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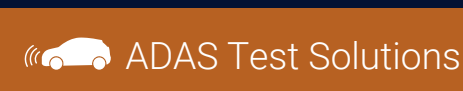
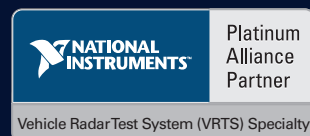
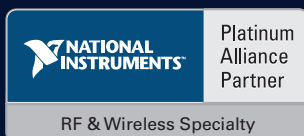
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**AUTOMOTIVE CAMERA TEST SOLUTIONS  
FROM VALIDATION THROUGH PRODUCTION**

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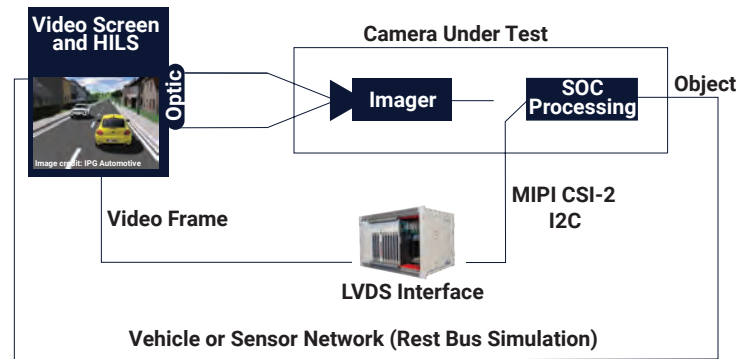
# AUTOMOTIVE CAMERA TEST SOLUTIONS FROM VALIDATION THROUGH PRODUCTION



## Automotive Camera Test Solutions

### Verification and Validation

A Konrad Technologies camera image injection method for verification and validation of camera sensors is illustrated on the right. It includes a video screen and Hardware in the Loop System with IPG CarMaker software, LVDS interface with the Konrad Technologies ABEx an Analog Bus Extension for PXI. More information regarding camera sensor test for verification and validation, in-vehicle data recording and product reliability testing is available by request.



### Manufacturing

- Turn table with 6 stations
- Lens holder screwing
- XY-phi adjustment
- UV glue curing
- Glue curing inspection via machine vision
- NI IMAQ Vision + TestStand

### Applications

- In-Vehicle Data Recording
- HIL/SIL Applications
- R&D Process
- Product Reliability Test
- Production Test
- Data Recording
- Data Replay
- Data Sniffing

Camera Assembly and Adjustment Test System



## ADAS Camera Test Solutions

### Screen and Relay Lens

The Konrad Technologies automotive camera tester allows for fully automated and reproducible tests to ensure the functionality of camera-based driver assistance systems. The automotive camera simulator test system consists of a vision system capable of stitching data from multiple cameras into a 360° image.

### LVDS MIPI CSI-2 Interface

The Konrad Technologies Low-voltage Differential Signaling Tester Platform is designed to cover multiple use cases with one system architecture. The test technology includes three channels recording and outputting in parallel, six channels monitoring CRC/ECC errors in parallel, support for FPD Link III (DS90UB953/54) and GSML2 (MAX9296/9295), full MIPI CSI-2 speed for each channel and deserializer/serializer on daughterboard. The solution can also cover new chipsets by the exchangeable/interchangeable daughterboard approach. Various configurations of the LVDS MIPI CSI-2 interface are available.

## Environment Sensors

Automotive cameras perceive the environment and perform many important tasks, such as lane departure warning, lane keep assistance and autonomous emergency braking. Vehicles can combine data from multiple sensors to perform environment recognition and make decisions accordingly. Konrad Technologies offers an innovative approach to test this technology with Sensor Fusion. The approach combines ADAS sensors with Hardware-in-the-Loop. Objects are simulated in real-time in a virtual environment simulating real world driving scenarios in the lab.

