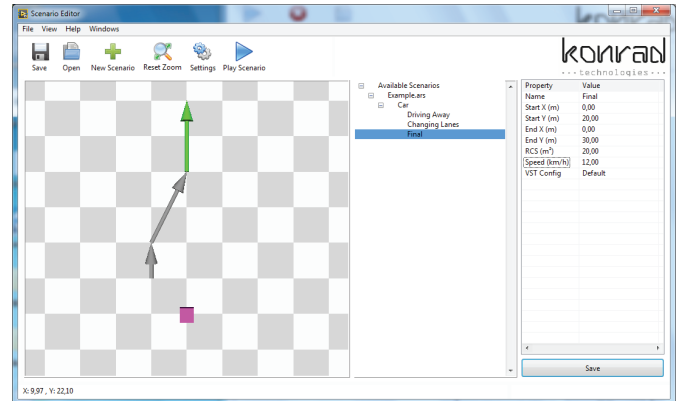


KT Radar Test & Measurement Suite

Simulation and Measurement Software

Key Benefits

- Easy to use
- Configure, play and replay complex driving scenarios in the lab
- Draw custom scenarios with graphical interface
- Interface with third party simulation software
- Customizable with software plug-ins
- Implement RF Measurements



Overview

The KT Radar Test & Measurement Suite (KT-Radar T&M Suite) is an easy to use software suite for verification of automotive radar sensors. The KT-Radar T&M Suite is applicable to all stages of the development cycle, from design to production, and enables test engineers to efficiently test custom scenarios required for the autonomous vehicle. It offers the ideal software capabilities automotive radar sensor engineers are searching for to implement required test applications.

Features

- Simulate driving scenarios in the lab environment
- Work in a controlled and reproducible test frame
- Configure and vary object parameters (RCS, distance, velocity) during a scenario
- Perform Sensor Fusion HIL test by synchronizing different test systems for wireless communications and sensors (radar, camera, lidar, etc.)
- Use customized plug-ins to receive external object parameters through various interfaces (CAN, ethernet, LIN, etc.) for headless operation

Scenario Editor

The software makes testing complex driving scenarios easy with a simple graphical editor. Users can draw their desired test case and edit individual parameters, such as RCS or speed via the Property View. The scenarios can then be replayed or saved to disk for later retrieval.

Application and Technology

With the KT-Radar T&M Suite, users are able to validate backend sensor algorithms. This can range from verifying the behavior of Adaptive Cruise Control functions to ensuring that emergency situations are handled correctly. The KT-Radar T&M Suite allows engineers to test a wide variety of scenarios with or without a Hardware-in-the-Loop (HIL) set-up. Users can evaluate the sensors field of view, detection range and doppler accuracy. The KT-Radar T&M Suite is a scalable and highly extensible solution available in multiple variations.

The RF measurements possible with the KT Radar T&M Suite support the functional verification to meet regional/international regulations and standards (ETSI, FCC, etc.). The KT-Radar T&M Suite enables test engineers to efficiently take a variety of measurements which are necessary when developing an autonomous vehicle.





Sensor Fusion with ADAS iiT and IPG CarMaker

Learn more at www.adas-iiT.com

Supported Measurements

- Occupied Bandwidth
- Antenna Pattern
- Phase Noise, CW and Chirp
- Linearity
- EIRP
- Additional measurements on request

Occupied Bandwidth

- Measure the occupied bandwidth of the signal and corresponding center frequency
- Ensure the sensor meets government emissions specifications
- Verify the carrier frequencies are within design tolerances

Phase Noise, CW and Chirp

- Calculate the phase noise of the sensor in chirp mode
- If available phase noise measurements can also be performed on a CW tone

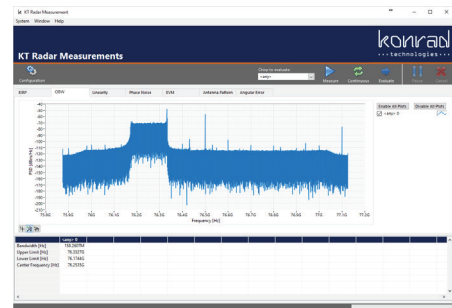
Chirp Identification

- Identify the different chirps for post signal processing
- Perform chirp-specific measurements
- Analyze only specific sections of the signal

Plug-ins for Hardware in the Loop

The plug-in interface enables remote control of the target generation aspects of the software. This allows the whole system to be integrated into a HIL setup and run headlessly. Target information can be received via CAN or Ethernet and immediately applied without any user interaction.

The KT-Radar T&M Suite has an open interface that allows for further extension via software integration with, for example, IPG CarMaker. The test program pictured below displays this approach with Sensor Fusion, IPG CarMaker and V2X Communication.



Occupied Bandwidth (OBW)

Antenna Pattern

- Measure the two dimensional antenna pattern of a radar sensor using the KT Dual Axis Rotation System (KT-DARS)
- Determine the influence of bumper, radom and emblem materials
- Confirm sensor functional performance according to specifications

Linearity

- Calculate the deviation from an ideal Frequency Modulated Continuous Wave (FMCW) ramp based on user specifications
- Verify ramp slope as well as maximum and minimum deviations

EIRP

- Measure the effective/equivalent isotropic radiated power of the device under test.
- Use EIRP measurements to confirm conformance to regulations.

Global Deployment & Service

Europe	info@konrad-technologies.de
Asia	china.info@konrad-technologies.cn
Americas	info-usa@konrad-technologies.com
United Kingdom	sales-uk@konrad-technologies.co.uk

Contact us!

Our highly qualified technical sales and project management teams are eager to help customers discover their ideal test and measurement solutions.

www.konrad-technologies.com