AUTOMOTIVE DIVISION

LEANE
international

VEHICLE TESTING SOLUTIONS
CUSTOMIZED SOFTWARE AND OUTSOURCING

Our support, your success...

YOUR PROFESSIONAL TEAM SUPPORT

Thanks to many years of experience in the field of sensors and data acquisition systems, our strong partnership with the FCA group in objective testing and our improved team, including professional drivers and vehicle data analysis experts, Leane is able to support your testing activities with data acquisition, data analysis, test validation, post processing and reporting.

STATE OF THE ART TESTING EQUIPMENT

Sensors & Data acquisition systems

DEWESoft® measurement innovation

Reliable and accurate measurement of all parameters for complete characterization of vehicle dynamics, including CAN messages, GPS (including RTK correction) synchronized video and audio signals, with wireless connection with the Target Vehicle for AEB/FCW testing.
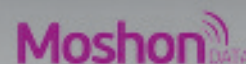
GNSS/IMU system for Vehicle Dynamics

GeneSys

State of the art GNSS/Inertial System for vehicle dynamics testing. RTK DGPS correction with base station or GPRS-DGPS-BOX and WiFi kit makes thid solution ideal for ADAS testing on track and on public road.

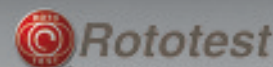## Driving robots/Driverless System & ADAS Testing

AB Dynamics

Steering, driving, braking, clutch and gearshift robots are essential for running ADAS tests according to the EuroNCAP test protocol, but may also improve traditional vehicle dynamics testing. Driverless systems with remote control are available too, for the most dangerous test scenarios.

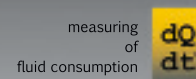## Vehicle target and towing system for ADAS test

Moshon DATA

MoshonData provides a range of soft vehicle targets and its innovative towing system suitable to create scenarios for testing AEB, FCW and other ADAS functions. The EVT (EuroNCAP Vehicle Target) is officially approved by EuroNCAP.

Chassis dynamometers

Rototest

Turnkey solutions for flexible and all around analysis of the powertrain unit, from homologation cycles to real driving emulation, WLTP fuel consumption, power and torque curves to NVH. 2WD or 4WD driveline, ICE, Hybrid and Full Electric power plants are all supported.

Vehicle & Test Bench fuel consumption meters

measuring of fluid consumption $\frac{dQ}{dt}$

Accurate measurement of highly dynamic fluid flow rate, for engine and roller test rigs or for on vehicle tests, without pressure drop and in a wide range. Solutions for applications ranging from consumption of fuel and ADblue to component leakage.
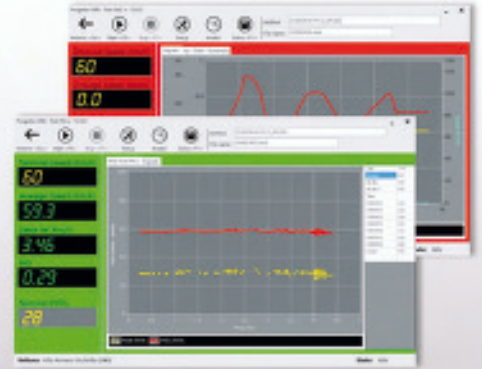
Handling, Ride and Braking

HRB is the new Handling Ride Braking test system developed by Leane. Dewesoft software is run behind a user interface designed for the test track, which supports the driver through the execution of standard or customized test protocol.
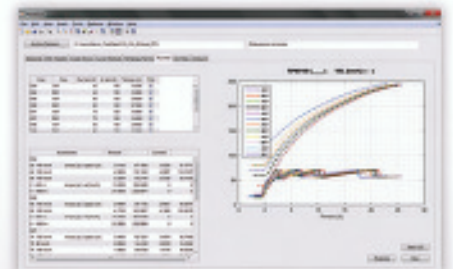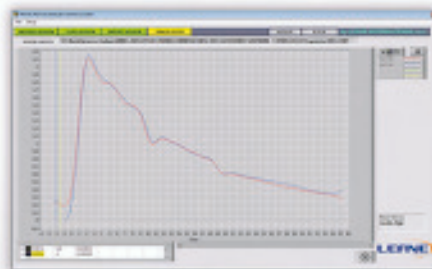

Objective vehicle dynamics
- Frequency sweep
- Slowly increasing steer
- Step Steer & release
- On center Sine
- Power-off in a turn
- Braking in a turn
- Lane change
- Sine with dwell
- ...

and the possibility to add any test protocol based on customer specification.

Performance & Fuel Consumption

The PCF Test System based on our Dewesoft core platform, includes the software and hardware tools to manage the whole characterization process. Our software tools manage the test sessions, the data acquisition with the online display of the main results, the organization and naming of the test data files, the final post processing and report.

The solution includes the data acquisition system with a remote controller display, all the transducers for objective assessment of the vehicle performance and the dQdt systems for fuel consumption measurement.

dQ-m   *dQ-ad*

Measurement of fuel consumption

LEANE, THE VALUABLE CHOICE FOR VEHICLE TESTING

TESTING SOLUTIONS, CONSULTING, SERVICES

Capability to deliver complete solutions for vehicle testing, from the selection of the appropriate sensors and devices, to training and testing outsourcing, including professional driver support.

HANDLING RIDE AND BRAKING

HRB Test System: Tool for complete evaluation of the vehicle dynamic behaviour: driving feeling, handling, braking, ESC, homologation.

HRB: Test selection and data acquisition

HRB TS

ADAS

ADAS Test System for evaluation EuroNCAP, AEB, ACC, FCW, LDW, Blind-spot detection, Pre-crash, etc. Full solution based on ABD robots, or DAQ solutions based on DEWESoft.
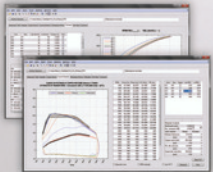
DAS TS

Soft Pedestrian Target (SPT)   *SR60 Orbit Steering robot*

PERFORMANCE & FUEL CONSUMPTION

PFC TS

PFC Test System for measurement and analysis of vehicle performances, drag force (coast-down) and fuel consumption.
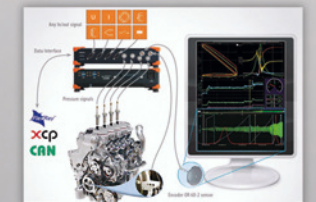

PWT CHARACTERIZATION AND ANALYSIS

PWT TS

Powetrain Test system based on Rototest technology for quick and accurate characterization of traditional powertrain units and hybrid or electric vehicles.

DEWESOFT IN VEHICLE SYSTEM

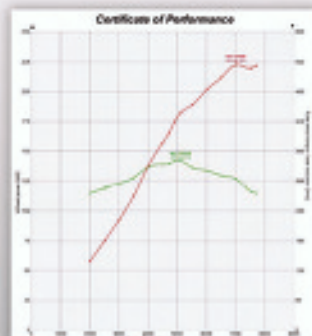### DEWESOFT X SOFTWARE APPLICATIONS

ADAS/ACC/EVT/GST/SPT

The ADAS Test System is based on Anthony Best Dynamics architecture and allows driver or driverless testing. We guarantee real-time high performance radio communication between hunter and target vehicles, calculation of parameters required by EuroNCAP standards, acquisition of external data sources/video using DEWESoft.

The state of the art technology of Genesys ADMA system provides accurate measurement of the motion variables of the vehicle under test and of the target vehicle, on track and on public road. The Flex-Moshon EVT Towing System is designed to tow a balloon car during EuroNCAP Autonomous Emergency Brake (AEB), Forward Collision Warning (FCW) and other ADAS tests. The ABD Guided Soft Target (GST) and Soft Pedestrian Target (SPT) are designed for ADAS test procedures EuroNCAP 2018.

Powertrain test characterization and analysis

The Rototest system allows to configure flexible turnkey solutions for a complete analysis of the powertrain unit: performance, fuel consumption (WLTP), transmission efficiency, energy recuperation, NVH and more. Modular 2WD or 4WD configuration, with hydraulic or electric actuation, suitable for Internal Combustion engine, Hybrid and Full Electric vehicles.

ABD TEST RIGS AND SIMULATORS

K&C Test Machines and Vehicle Dynamic Simulators

Suspension Parameters Measuring Machine

Advanced Vehicle Driving Simulator (aVDS)

EFFECTIVE SUPPORT AND PROVEN EXPERTISE

Capability to develop applications based on DEWESoft or other software tailored to the customer's specific needs, in order to make the whole testing process even more automated, robust and efficient.

Customized Software Applications

• Data Acquisition • On board analysis and test validation • Post processing and reporting

Consulting & Services

• Support defining the right service/product

• On site technical objective and subjective tests outsourcing, including professional driver

• Data analysis according to standard or custom procedures

• Development of procedures and methodologies

• Custom sensors development and production

LEANE International Srl
HEADQUARTER
Viale Partigiani d'Italia, 1
43123 Parma
Tel.: +39 0521.242495
Fax: +39 0521.242505
E-mail: leaneautomotive@leane.it
www.leane.it
www.leaneautomotive.com

LEANE International is present since 1978 on the Italian market of both electronic instrumentation
and sensor and is able to provide its customers with comprehensive solutions (from the sensor to report)
in the field of data acquisition.