



# VEHICLE ANALYSIS SOLUTIONS

WELCOME TO THE DEWESOFT EXPERIENCE. ONE SOFTWARE, ONE HARDWARE, YOUR SOLUTION.



# ULTIMATE ALL-IN-ONE TOOL FOR ANY CHALLENGE

## EASY TO USE AND VERSATILE

Get your measurements in 30 seconds.

## DEEP IN FUNCTIONALITY

With an amazing set of features, Dewesoft instruments are used in most advanced research labs around the world; all functions are available at the same time in one software.

## DUAL CORE HIGH DYNAMIC

Dewesoft Sirius increases signal dynamic to 160 dB by using two ADC converter per channel with different gains. Both - time domain and frequency domain data have an amazing dynamic signal performance.

## SUPERCOUNTER

Patented Supercounter technology provides perfect angle and angular speed information which is a base to align data from time to angle domain.

## FULLY SYNCHRONISED

Data from various sources are perfectly aligned: Analog, Digital, Counter, Vehicle buses, Video, ...



## PERFECT VEHICLE CONNECTIVITY

Connection to any vehicle by using either CAN, CAN FD, J1939, OBDII, XCP, CCP, LIN, FlexRay.





### **ALL-IN-ONE**

Dewesoft hardware can perform a wide variety of measurement tasks. Every function is available in a single Dewesoft X3 software package.

### **NO HIDDEN COSTS**

Software license is included in every system. Free lifetime software upgrades included. No yearly maintenance or upgrade fees, free online training courses.

### **MODULAR AND EXPANDABLE**

Can you imagine FFT analyzer with thousands of channels? We can... Systems can be gradually expanded from one to unlimited number of channels.

### **PRECISE POSITIONING**

Dewesoft VGPS-HS can provide 2cm accuracy with 100Hz GPS output rate.

### **TOTAL SOLUTION**

Combine your NVH measurements with data recording, electrical power, combustion, vehicle dynamic and other powerful Dewesoft tools.

### **PLUG AND PLAY**

Any device, sensor or signal. Smart sensors with TEDS are recognized automatically.

# GPS AND IMU DEVICES



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## INTERFACES & SENSORS

HIGH ACCURACY 100HZ GPS RECEIVERS AND INERTIAL MEASUREMENT UNITS (IMU) WITH REAL-TIME KINEMATICS (RTK) SUPPORT FOR THE MOST PRECISE POSITION BASED TEST AND MEASUREMENT APPLICATIONS.

	DS-GPS-CLOCK	DS-VGPS-HS/HSC	DS-IMU1	DS-IMU2	DS-GYRO
NAVIGATION					
Standalone (horizontal positioning)	2.5 m	1.2 m	2.0 m	1.2 m	-
Standalone (vertical positioning)	3 m	1.8 m	3 m	2.0 m	-
SBAS (horizontal positioning)	1 m	0.8 m (WAAS, EGNOS 0.3 m)	0.6 m	0.5 m	-
SBAS (vertical positioning)	3 m	1.2 m (WAAS, EGNOS 0.5 m)	1 m	1 m	-
Omnistar (horizontal positioning) *	-	-	-	0.1 m	-
Omnistar (vertical positioning) *	-	-	-	0.2 m	-
RTK (horizontal positioning) *	-	0.02 m	0.02 m	0.01 m (0,3 m as standard option)	-
RTK (vertical positioning) *	-	0.02 m	0.03 m	0.02 m (0,3 m as standard option)	-
Velocity accuracy	0.05 m/s	0.02 m/s	0.05 m/s	0.007 m/s	-
Roll & Pitch accuracy (dynamic)	-	-	0.1 °	0.1 °	0.6 °
Heading accuracy (dynamic with GNSS)	-	-	0.2 °	0.1 °	1.0 °
Slip angle accuracy	-	-	0.3 °	0.1 °	-
Range	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Hot start time	< 3 s	< 10 s	0.5 s	0.5 s	0.5 s
Output data rate	10 Hz	20/100 Hz	Up to 100 Hz	Up to 500 Hz	up to 500 Hz
GNSS					
Supported navigation systems	GPS L1, GLONASS L1	GPS L1, L2* GLONASS L1, L2*	GPS L1, GLONASS L1, GALILEO E1, BeiDou L1	GPS L1, L2*, L5* GLONASS L1, L2*, GALILEO E1, E5, BeiDou B1, B2	-
Supported SBAS systems	SBAS L1	WAAS, EGNOS, MSAS, GAGAN, QZSS	WAAS, EGNOS, MSAS, GAGAN, QZSS	WAAS, EGNOS, MSAS, GAGAN, QZSS, Omnistar HP/XP/B2, Trimble RTX	-

ADDITIONAL FEATURES					
PPS output	✓	✓	✓	✓	✓
IRIG B DC output	✓	-	-	-	-
Dual antenna heading	-	-	-	✓	-
RTK positioning	-	✓	✓ (no additional license)	✓	-
Hardware					
Interface	USB	RS232 / USB, CAN, Analog, Digital	USB & RS232	USB & RS232	USB
Operating voltage	5 V USB powered	9 to 36 V	5 to 36 V USB powered	9 to 36 V	4 to 36V USB powered
Power consumption	400 mA @ 5 V	250 mA @ 12 V	100 mA @ 5 V	220 mA @ 12 V/td>	65 mA @ 5 V
Operating temperatures	-5 °C to 75 °C	0 °C to 60 °C	-40 °C to 85 °C	-40 °C to 85 °C	-40 °C to 85 °C
Environmental protection	not IP rated	not IP rated	IP 67	IP 67	IP 68
Input protection	Polarity & short overvoltage protection	Polarity & short overvoltage protection	±40 V	-40 to 100 V	±40 V
Shock limit	MIL-STD 810 F	MIL-STD 810 F	2000 g - MIL-STD 810G	2000 g - MIL-STD 810G	2000 g - MIL-STD 810G
Dimensions	115 x 93 x 35 mm	115 x 93 x 35 mm	30 x 40,6 x 24 mm	90 x 127 x 31 mm	30 x 40,6 x 24 mm
Weight	330 g	740 g	37 g	285 g	25 g

### RTK 2 CM ACCURACY

Optional RTK upgrade of all GPS and IMU units, improving positioning accuracy down to 2 cm.

### USB, CAN, RS232

GPS instruments offer various data connection interfaces from USB, CAN and RS232.

### INERTIAL MEASUREMENT UNITS

Very rugged IMU units which in addition to GPS receivers have an integrated 3-axis accelerometer and 3-axis gyroscope to improve dead reckoning and offer IP67 degree of protection.



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# CAN INTERFACES

INTERFACES & SENSORS

MULTICHANNEL USB AND SINGLE CHANNEL EtherCAT® CAN BUS SOFTWARE WITH SUPPORT FOR OBDII, J1939, XCP/CCP, CAN TRANSMIT AND DBC FILES.



## HIGH-SPEED ISOLATED CAN

Each CAN port on any CAN device is isolated and utilizes high speed CAN 2.0B standard.

## 1, 2, 4 OR 9 CAN PORTS

Multiple CAN devices can be connected together to expand to more CAN ports.

## OBDII AND J1939 SUPPORT

CAN interfaces have XCP/CCP, OBDII, J1939 and other standard support.

## FANLESS CHASSIS AVAILABLE

While 2 and 4 port CAN port are fanless by default, the 9 port CAN device can also be built into a fanless aluminium chassis with IP50 degree of protection for worry-free CAN acquisition in harsh, dusty environments.

## PLUG-AND-PLAY CAN INTERFACES

Robust and easy to use interfaces. Connect your CAN device to the USB port of any laptop or PC, or to any SBOX or KRYPTON CPU computer. The device will be recognized automatically, and be ready to use in a moment.

## CAN OUT

All devices can transmit CAN messages.

## DBC FILE SUPPORT

Included Dewesoft X software enables import of DBC files which will automatically set the CAN channel list.

## CAN FD, XCP, FLEXRAY AND LIN

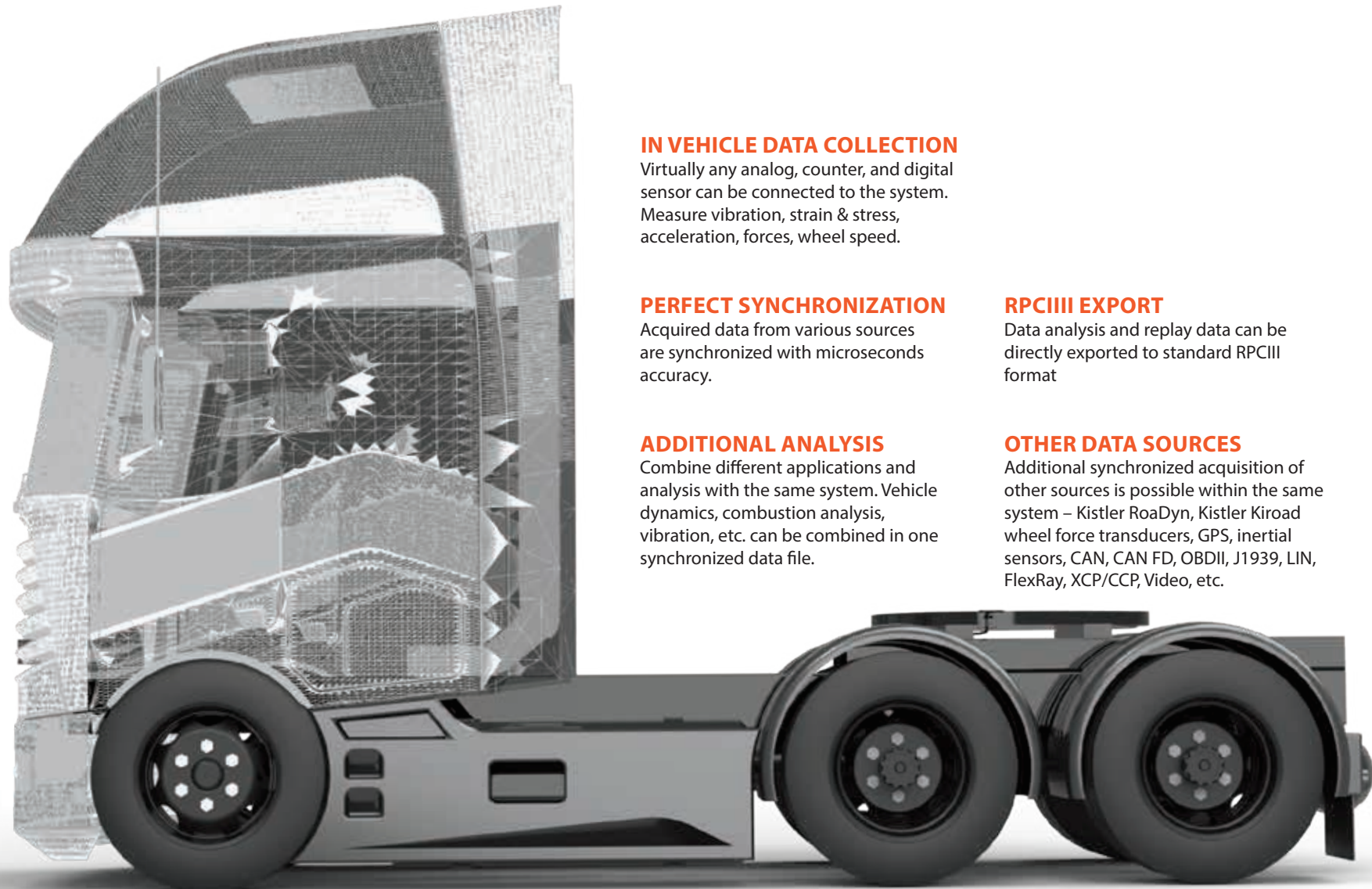
Using third party hardware, additional interfaces are supported.

# ROAD LOAD DATA ANALYSIS



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DURABILITY MEASUREMENTS DURING ACTUAL TEST DRIVES OR ON TEST BEDS, EITHER FOR ENTIRE VEHICLE OR CERTAIN COMPONENT. VARIOUS SMART TECHNOLOGIES AVOID RE-TESTING, AND DRAMATICALLY SHORTEN TEST TIME.



## IN VEHICLE DATA COLLECTION

Virtually any analog, counter, and digital sensor can be connected to the system. Measure vibration, strain & stress, acceleration, forces, wheel speed.

## PERFECT SYNCHRONIZATION

Acquired data from various sources are synchronized with microseconds accuracy.

## ADDITIONAL ANALYSIS

Combine different applications and analysis with the same system. Vehicle dynamics, combustion analysis, vibration, etc. can be combined in one synchronized data file.

## RPCIII EXPORT

Data analysis and replay data can be directly exported to standard RPCIII format

## OTHER DATA SOURCES

Additional synchronized acquisition of other sources is possible within the same system – Kistler RoaDyn, Kistler Kiroad wheel force transducers, GPS, inertial sensors, CAN, CAN FD, OBDII, J1939, LIN, FlexRay, XCP/CCP, Video, etc.

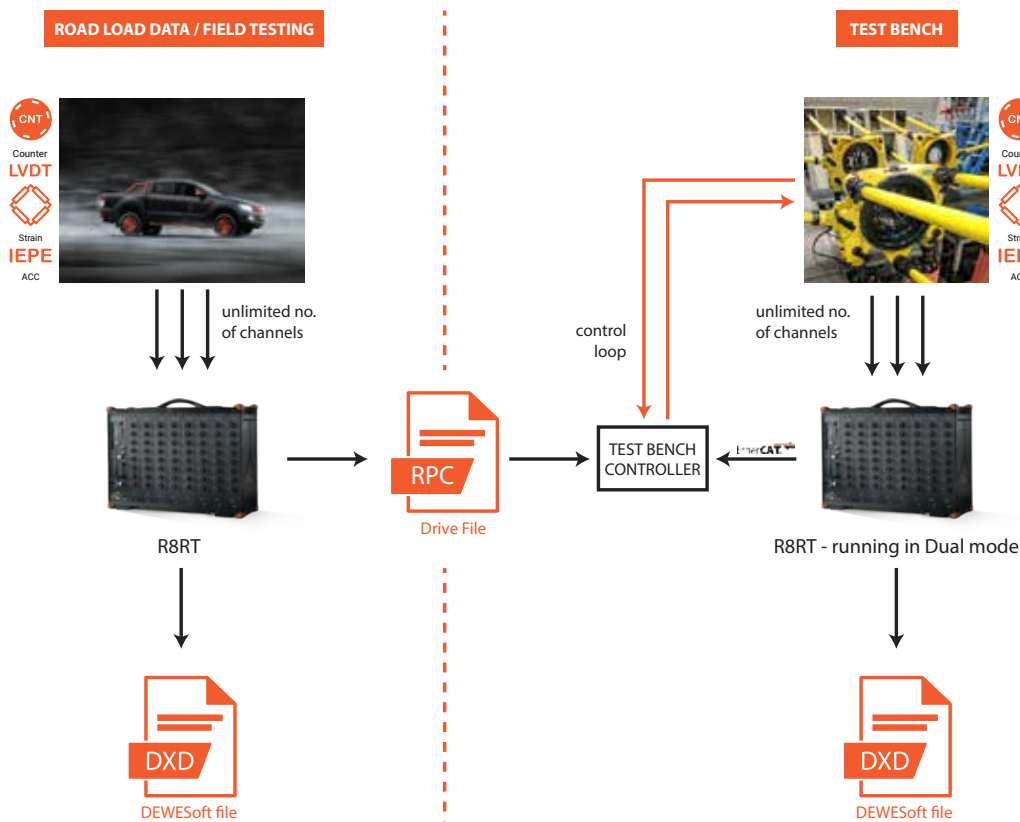




# DURABILITY TEST BED INTEGRATION

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ANALOG SIGNAL TRANSFER IS A THING OF THE PAST WITH DEWESOFT'S ALL-IN-ONE DURABILITY TEST SOLUTION. SAVE TIME AND MONEY BY USING THE SAME SYSTEM FOR ACQUISITION AND DRIVING THE TEST BED - USING A SINGLE EtherCAT® CABLE.



## ONE SYSTEM FOR ROAD AND LAB TESTING

Save your money! A single Dewesoft system can be used to record data on real or proving ground roads - and also in the lab, to replay the recorded data into the road load simulator.

## REDUCED COMPLEXITY

Compared to traditional sensor input -> analog out -> analog in the conditioned data is sent digitally and therefore greatly reduces complexity of the system.

## PORTABLE SETUP FILES

Dewesoft allows easy transfer of the channel setup to MTS test bed reducing setup time and risk of error.

## ANALOGUE OUTPUT

The Dewesoft R8 with optional rear analog outputs is the perfect solution for replaying recorded data, and transmitting analog signals to control the test bed.

## TEST BED INTEGRATION

The EtherCAT® slave port on the R8RT and R4RT can feed the data to any EtherCAT® master controller in real time. This solution offers easy integration with MTS road load simulators, with just one cable.

# VEHICLE DYNAMICS - VTS



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THE VEHICLE TESTING SUITE (VTS) IS A SUITE OF AUTOMATED TEST WORKFLOWS AND STANDARD TEST MANOEUVRES FOR VEHICLE DYNAMICS AND QUICK PASS/FAIL EVALUATION FOR THE DRIVER.



## AUTOMATED WORKFLOW

Pre-defined testing manoeuvres and easy-on screen controls for the operator to configure and run the tests.

## REAL-TIME RESULTS

Results are visualized and validated in real time as the test is running, allowing instant verification of test success or failure.

## INS/GNSS FOR AUTOMOTIVE TESTING

DS-IMU devices with single or dual antenna GPS provide accurate positioning and on-device calculations of slip angle, velocities, distances...

## AUTOMATED RESULTS AND STATISTICS

Summary table with statistics and overlay results from a batch of test runs provides quick analysis of results.





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# BRAKE TESTING

THE BRAKE TEST SYSTEM FROM DEWESOFT IS VERY FLEXIBLE AND COVERS ALL KIND OF BRAKE TESTS, BRAKING COMFORT AND TESTING VEHICLES WITH REGENERATIVE BRAKING.



## WIDE RANGE OF APPLICATIONS

Built-in analysis of standard brake tests, plus ABS testing, braking comfort, and brake squeal allow for additional test standards or maneuvers to be performed, such as tire, acceleration, handling, and/or fuel consumption tests.

## AUTOMATED WORK FLOW AND REPORTS

Automated testing procedures and reporting.

## BRAKE TEMPERATURE

Measures and logs multiple brake temperature and pressure channels.

## ONLINE CALCULATIONS

Instant calculation of outputs like MFDD, start speed, stopping time, corrected brake distance, brake deceleration, maximum deceleration and custom outputs.

## SUPPORTED STANDARDS

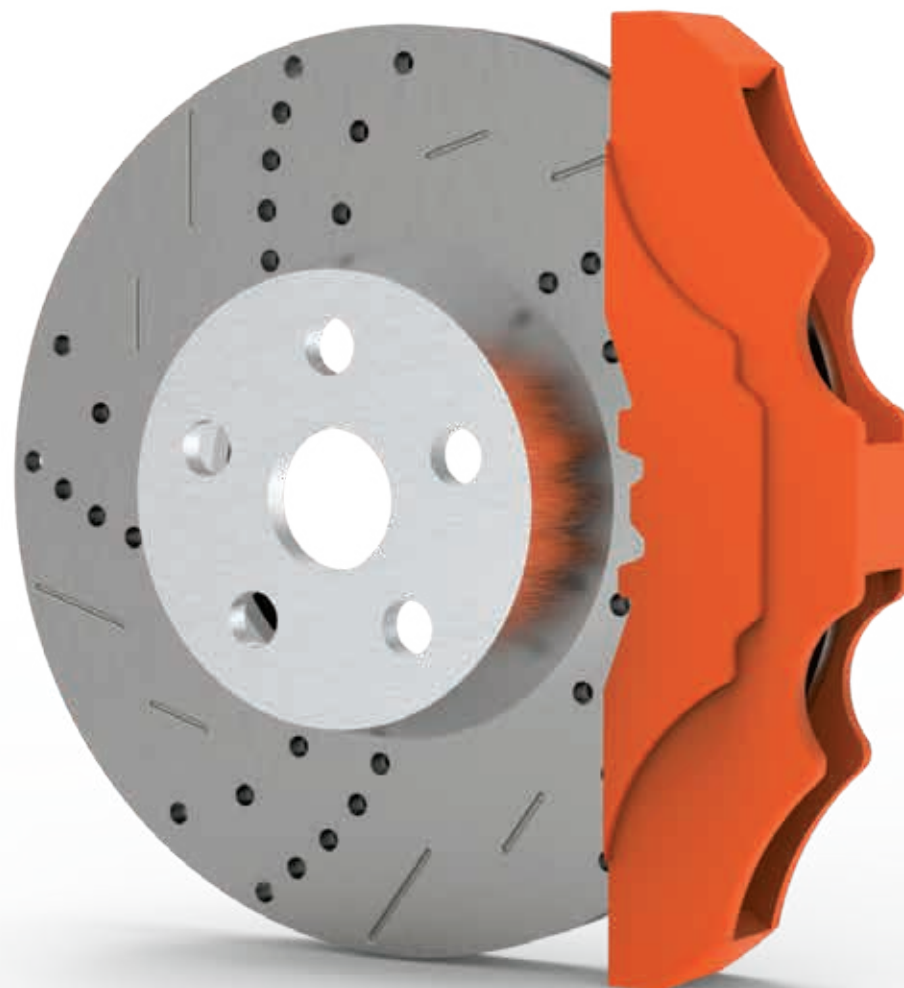
Brake tests according to several international standards like ECE13H, FMVSS 135, etc.

## REAL-TIME RESULTS

Results validated and visualized in real-time during the test allow an easy check if the tests are successful.

## BRAKE PEDAL SENSOR

Direct brake pedal force, travel, and pressure sensor inputs via analog or CAN interface.



# BRAKE SQUEAL

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DETECT AND TRACK BRAKE SQUEAL EVENTS FROM MICROPHONE AND ACCELEROMETER MEASUREMENTS.



## EASY PAIR DEFINITION

Detects squeal events from pairs of microphone and accelerometer measurements. Pairs generated automatically from specified accelerometer and microphone channels.

## CALCULATION SETTINGS

Squeals are detected from amplitudes of sound and mechanical vibration. Fourier transformation settings are integrated. Only direct time domain measurements are needed to detect squeal events.

## VDA 303

Software is developed according to VDA 303 guideline.

## FLEXIBLE CONFIGURATION

The number of microphone and accelerometer channels is not limited by the software.

## SQUEAL TRACKING

Each detected squeal is tracked. During the squeal event, statistic on squeal parameters and other Dewesoft X channels (temperatures, RPMs, vehicle speed...) can be calculated.



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# PASS-BY NOISE

EASY TO USE AND FLEXIBLE PASS-BY NOISE TEST SYSTEM WITH HI-END DAQ HARDWARE AND POWERFUL SOFTWARE CAPABILITIES FOR ONLINE VISUALIZATION, VALIDATION, AND ANALYSIS.



## **BATTERY-POWERED**

Entire Dewesoft DAQ systems and their sensors can be self-powered, using our high-performance Li-ion battery packs.

## **0.1 KM/H VELOCITY ACCURACY**

Velocity accuracy is guaranteed down to 0.1 km/h.

## **LIVE RESULTS**

Real-time online results and automated report generation.

## **EASY CONFIGURATION**

Easy software and hardware configuration of all devices and sensors.

## **SUPPORTED STANDARDS**

Calculation of pass-by noise results, CPB and sound level according to standards IEC 61672, ISO 362, UNECE R51.03 and SAE J1470.

## **AUTOMATED WORKFLOW**

Automated testing procedures for the test operator. Brake test module includes a predefined test sequence guiding the driver through procedure.



# POLYGON AND GPS SOLUTIONS



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THE DEWESOFT POLYGON OPTION IS THE MOST VERSATILE AND WIDELY USED TOOL FOR PERFORMANCE TESTS. ALONG WITH THE NEW OPENSTREETMAPS VISUAL CONTROL, IT MAKES THE PERFECT VEHICLE TESTING SUITE.



## ANY GPS DATA SOURCE

GPS data from various sources can be used for measurement, and as inputs for the Polygon module. CAN, Ethernet or RS232 data can be read directly from 3rd party devices.

## PARAMETER OUTPUTS

Each calculated parameter like distance, position, angle or gate crossing are available as output channels.

## PERFECT HARDWARE

Synchronous acquisition of 2 cm RTK GPS and IMU sensor with additional analog, digital and vehicle bus channels.

## MULTIPLE VEHICLES

Support of multiple vehicles, cars, trucks and pedestrians in the same polygon.

## 3D VISUALIZATION

Freely definable view angles gives a perfect view of the maneuver.

## UNIVERSAL

Suitable for ground, air (high G testing, performance testing) or sea (handling tests, pass by noise, obstacle avoidance test) applications.

## NEW MAP VISUAL CONTROL

Uses a tile server hosted by Dewesoft (OpenStreetMap). Online or offline (pre-downloaded) map usage possible. Multiple traces can be displayed at once with channel based color tracing.



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# ADAS TESTING

EASY-TO-USE ADAS VALIDATION SYSTEM WITH THE LATEST GPS AND IMU TECHNOLOGIES WITH 2CM ACCURACY. ADVANCED DRIVER ASSISTANCE SYSTEMS ARE AUTOMATED, WHICH INCREASE SAFETY AND IMPROVE THE DRIVING EXPERIENCE.



## PRECISE GPS AND IMU

Rugged and reliable miniature GPS aided inertial navigation system with high dynamic, 500 Hz update rate and static initialization. High-accuracy GPS or IMU with optional RTK support, offering 2cm positioning accuracy.

## POLYGON MATH

Math functions to place several moving and static objects and calculations of real time positions, distances and angles from any object to another as well as collision calculations.

## TEST AUTOMATION

The Dewesoft X Sequencer function allows you to automate your test sequences.

## POLYGON VISUAL CONTROL

Powerful 3D visualization of moving and static objects at any position.

## RANGE OF APPLICATIONS

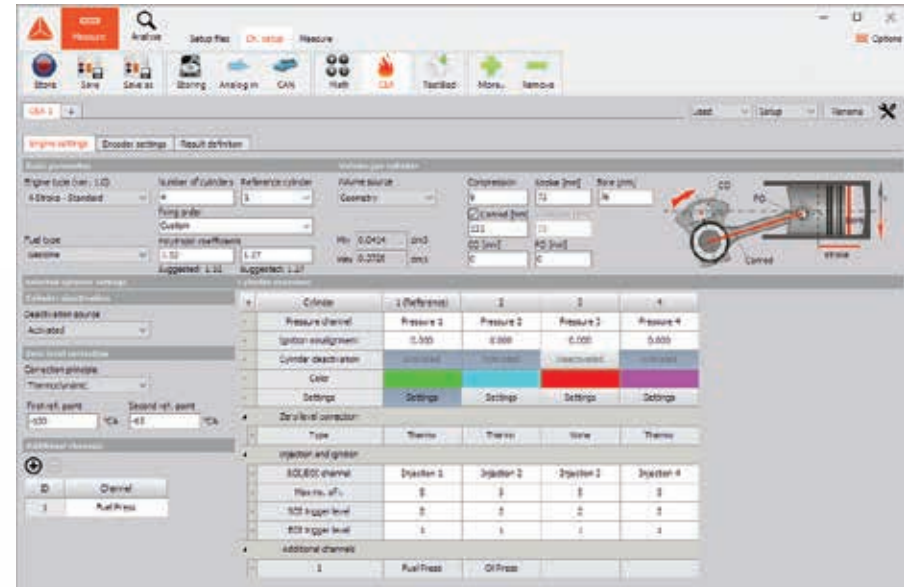
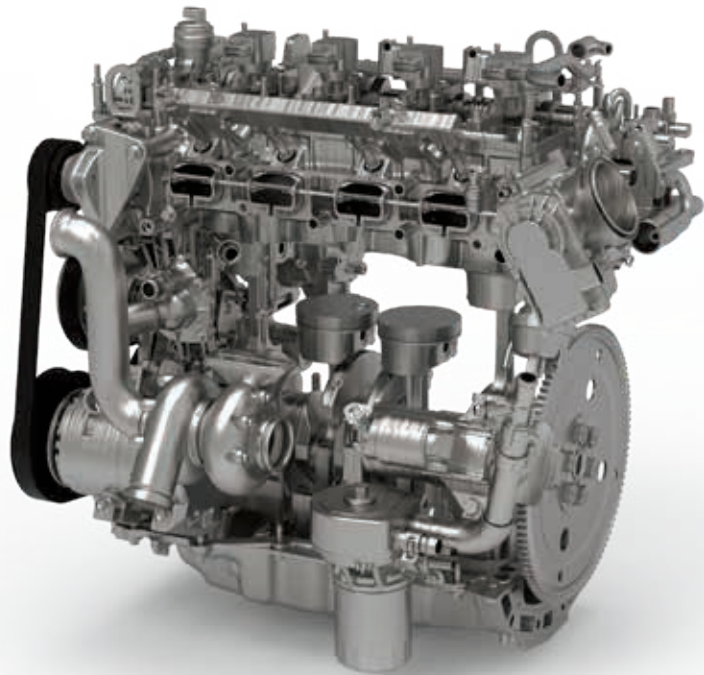
Collision avoidance testing, blind spot detection, adaptive cruise control testing, autonomous vehicles testing, lane departure warning, and lane assist system testing.

# COMBUSTION ANALYSIS



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COMPLEX MEASUREMENTS MADE EASY WITH NEW COMBUSTION ANALYZER. FROM THE SMALLEST SINGLE CYLINDER ENGINES TO THE LARGEST MULTI-CYLINDER ONES. SIMULTANEOUS USE OF THE COMBUSTION ANALYZER WITH THE POWER MODULE MAKES THE PERFECT SOLUTION FOR HYBRID ENGINE TEST!



## STANDARD OUTPUTS

Maximum pressure, MEP, power, work, torque, temperature, average outputs...

## PERFECT INTEGRATION

Interface to testbed via AK-protocol for laboratory or CAN output for mobile use.

## READY FOR ANY ENGINE

Cylinder deactivation, variable compression ratio, dual polytropic coefficient with automatic detection and input.

## ADVANCED CALCULATIONS

Knock detection, thermodynamics, polytropic coefficient, compression curve...

## HIGHEST ACCURACY

Angle resolution from 2° to 0.025° crank angle.

## DIRECT SENSOR SUPPORT

Integrated charge type amplifier for cylinder pressure sensors and direct connection of any RPM sensor (stock - 60-2, encoder, CDM+trig).

## MULTIPLE DATA INTERFACE

CAN, CAN FD, J1939, XCP, CCP, LIN, ModBus, OPC UA, Flexray, Ethernet, GPS, Video,...





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# ELECTRIC & HYBRID VEHICLE TESTING

ADVANCED AND EASY TO USE SOLUTIONS FOR COMPLETE ELECTRIC AND HYBRID VEHICLE DEVELOPMENT, VALIDATION AND PRODUCTION. ELECTRIC MOTOR AND INVERTER TESTING, BATTERY AND BATTERY CHARGE TESTING, COMBUSTION ANALYSIS, HYDROGEN TESTING AND MORE.



## HIGH ISOLATION

Specially designed amplifiers allow measuring of voltages and temperatures at high potentials of up to 1.6kV DC.

## MOTOR & INVERTER

Any kind of motor (1-12 phase AC) and any kind of inverter (DC-AC, AC-AC, switching frequencies up to 100 kHz) are measured and analysed by the power module.

## DRIVETRAIN

Modular DAQ system allows measuring the power (AC or DC) at multiple points, perfectly synchronized. This unique feature enables comprehensive analysis for all types of electric drivetrains: single motor, motor and generator, 2-4x in-wheel-motors.

## CHARGING

Power Quality Analysis, Energy & Efficiency and Troubleshooting of EV Charging stations complement the features for EV testing.

## WINTER & SUMMER TESTS

Our wide temperature operating range makes it all possible.

## BATTERY

The battery as the central element in the electrical powertrain needs extensive testing. For dynamic tests (Misuse tests, Overcharge, Short-Circuit etc.) the HS series with 1 MS/s is the perfect fit. The flexible and scalable IOLITE and KRYPTON series is ideal for static tests (voltage, current, temperature, monitoring etc.).

# HARSH ENVIRONMENT TESTING



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ROBUST DAQ SYSTEMS WITH IP67 DEGREE OF PROTECTION, OPERATING TEMPERATURE BETWEEN  $-40^{\circ}\text{C}$  UP TO  $+85^{\circ}\text{C}$  AND HIGH SHOCK PROTECTION PROVIDE A RELIABLE SOLUTION FOR TESTING IN EXTREME AND HARSH ENVIRONMENTS.



## LOW POWER CONSUMPTION

Ideal for air-conditioning testing.

## $-40^{\circ}\text{C}$ TO $85^{\circ}\text{C}$

### TEMPERATURE RANGE

The SIRIUS waterproof and KRYPTON lines of DAQ system offer a wide temperature range from  $-40^{\circ}\text{C}$  up to  $85^{\circ}\text{C}$  suited for the harshest environments on Earth.

## > 100 G SHOCK RATING

Instruments offer high 100G shock rating.

### DUST, SHOCK, MUD AND WATERPROOF

IP67 degree of protection from water, dust, mud and high shock. Instruments are tested in highly sophisticated labs to ensure quality and maximum reliability.

### ADDITIONAL SYNCHRONIZED SOURCES

Acquisition of additional data sources like GPS, inertial platforms, gyros, CAN, CAN FD, LIN, XCP/CCP, FlexRay, video, high-speed video with perfect synchronization.

## THOUSANDS OF CHANNELS

Systems can be expanded from 1 to thousands of channels.

### DISTRIBUTED

DAQ systems can be distributed down to a single channel - keeping costs of sensor cabling low while ensuring high signal quality.



# FATIGUE

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SAFETY IS AN IMPORTANT ASPECT IN DESIGNING AUTOMOTIVE COMPONENTS. FATIGUE ANALYSIS IS A DEWESOFT X SOFTWARE EXTENSION FOR PREDICTING FATIGUE DAMAGES BASED ON MEASURED STRAIN AND STRESS.



## PREPROCESSING

Direct pre-processing or local extreme detection, counting methods with algorithm settings, rainflow filtering, discretization, visualisation and analysis software support.

## STANDARD COUNTING ALGORITHMS

Standard counting algorithms like ASTM and Markov counting are implemented.

## POST PROCESSING MADE EASY

Export to many different file formats and analysis of huge data files is also possible with Dewesoft X.

## INSTANT RESULTS

Temporary fatigue results available online including additional math channels.



# NVH SOLUTIONS

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ALL NVH SOLUTIONS AVAILABLE IN A SINGLE SOFTWARE PACKAGE, USING THE SAME HARDWARE.

## FFT ANALYZER

Top performance, advanced cursor functions, very high freely selectable line resolution, flexible averaging as well as many advanced functions for in-depth analysis.

## OCTAVE ANALYZER

True octave filters exactly represent the filter sets defined by the IEC 61260 standards and offer the user a real time response for vivid live visualization of data, crucial for advanced acoustic analysis.

## SOUND LEVEL METER

IEC 61672 Class 1 sound level meter supports measurements in either air or water and can be combined with all other physical measurement parameters, vehicle bus systems, video, GPS and other math to build a thorough image of your entire measurement.

## SOUND POWER

Fully compliant with relevant sound power standards ISO 3741, ISO 3743-1, 3743-2, ISO 3744, ISO 3745, ISO 639-3, ISO 639-4, ISO 639-5 and ISO 639-6.

## SOUND INTENSITY

Complies to Sound Intensity-based Sound Power calculation - Discrete points method (9614-1) and Scanning method (9614-2). Complete measurement chain of sound intensity solution can be calibrated according to IEC 61672.

## MODAL ANALYSIS

In combination with in-built function generator module, the system allows any type of excitation from fixed sine with 1 mHz resolution, sweep sine, random, step sine, chirp, burst and others. Operating deflection shapes (ODS), mode indicator functions (MIF), COLA analysis are fully implemented while operational modal analysis (OMA) and time domain ODS are available with close integration in connection to external software package

## ORDER TRACKING

Due to a high sampling and advanced alias free re-sampling mechanism, data is available in all three domains (time, frequency and order), everything at the same time in one screen and data file, perfectly synchronized.

All angle sensors from tacho, encoder, geartooth, geartooth with missing or double teeth, tape sensors and others are supported to perfectly determine angle and rotational speed with 10 nsec resolution using Supercounter technology

## ROTATIONAL AND TORSIONAL VIBRATIONS

Rotational and torsional vibration module along with order tracking are a strong tool to troubleshoot such issues in automotive, industrial or power-generation applications. Math module support any type of sensors. Sensors type can be totally different for both ends of the rotor.

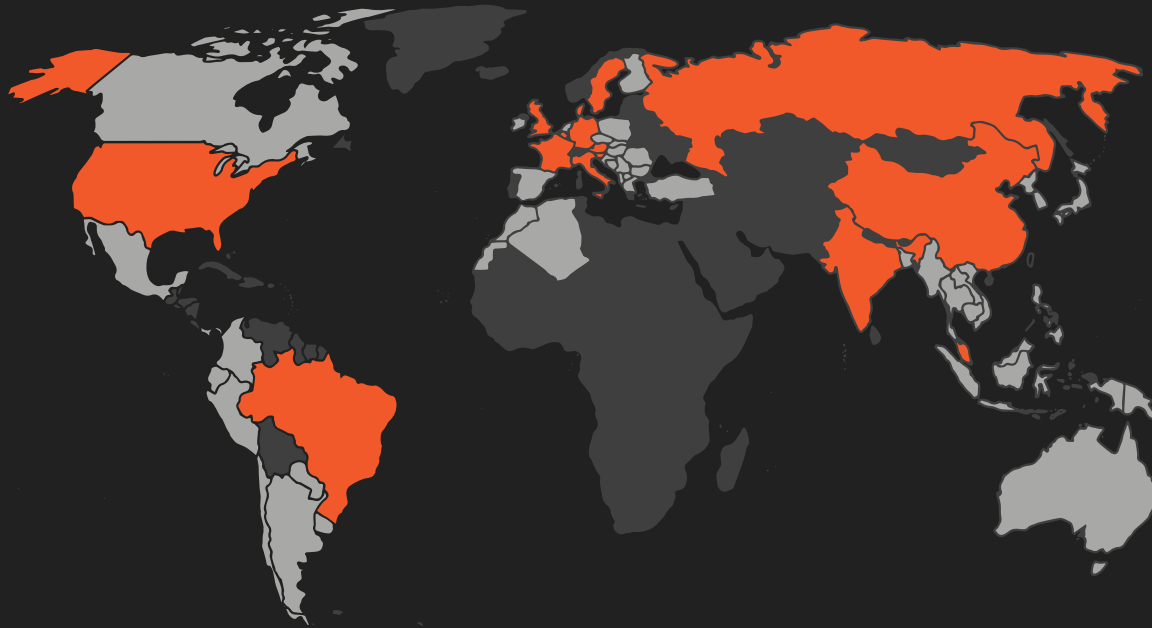
## BALANCING

Single plane (narrow disc) or dual plane (long shaft) balancing. Users are guided through the balancing steps for flawless operation including easy setup of angle sensor with live preview. Multiple modules can be combined for multi axis balancing to save time and greatly improve the quality of balancing.

## BEARING FAULT (ENVELOPE)

Easily identify the bearing fault frequencies with the help of automatic markers in the spectrum. Defects on the cage, rolling element, outer or inner race (FT, BSF, BPFO, BPF1) and also their harmonics can be seen. Large database is available where the manufacturer and bearing number can be selected.





DEWESOFT® WORLDWIDE: SLOVENIA, Austria, Brasil, China, Denmark, France, Germany, Hong Kong, Italy, India, Russia, Singapore, Sweden, UK, USA, BELGIQUE and PARTNERS IN MORE THAN 50 COUNTRIES

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