



# Hands Off Clutch – The add-on for your steering system test bench

Test your ADAS/AD applications as close to reality as possible

Especially for driving functions from the semi-automated level onwards, the Hands Off Clutch system plays a major role. Vehicles from this level can take over longitudinal dynamics as well as lateral dynamics. Therefore, for example the lane keeping assist system can keep the vehicle centered in the lane, or the park assist function can take control over the vehicle. To thoroughly test these functions, steering system test benches are used that take over steering with a servomotor control.

At this point, the Hands Off Clutch from IPG Automotive comes into play. So far, the conventional assist systems expected the driver to keep his hands on the steering wheel. In future, the driver will have the option to safely hand over control to the vehicle to be able to fulfill other tasks at hand. Extensively

test your driving functions moving toward fully automated driving, and extend your steering system test bench with a new functionality – for testing in accordance with ISO 26262. The new clutch system allows to decouple the power transmission from the steering actuator. It therefore prevents wrong measurements caused by the faulty addition of power in the so far necessary but complex zero torque control. In addition, the system enables variable modeling of the moment of inertia via a rotational mass for different steering wheels and consequently allows to carry out all tests easily, including tests with different combinations. Hence, steering torque assistance functions as well as independent steering functions can be tested under realistic conditions.



#### Use Cases:

- Lane change assist
- Lane keeping assist
- Collision avoidance system
- Highway pilot
- Park assist
- Automated valet parking

## Your benefits at a glance

- Backlash-free torque transmission up to 180 nm
- Quick and frictionless uncoupling in 70 ms
- Closed when currentless
- Direct attachment to steering column without steering wheel possible
- Adjustable moment of inertia
- Hardware driver available in CarMaker/HIL
- Handover maneuver hands on/hands off with reproducible and deterministic real-time conditions
- Validation of seamless handover and stabilization of steering assistance functions

➤ Find more information on our website at

[www.ipg-automotive.com/products-services/test-systems/test-benches](http://www.ipg-automotive.com/products-services/test-systems/test-benches)



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