ADAS Evaluation

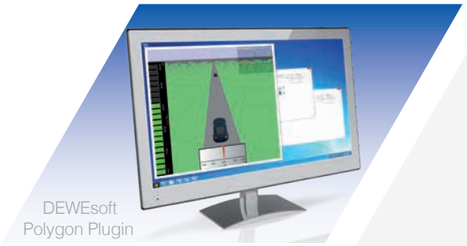
Advanced Driver Assistance Systems

User Advantages

- Easy installation and operation
- Pre-configured, sophisticated and tested system
- Uncomplicated, quick installation in vehicles
- All data of all vehicles are available online at a glance
- Reproducible driving maneuvers using online driver guidance
- Online 3D distance measurement between moving objects (vehicles, pedestrians) and fixed objects (lane, obstacles)
- Suitable for pedestrian tracing
- Data security by in-situ quality assurance
- Time saving by automatic reporting
- No synchronization of data required

Validation of Driver Assistance Systems

In cooperation with its partner companies DEWETRON and DEWEsoft, GeneSys Elektronik GmbH has developed a user firendly ADAS test suite. One and the same system enables quick and precise evaluation of driver assistance systems through synchronized data acquisition of relative movements vehicle-to-vehicle and vehicle-to-environment. The user is supported by an online visualization and an In-situ-evaluation of recorded data.



DEWEsoft
Polygon Plugin

ADAS Testsuite

ADMA Models and more

The ADAS Testsuite is compatible with all ADMA models featuring RTK2-DGNSS. By this means, a position accuracy of 2 cm can be achieved. The **ADMA-G-Pro+** system meets all accuracy requirements and partially disturbed GNSS reception is tolerated. The **MEMS based systems** requires good GNSS reception.

ADMA-Slim and SP80 can be used to trace pedestrians and to localize fixed objects.

Solutions for real time detection of audio-visual warnings are available as well.

Measurement Data Recording

DEWETRON and DEWEsoft offer various data acquisition systems: These distinguish themselves by perfect synchronization of all data, either ADMA data, vehicle data (CAN, FlexRay, XCP) analog data (e.g. Signalgong) or video data (e.g. Dashboard).

Thanks to GNSS-Sync-Clock WiFi transmission, the data of all devices are synchronously calculated, displayed and recorded on a single DAQ.

By means of the DEWETRON or DEWEsoft software, all data including vehicle movements are visualized and recorded and the ADMAs are controlled. Individual online and offline calculations are possible.

DGNSS Correction Data

NTRIP modem
For online reception of correction data from a service provider (SAPOS, AXIO-NET, SWEPOS, etc.), particularly on public roads.

GPS Base Station
Wireless modem or WiFi for transmission of DGNSS correction data to local proving grounds.

Possible Applications

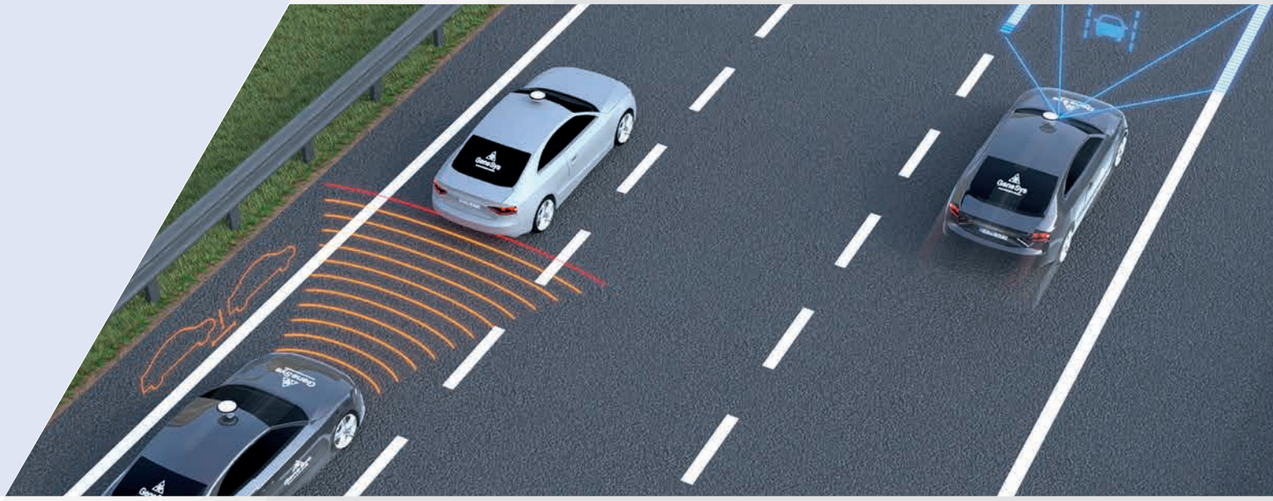
Driver assistance
- Ultrasonic sensors
- Long range Radar
- Video systems

Active safety
- ACC (Adaptive Cruise Control)
- FCW (Forward Collision Warning)
- BA/AEB (Braking Assistant, Autonomous Emergency Brake)
- Blind Spot Detection

Passive safety
- Crash detection
- Rollover detection
- Pedestrian safety

Lane Deviation

LDW, Functional Safety



Precise Lane Tracing

The ADAS Testsuite can also be deployed for precise lane tracing or measurement of vehicle lane deviation.

The components are identical: ADMA, DEWETRON or DEWEsoft DAQ, DGPS correction data.

The reference lane for measuring the vehicle deviation can be generated in various ways: by means of ADMA or SP80 measurement, KML import or by propagading the covered track (straight, circular).

BirdsEye
DEWETRON Plugin

Possible Applications

- LSS (Lane Departure Warning, LDW, Lane Keeping Assistant, LKA)
- PA (Parking Assistant)
- Lateral Offset (braking, load change)
- Cross wind sensitivity
- Steady state circular test (braking, load change)
- Lane change
- Traffic Sign Recognition
- ISO 26262 (Functional Safety of Road Vehicles, e.g. for ESP and EPS)

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