detection and one of the leading suppliers of advanced automotive interior sensing solutions. Founded in 1989 and headquartered in Luxembourg, it has operations in Europe, America and Asia. The innovation driven company has a long history in developing and manufacturing cutting-edge sensing systems for automotive industry, building management and eHealth. IEE employs 4,100 people worldwide and more than 10% of the company's workforce is engaged in Research & Development.

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