

KT ADAS/AD Sensor Fusion XiL Test Workbench

The KT ADAS/AD Sensor Fusion XiL Test Workbench is a configurable, PXI-based sensor and chassis XiL test workbench that enables Automated Driver Assistance Systems (ADAS) and Autonomous Driving (AD) functionality to be reliably and safely tested in a lab environment. Combinations of sensors and Electronic Control Units (ECU), with ADAS/AD algorithms can be tested together in a Model, Software, Hardware, Driver, and Vehicle In the Loop (XiL) test. The workbench can be configured for multiple radar, camera, LiDAR, and ultrasonic sensors with connectivity to most 3rd party modelling and simulation software and hardware platforms.

The KT Advantage

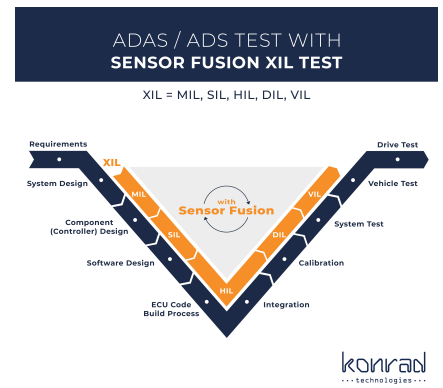
- Future-proof your test plans with a modular and scalable validation test workbench.
- Reduce development time and costs with in-lab regression and repeatability tests.
- Optimize ADAS/AD function by validating component, sub-system, and system level ADAS/AD performance with a single workbench before drive tests.
- Test ADAS/AD functions for corner cases and NCAP, SOTIF cases in a safe, controlled environment.

Application Requirements

- Reliably verify functional performance of ECU hardware, ADAS/AD software, and sensor package effectiveness in a controlled environment across the V-development flow.
- Scalable for different sensor packages consisting of multiple radar, LiDAR, camera, and ultrasonic sensors with connectivity to NI and other 3rd party HiL hardware platforms.
- Safely implement regression and repeatability tests for ADAS/AD software and sub-systems before the drive tests.

KT Solution

- Combines sensor measurements with object identification for reliable ADAS/AD functional tests in the lab.
- Uses a modular architecture to scale for different sensors and sensor combinations with connectivity to 3rd party software and hardware simulation platforms for open and close loop HiL tests.
- Connects ADAS/AD sensors, sub-systems, ECUs and Body and Chassis components for component tests and total vehicle safety feature performance evaluation in a lab for HiL, DiL, and ViL testing before drive tests.



Key Specifications

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| Number of Sensors | Configurable for radar, lidar, camera, and ultrasonic sensors. |
| HiL System | NI HiL or 3 rd party system. |
| Bus Communication | CAN, FlexRay, and Ethernet AV. |
| Type of Tests | Over the Air, Data Injection, Parametric Measurements, and Object identification. |
| Connectivity to 3 rd party simulation tools | Connectivity to multiple simulation packages including IPG CarMaker®, VI-grade CarRealtime®, SCANer®, Hexagon VTD®, monoDrive® etc. |
| Vehicle Component Simulators | Steering, Brake, Custom as needed. |
| Wireless Test | V2X, GPS, Bluetooth. |

System Diagram



Contact Konrad Technologies to learn more about how we can help you increase product quality and accelerate testing timelines.

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