DEWESoft®

GENERAL CATALOG

GC2020-V2.1.

"Again, thanks for all of the new features that are being included in Dewesoft X. It is already a fantastic product and deserves to become the "Microsoft Word" of data acquisition software."
- Goodrich

"I think I mentioned in previous emails how Dewesoft has mushroomed here, but even I didn't know how much. I was informed today that the data was being reviewed by up 50 to 60 different centers, along with NASA personnel as high as the manager of the entire Space Shuttle program."
- NASA KSC

ULTIMATE TOOLS FOR TEST &

AT DEWESOFT WE DEVELOP,
DESIGN AND BUILD

TEST AND MEASUREMENT INSTRUMENTS AND SOFTWARE

TO PROVIDE SOLUTIONS
FOR APPLICATIONS IN
AUTOMOTIVE, AEROSPACE, ENERGY, INDUSTRIAL AND CIVIL ENGINEERING.

MEASUREMENT APPLICATIONS

20 years ago, as young engineers we dreamed of creating a revolution in the world of measurement. We dreamed of creating data acquisition software that was versatile and powerful - and yet easy to use - something that didn't exist.

We are who we are because of you - our customers - working in the most advanced labs around the world. You had the same dream: you introduced us to the challenge that drives our passion for constant improvement, keeping our minds sharp and our spirits free.

IN PARTNERSHIP WITH YOU, WE BUILT SOLUTIONS THAT EXTENDED FAR BEYOND WHAT WE EVER IMAGINED WAS POSSIBLE TWO DECADES AGO. THANK YOU!

Today, we offer a variety of hardware and software solutions made just for you. And you're still our greatest asset. That will never change.
Tell us what you need, and we will continue to push the limits.

Dr. Jure Knez
president and co-founder

DEWESOFT IS MORE THAN A BUSINESS


DEWESOFT IS OUR WAY OF LIFE


DEWESOFT IS MORE THAN A COMPANY.

WE BUILT OUR COMPANY TO LAST,
STRONGLY INVESTING IN PEOPLE,
OUR TECHNOLOGY AND
OUR OWN SALES NETWORK.

DEWESOFT IS

100% EMPLOYEE-OWNED

AND COMPLETELY SELF-FINANCED,
WITH AAA RATING.

The best solutions can be made only by a motivated team of people who love their work - those who design and build instruments with a spark in their eyes and those who light up when they have an idea for improvement. Together with you we are the ones creating Dewesoft.

DEWESOFT IS PEOPLE.

ONE SOFTWARE,

ONE HARDWARE,

YOUR SOLUTION.

CONTENTS

FREE UPGRADES

ACQUIRE ANY DATA

PROCESS

STORE >500 MB/SEC

PUBLISH

TIME SAVING

EXTREMELY DEEP IN FUNCTIONALITY

FREE ANALYSIS

ONE SOFTWARE.

DEWESoft® X3

EASY TO LEARN
Intuitive user interface. Free PRO on-line training courses. Free webinars. Large user community. Local support also in your country.

SAVE TIME
Advanced technology aimed at easy setup and rock solid results. Our real-time "live" data visualization means instant data qualification.

SAVE MONEY
No hidden costs! Software is included with all of our instruments. Free lifetime software upgrades. Free data analysis. No maintenance fees. You buy it, you own it.

VISUALIZE

EASY TO LEARN

DEWESOFT X3 ACQUIRE

NO OTHER SOFTWARE ALLOWS YOU TO CONNECT SO MANY DIFFERENT KINDS OF DATA SOURCES AND RECORD THEM ALL SYNCHRONOUSLY, SEE THEM IN REAL TIME, AND RECORD THEM TO A SINGLE DATA FILE. THAT IS THE DEWESOFT ADVANTAGE.

ANALOG CHANNELS
Voltage, Current, Potentiometer, Temperature, Strain, Stress, Force, Displacement, Velocity, Acceleration, Sound pressure, Pressure, Resistance, Torque, Mass and TEDS.

DIGITAL
Digital inputs, waveform timing, counters, angle & frequency from encoders, any type of gear tooth sensors and tachos.

VIDEO
Video from DirectX, GigE, high-speed Photron™ and FLIR® infra-red cameras.

VEHICLE BUS SYSTEMS
CAN, CAN FD, XCP, LIN, FlexRay, CCP, OBDII, J1587/J1708, J1939, SENT, Arinc 429, MIL 1553, Chapter 10, iNET and Kiroad.

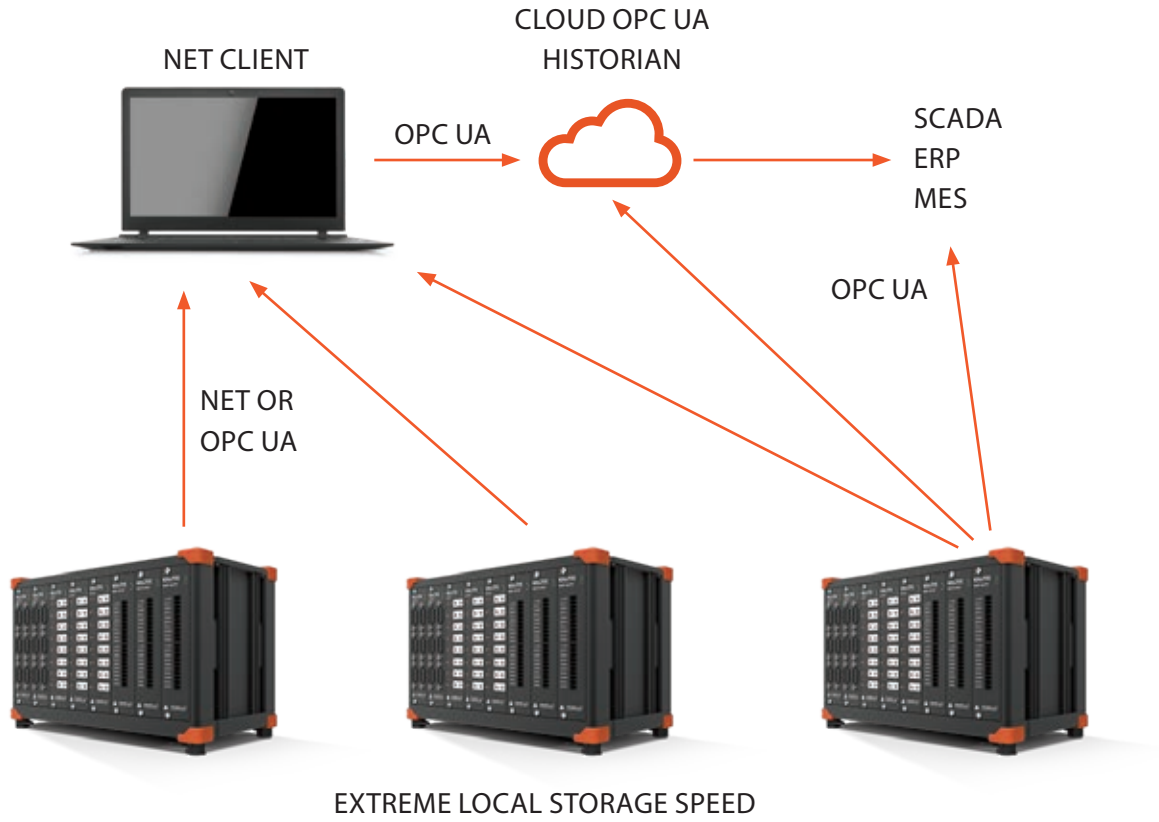
DATA BUS SYSTEMS
OPC UA, Ethernet, Modbus, PCM telemetry, RS232 and RS485, Weather station and Siemens S7.

NAVIGATION
GPS and Inertial platforms.

OUTPUTS
Analog out, digital out alarms, CAN, EtherCAT®, Ethernet, RS232 and OPC UA.

STORE DEWESOFT X3

HIGH PERFORMANCE STORING >500MB/SEC, INSTANT FILE LOADING, TRIGGERING, NETWORKED ACQUISITION AND CLOUD STORAGE.



HISTORIAN

Dewesoft historian provides a versatile solution for cloud or local networked data storage in powerful Influx time series database. Standard OPC UA interface allows communication between measurement units and database and between database and clients, so any standard SCADA, MES or mobile solution can be used for data analysis.

ADVANCED TRIGGERING

Using triggering, only the data you need are stored. Dewesoft supports Pre trigger, Post trigger, Hold off, Post time extension, Simple edge trigger, Filtered edge trigger, Window and Pulsewidth, Slope, Delta amplitude, Relative time trigger, Absolute time trigger and FFT trigger.

MORE THAN 500MB/SEC STORING

High performance engine allowing high data storing write speeds. Advanced data structure allows data files, even GBs long, to be loaded instantly.

DISTRIBUTED NETWORKED DATA ACQUISITION

Precise synchronization allows flexible configurations of thousands of channels.

BIG DATA

For big data and Industry 4.0 applications, data can be stored to the cloud and reviewed using standard OPC UA interface.

RAW DATA AND MATH CHANNELS

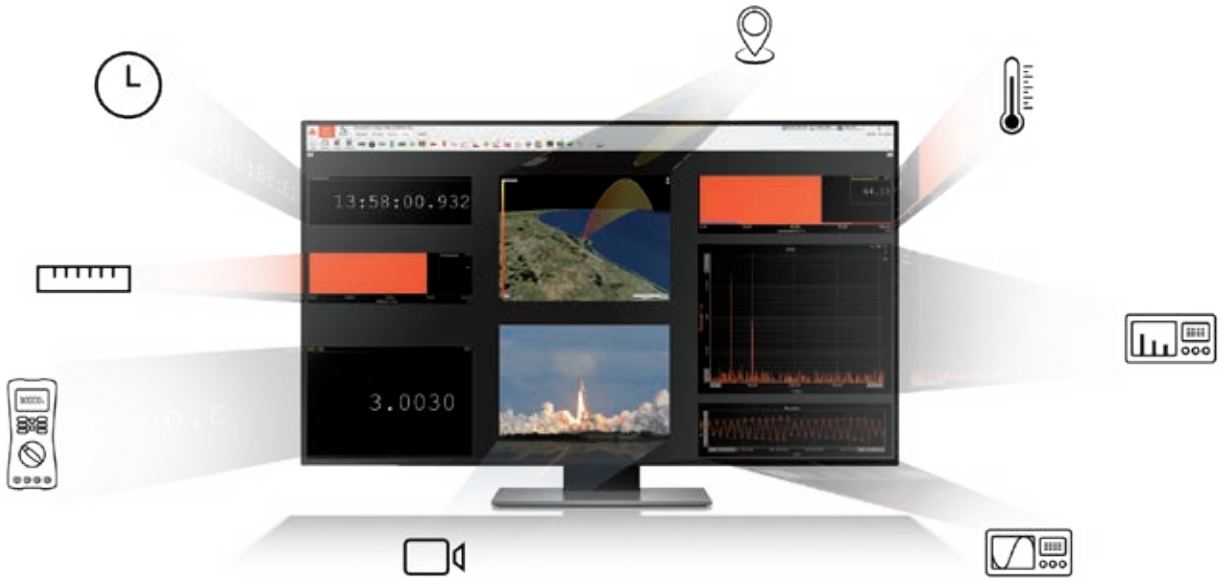
Raw data are always stored from the hardware interface channels and kept untouched. You can easily create new math channels based on the raw data, leaving the original data untouched.

DEWESOFT X3 VISUALIZE

EXTENSIVE WIDGET LIBRARY, FLEXIBLE DISPLAYS, OPTIMIZED GRAPHICS.

EXTENSIVE LIBRARY OF STANDARD DISPLAYS:

- **Recorders** - horizontal, vertical and XY recorder
- **Oscilloscope** - scope, 3D scope, vectorscope
- **FFT** - FFT, 3D FFT, Harmonic FFT and Octave
- **Meters** - digital, analog, horizontal/vertical bar meters
- **Graphs** - 2D, 3D graph, Octave, Orbit, Campbell plot
- **Video** - standard video display and thermal video display with temperature indicators
- **GPS** - positioning display with Satellite and OpenStreetMap layers
- **Control** - button, switch, knob, slider, user input
- **Combustion analysis** - P-V diagram and combustion scope
- **Rotor balancer** - for field balancing
- **Automotive** - 3D polygon for displaying moving objects
- **Aerospace** - attitude or artificial horizon indicator
- **DSA/NVH** - Modal circle
- **Other** - 2D/3D table, image, text, line, overload indicator, indicator lamp, note



FLEXIBLE VISUALIZATION

Simple drag-drop and assign channel generates your perfect display. Create any number of different displays.

FILE REPLAY

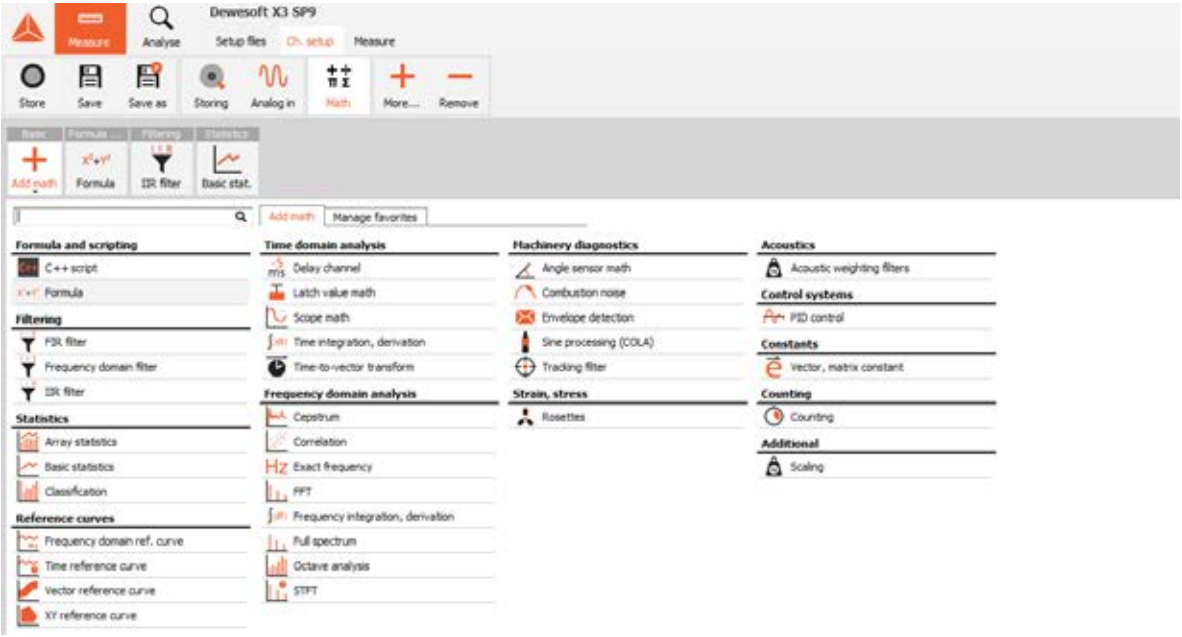
During analysis, data replay looks the same as when it was being recorded. With integrated video you can easily follow the measurement process.

OPTIMIZED GRAPHICS

Using the latest CPU and GPU technologies, graphics run smoothly even on basic computers.

PROCESS DEWESOFT X3

AN EXTENSIVE AND EASY TO USE MATHEMATICS LIBRARY FOR DATA AND SIGNAL PROCESSING - ALL DEVELOPED TO MATCH SPECIFIC APPLICATIONS.



MATH LIBRARY FUNCTIONALITIES:

- **Formula** - custom formula editor
- **Filtering** - FIR, IIR, FFR, integration, derivation
- **Statistics** - RMS, Average, Min, Max, Std deviation, variance, classification, counting, array statistics …
- **Reference curve** - time and frequency domain, vector and XY reference curves
- **Time domain analysis** - Delay channel, Integral, derivative, Latch value math, Scope math, Time-to-vector transform
- **Frequency domain analysis** - Cepstrum, Correlation, Exact frequency, Fourier transform, Full spectrum, Octave analysis, Short-time Fourier transform
- **Control systems** - PID control
- **Strain, stress** - Strain rosette
- **Constants** - Vectors, Matrix constant

ADVANCED APPLICATION ANALYSIS:

POWER ANALYSIS

Power Analyzer, Power Quality, Hybrid Vehicle Analysis, Inverter Motor Analysis, efficiency measurements

VEHICLE ANALYSIS

Combustion Analyzer, Combustion Noise, Polygon, Brake Test, Vehicle Dynamic, Brake Noise

MACHINERY DIAGNOSTICS

Modal Analysis, Order Tracking, Torsional Analysis, Balancing, Angle Sensor Math, Envelope Detection, Sine Processing (COLA), Tracking Filter

ACOUSTICS

Acoustic Weighting Filters, Sound Level Meter, Sound Power, Sound Intensity, Sound Quality, RT60

DEWESOFT X3 PUBLISH

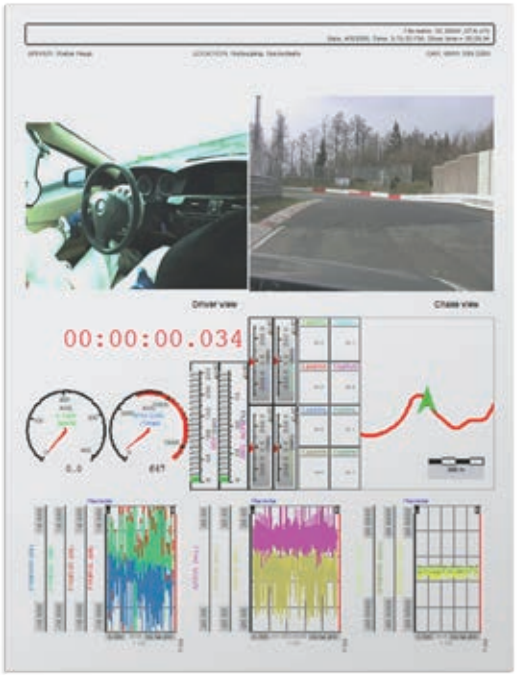
YOU CAN ADD DEWESOFT X ON ANY COMPUTER TO FREELY VIEW AND ANALYZE FILES.
EXPORT DATA AND CREATE REPORTS IN STANDARD FORMATS.

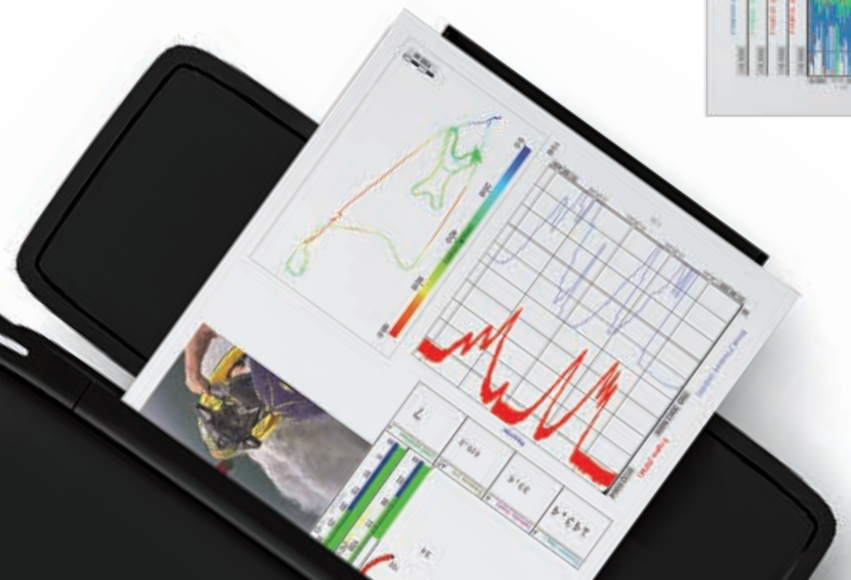
REPORTING
Create and print PDF or printed reports directly from Dewesoft.

DISPLAY COPY
Copy/paste displays to integrate data in standard reports.

VIDEO FILE EXPORT
If a picture is worth a thousand words, imagine the value of video! You can export your choice of live screens with all widgets to a video file.

SEQUENCER
A built-in block diagram sequencer extends the use of Dewesoft to automated testing applications.



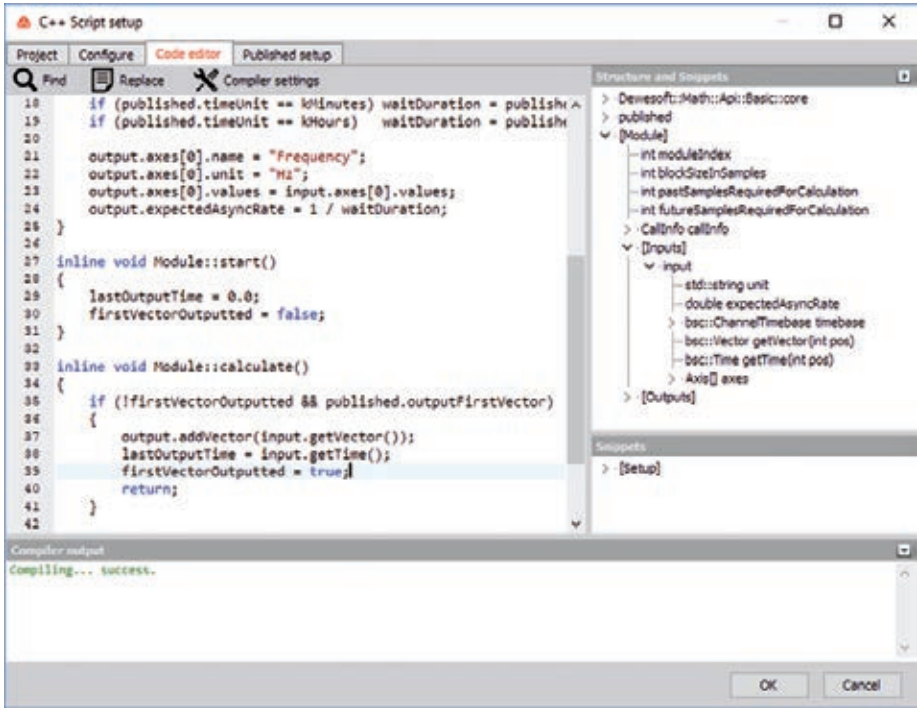


EXPORT YOUR DATA TO A VARIETY OF STANDARD FORMATS FOR FURTHER ANALYSIS...

- **MS Excel®** - standard spreadsheet software
- **FlexPro®** - powerful, easy-to-use data analysis software
- **Text/CSV and ASCII** - tab delimited text file
- **DIAdem®** - powerful data analysis software from NI
- **Famos** - signal analysis software
- **NSoft** - NCode file format for Somat software
- **MATLAB®** - MATLAB® file format
- **Sony** - Sony tape recorder compatible format
- **RPC III** - MTS file format used by road simulator testbed
- **Comtrade** - used in power & energy markets
- **UNV** - universal file format
- **WAV** - standard audio file format
- **KML** - GPS export for viewing path in Google Earth
- **BWF** - multichannel wave file format
- **ATI** - native iDeas format for dynamic signal analysis
- **SDF** - used by LMS and Prosig software
- **WFT** - Nicolet file format
- **CSV** - for exporting CAN messages
- **TDF** - file format defined and used by LMS software
- **ASAM MDF4** - standard file format in automotive industry

EXTEND & AUTOMATE DEWESOFT X3

DEWESOFT X OFFERS A WIDE VARIETY OF BUILT-IN FUNCTIONS, BUT IT IS ALSO COMPLETELY OPEN TO ADAPT TO VARIOUS APPLICATIONS.



BUILT-IN C++ COMPILER

Extend your processing capability with our built-in C++ script editor. No need for external programming tools.

PLUGIN INTERFACE

Using plugins you can add just about any external device to your system. Plugins can be created using virtually any programming language.

OPEN EXPORT INTERFACE

Create your own unique export format using our open export programming interface.

OPEN DISPLAY INTERFACE

Our built-in displays cover 99% of application requirements, however you can extend our visual displays using the plugin programming interface for special cases.

SEQUENCER

Automate test workflow with easy-to-use build-in flowchart programming tool.

OPC UA INTERFACE

Exchange data between Industry 4.0 systems with standard OPC UA interface.

NET INTERFACE

Control remotely and exchange data with our simple, but powerful exchange protocol.

DCOM INTERFACE

Integrate Dewesoft systems as components in custom applications.

REAL TIME EtherCAT® INTERFACE

For control applications, Dewesoft brings together the words of data acquisition and control.

DEWESOFT X3 SPECS

	Lite	Professional	DSA	Enterprise
Key features				
All applications/ interfaces in one software	✓	✓	✓	✓
Synchronized data acquisition	✓	✓	✓	✓
Unlimited number of configurable channels	✓	✓	✓	✓
Live visualization of data	✓	✓	✓	✓
Triggered storing	✓	✓	✓	✓
Distributed acquisition (Dewesoft NET)	Option	Option	Option	✓
Offline analysis (Post-processing)	✓	✓	✓	✓
Reporting	✓	✓	✓	✓
Localization (software translation)	✓	✓	✓	✓
Lifetime free upgrades	✓	✓	✓	✓
Configuration management				
Saveable/shareable configuration files	✓	✓	✓	✓
Project definition for different users	✓	✓	✓	✓
Sensor database	✓	✓	✓	✓
Adjustable physical quantities	✓	✓	✓	✓
Modular security, encryption, access restriction	✓	✓	✓	✓
Input/output interfaces				
General				
Dewesoft analog/ digital inputs	✓	✓	✓	✓
Dewesoft analog/ digital outputs	✓	✓	✓	✓
Analog replay of data	✓	✓	✓	✓
Function generator	Option	Option	Option	✓
TEDS support	✓	✓	✓	✓
Gantner Ethernet devices	-	Option	Option	✓
Gyro platform - LORD MicroStrain	-	Option	Option	✓
Barcodes	-	Option	Option	✓
Vehicle interfaces				
Dewesoft CAN/J1939 interfaces	✓	✓	✓	✓
Vector CAN/J1939 interfaces	-	Option	Option	✓
Vector CAN FD devices	-	Option	Option	✓
OBDII	-	Option	Option	✓
XCP/CCP	-	Option	Option	✓
FlexRay	-	Option	Option	✓
LIN	-	Option	Option	✓
SENT (SAE J2716)	-	Option	Option	✓
Kistler RoaDyn 2000	-	Option	Option	✓
Kistler KiRoad	-	Option	Option	✓
Engine Testbed	-	Option	Option	✓
GPS and IMU interfaces				
Dewesoft or third party GPS devices	✓	✓	✓	✓
Dewesoft IMU devices	-	✓	✓	✓
OxTS	-	Option	Option	✓
Gyro platform - GeneSys ADMA-CAN	-	Option	Option	✓
Gyro platform - GeneSys ADMA-Ethernet	-	Option	Option	✓
Gyro platform - MicroStrain MIP	-	Option	Option	✓
Aerospace interfaces				
PCM telemetry	-	Option	Option	✓
Chapter 10	-	Option	Option	✓
ARINC 429 and MIL-STD-1553 devices	-	Option	Option	✓
iNET	-	Option	Option	✓
Video cameras				
Direct X compatible cameras	✓	✓	✓	✓
Dewesoft DS-CAM cameras	-	✓	✓	✓
GigE cameras	-	✓	✓	✓
FLIR thermovision cameras	-	Option	Option	✓
Photron high-speed cameras	-	Option	Option	✓
Industrial interfaces				
OPC UA server	-	Option	Option	✓
OPC UA client	-	Option	Option	✓
Siemens S7	-	Option	Option	✓
MODBUS TCP/IP (master)	-	Option	Option	✓
MODBUS TCP/IP (slave)	-	Option	Option	✓
Serial communication	-	Option	Option	✓
Ethernet	-	Option	Option	✓
Data processing and analysis				
Standard math				
Formula editor	✓	✓	✓	✓
Filters (IIR, FIR, FFT)	✓	✓	✓	✓
Integration, derivation	✓	✓	✓	✓
FFT analyzer (basic)	✓	✓	✓	✓
Statistics (basic, array, classification)	✓	✓	✓	✓
Reference curves	✓	✓	✓	✓
Latch mathematics	✓	✓	✓	✓
Interactive math cursors	✓	✓	✓	✓
Counting (histogramming)	✓	✓	✓	✓
Exact frequency extraction	✓	✓	✓	✓
Advanced analysis				
Power analysis	-	Option	Option	✓
Basic combustion engine analysis	-	Option	Option	✓
Advanced combustion engine analysis	-	Option	Option	✓
Combustion noise	-	✓	✓	✓
Vehicle dynamics (VTS)	-	Option	Option	✓
Polygon for vehicle analysis	-	Option	Option	✓

DEWESOFT X3

Brake noise	-	Option	Option	✓
Brake test	-	Option	Option	✓
FFT analyzer (advanced) - Advanced cursors - Advanced markers - Bearing fault	-	Option	✓	✓
Octave band analysis	-	✓	✓	✓
Order tracking	-	Option	✓	✓
Rotational and torsional vibration	-	Option	✓	✓
Rotor balancer	-	Option	✓	✓
Human body vibration	-	Option	✓	✓
Modal analysis (FRF)	-	Option	✓	✓
SRS (offline only)	-	Option	✓	✓
Angle sensor math	-	✓	✓	✓
Envelope detection	-	✓	✓	✓
Sine processing	-	Option	Option	✓
Harmonic tracking filter	-	✓	✓	✓
Full spectrum (two-sided Fourier transform)	-	✓	✓	✓
Cepstrum	-	✓	✓	✓
Sound level meter	-	Option	✓	✓
Sound power	-	Option	Option	✓
Sound intensity	-	Option	Option	✓
Sound quality	-	Option	Option	✓
Reverberation Time RT60	-	Option	Option	✓
Fatigue analysis	-	Option	Option	✓
Psophometer	-	Option	Option	✓
Visualization				
Meters (digital, analog, horizontal/vertical bar)	✓	✓	✓	✓
Recorders (horizontal, vertical and XY recorder)	✓	✓	✓	✓
Oscilloscope (scope, scope 3D, vectorscope)	✓	✓	✓	✓
FFT (FFT, 3D FFT, Harmonic FFT and Octave)	✓	✓	✓	✓
Graphs (2D, 3D graph, Octave, Orbit, Campbell plot)	✓	✓	✓	✓
Video	✓	✓	✓	✓
Control (button, switch, knob, slider, user input)	✓	✓	✓	✓
Utilities (table, image, text, line, overload indicator, indicator lamp, note)	✓	✓	✓	✓
Interactive GPS Map and 3D Model	✓	✓	✓	✓
Attitude or artificial horizon indicator	✓	✓	✓	✓
Data management				
Data export				
FlexPro®	✓	✓	✓	✓
FlexPro® template	✓	✓	✓	✓
Excel®	✓	✓	✓	✓
Excel® template	✓	✓	✓	✓
Dewesoft (file reduction)	✓	✓	✓	✓
DIAdem®	✓	✓	✓	✓
MATLAB®	✓	✓	✓	✓
Universal file format 58	✓	✓	✓	✓
Famos	✓	✓	✓	✓
NSoft	✓	✓	✓	✓
Text/CSV	✓	✓	✓	✓
Sony	✓	✓	✓	✓
RPCIII	✓	✓	✓	✓
Comtrade	✓	✓	✓	✓
Technical data management	✓	✓	✓	✓
JSON	✓	✓	✓	✓
ASAM MDF4	✓	✓	✓	✓
S3	✓	✓	✓	✓
ATI	✓	✓	✓	✓
HDF5	✓	✓	✓	✓
DynaWorks neutral file	✓	✓	✓	✓
Standard data file	✓	✓	✓	✓
WFT	✓	✓	✓	✓
Replay	✓	✓	✓	✓
Wave	✓	✓	✓	✓
Google earth KML	✓	✓	✓	✓
Broadcast wave format	✓	✓	✓	✓
CAN messages	✓	✓	✓	✓
IFile CA	✓	✓	✓	✓
Clipboard	✓	✓	✓	✓
Data import				
Dewesoft data file merge (channel import)	✓	✓	✓	✓
Text	-	✓	✓	✓
Data exchange				
Data management (FTP file transfer)	-	Option	Option	✓
Online data export to .csv/SQL/MySql	-	Option	Option	✓
Online data writing to Excel®	-	Option	Option	✓
Excel® reporting tool (Excel® add-in)	-	Option	Option	✓
Email/SMS alarm notifications	-	✓	✓	✓
Automation/Development tools				
Sequencer	-	✓	✓	✓
DCOM	-	✓	✓	✓
Data reader API	✓	✓	✓	✓
EtherCAT® ENI file generator	-	Option	Option	✓
C++ Script	-	Option	Option	✓
Third party extensions	-	✓	✓	✓

ONE HARDWARE.

COMPACT FORM FACTOR

EXPANDABLE

SYNCHRONIZED

SOFTWARE INCLUDED

NO HIDDEN COST

FLEXIBLE

ONE HARDWARE.

DAQ SYSTEMS

HYBRID ANALYZER
Ready to be used for any measurement application, all at the same time.

ONE TO 1000 CHANNELS
Modular systems can be expanded for any measurement challenge.

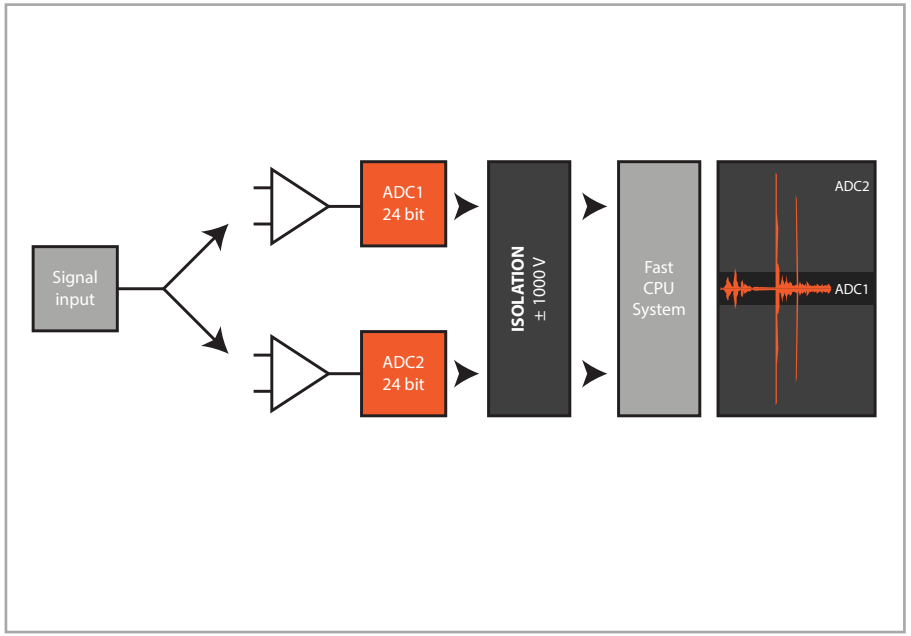
PLUG AND PLAY
Any device, sensor or signal can be detected automatically.

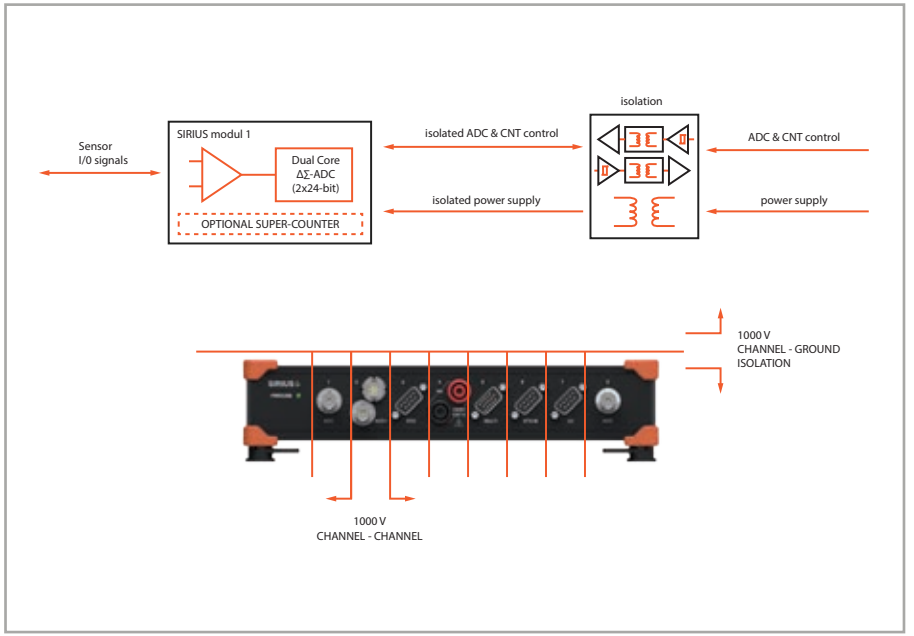
FULLY SYNCHRONIZED
Data from various sources are aligned: Analog, digital, counter, vehicle buses, video…

PLUG AND PLAY

EXPANDABLE

TECHNOLOGY OVERVIEW





HIGH DYNAMIC RANGE (SIRIUS®)

The most common problems you face when recording data are signal overloads, noise, and false signals recorded into the data due to aliasing. When signal levels are higher than expected, they are clipped by the ADC, resulting in wrong measurements, which means you have to do the test all over again.

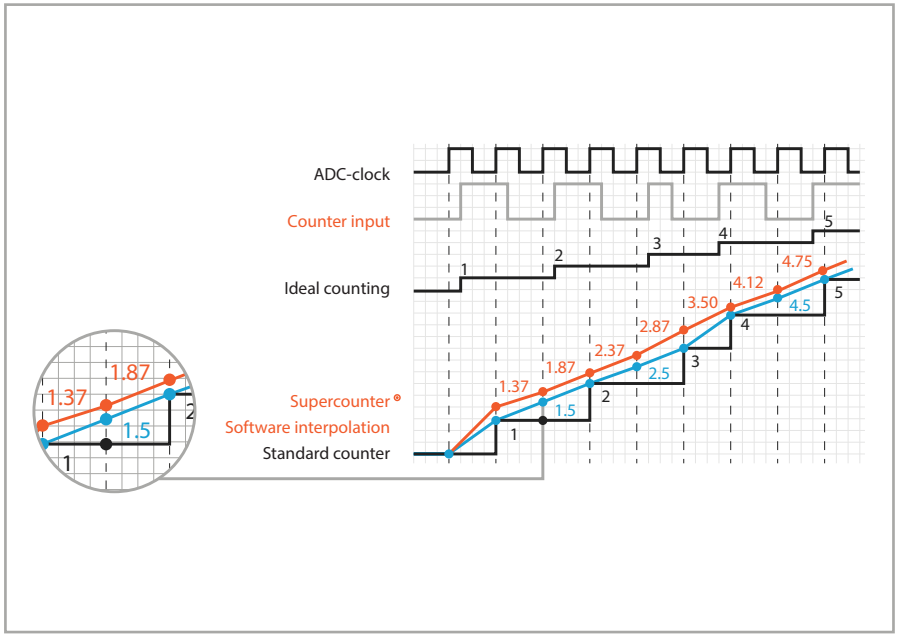
DualCoreADC® technology prevents these problems. Each channel amplifier has two ADC's that always measure the high and low gain of the input signal. This results in the full possible measuring range of the sensor and prevents the signal from being clipped.

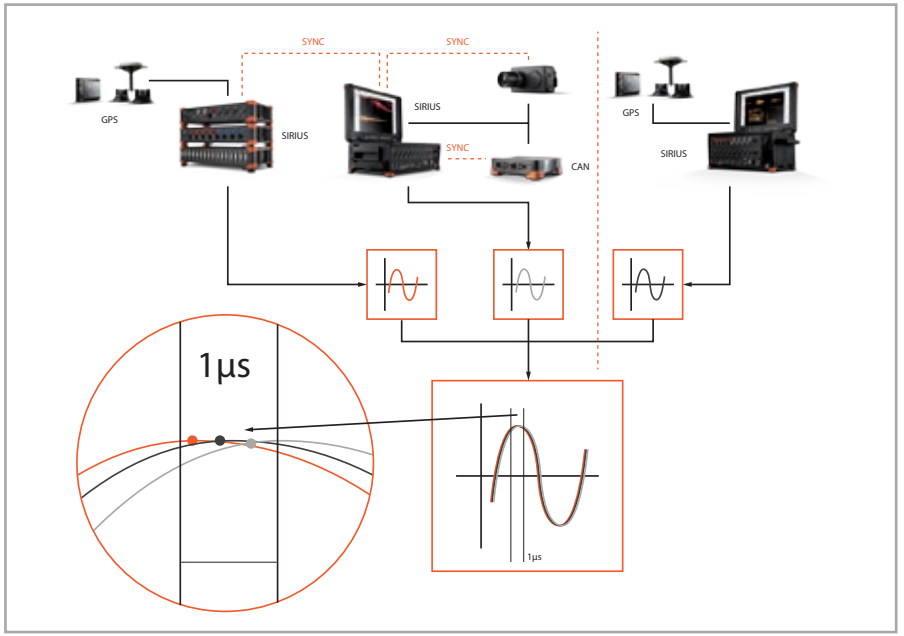
With DualCoreADC® technology SIRIUS achieves more than 130 dB signal to noise ratio and more than 160 dB in dynamic range. This is 20 times better than 24-bit systems and 20 times less noise.

HIGH ISOLATION

SIRIUS instruments come with high galvanic channel-to-channel and channel-to-ground isolation (CAT II 1000 V with ranges up to 1600V), and even include isolated sensor excitation.

Our high isolation means that you have no problem measuring high voltage potentials or common mode voltages. You are also safe with measurements like vibration, temperature, or any other measurement where non-isolated sensors are placed next to the high voltage potential against the DAQ system ground. In such cases, a non-isolated DAQ system would burn or at least give faulty results. With SIRIUS it is just one thing less to worry about.





PRECISE COUNTER AND ENCODER MEASUREMENT

SIRUS® uses a patented technology called SuperCounter® in every one of its counter/encoder inputs.

Counter inputs can measure RPM and angle when testing rotating machines. Standard counters only provide integer resolution (like 1, 1, 2, 2) and their data is one sample behind the data. However, SuperCounter® can extract floating point values like 1.37, 1.87, 2.37, and time-align them precisely with the rest of your data. This is done by measuring the exact time of the rising edge of the signal with an additional counter. Our SuperCounter® work on a 102.4 MHz time base, independent from the current sampling rate.

Counter inputs are fully synchronized with analog, CAN bus, and other data sources to enable easy applications like balancing, order tracking, and torsional vibrations.

SYNCHRONIZATION

SIRIUS hardware is capable of reading different signals like voltage, strain, ICP/IEPE, charge, CAN, counter, encoder, and digital. Additionally with the included Dewesoft X software, you can easily acquire and combine data from additional interfaces like GPS, Flexray, Ethernet, Serial, PCM telemetry, and many more.

Even though each data source have different sampling rates, all your data will be perfectly synchronized down to microsecond accuracy. All this thanks to our timing and GPS synchronization technologies.

SIRIUS® HIGH END DAQ SYSTEMS

- UNIVERSAL ANALOG INPUTS: A wide variety of universal and analog amplifiers that accept voltage and full/half/quarter bridge signals natively as well charge and IEPE accelerometers, thermocouple and RTD temperature sensors, current, resistance, and even LVDT sensors, with the use of DSI adapters.
- DIGITAL/COUNTER/ENCODER INPUTS: Each counter channel is capable of 3x digital inputs, 1x event counter, encoder, period, pulse-width, duty-cycle, and precise frequency and angle measurement using patented SuperCounter® technology.
- ISOLATED CAN BUS INTERFACE: High-speed CAN 2.0b channels with 1 Mbit/sec data throughput with additional support for CCP, OBDII, J1939, and CAN output.

SIRIUS® MODULAR

Most flexible and distributable single slices with USB and EtherCAT® interface

SBOX

Synchronized, highly reliable data logger and powerful data processing computer

R4

Integrated solution with 4 SIRIUS slices and powerful SBOX computer or USB hub in one unit with real-time EtherCAT® slave interface

- SENSOR POWER SUPPLY: Amplifiers provide channel-independent, programmable power supply for sensor excitation.
- ANALOG OUTPUTS: SIRIUS® slices can be configured with 8 analog outputs and function as a multi-channel function generator, can also act as real time signal conditioning, analog replay of data in analysis, and as manual or automated control output with output voltage levels of up to ±10V.
- HIGH ISOLATION: High channel-channel and channel-ground isolation prevents damage to the systems from excessive voltage and avoids ground loops

R8DB/R8

Integrated instrument with 8 SIRIUS slices, powerful SBOX computer, optional 19" display (R8D) and batteries (R8DB) and real-time EtherCAT® slave interface (R8rt)

R1DB/R2DB

Small size instrument with embedded computer, 12" display and batteries

R3

Up to 3 SIRIUS slices in a rack mounted lab unit with standard easy-to-upgrade computer

SIRIUS® MODULAR SOLUTIONS

VERSATILE USB AND EtherCAT® DATA ACQUISITION SYSTEMS. ANY SIGNAL, ANY SENSOR - PACKED WITH CUTTING EDGE TECHNOLOGY.

Up to 8 isolated analog channels of SIRIUS dual-core or high-speed HS

Up to 16 analog channels with HD amplifiers

FLEXIBLE

SIRIUS single slices provide our most flexible configuration. Slice-based systems can be split or combined at any time, to handle different measurement tasks.

SCALABLE

SIRIUS DAQ systems can grow with needs at any time - from a single channel to a system to thousands of channels.

USB/EtherCAT® INTERFACE

SIRIUS DAQ systems can be connected via USB or EtherCAT® to any data acquisition computer, or to one of our high-performance data loggers.

DISTRIBUTABLE

SIRIUS EtherCAT® slices can be located up to 100 meters (328 feet) apart from each other, using a single cable that carries data, sync, and power!

MODULAR SOLUTIONS SIRIUS® SBOX

HIGHLY RELIABLE SBOX DATA LOGGER WITH POWERFUL DATA PROCESSING COMPUTER.
THE PERFECT COMPANION TO SIRIUS® DATA ACQUISITION SYSTEM.

HIGH-PERFORMANCE DATA PROCESSING COMPUTER

With an 8-thread Intel Core i7 CPU and 8GB of memory, SBOX is a powerhouse computer for worry-free, real-time data recording and processing.

HIGHLY RELIABLE SSD STORAGE

SBOX provides highly reliable data recording with a typical 180MB per second write speed to the internal fast SSD. This drive is removable so that you can swap and replace it quickly.

6 USB INTERFACES

SBOX includes four USB3.0 ports and two USB2.0 ports. All USB ports feature screw-lock connectors to prevent accidental disconnection.

3 NETWORK INTERFACES

Two gigabit LAN ports and wireless WLAN interface with external antenna ensure maximum connectivity.

EtherCAT® INTERFACE

Built-in EtherCAT® interface port for synchronized data acquisition from Dewesoft EtherCAT® DAQ devices.

100 HZ GPS WITH RTK

Optional 10Hz or 100Hz GPS receiver with additional RTK support can be built straight into SBOX.

SIRIUS® R4 BOXED SOLUTION

COMPACT DATA ACQUISITION SYSTEM WITH UP TO 64 ANALOG INPUTS, 32 COUNTER INPUTS AND 32 ANALOG OUTPUTS, WITH BUILT-IN HIGH PERFORMANCE, HIGHLY RELIABLE DATA PROCESSING COMPUTER AND SSD DATA LOGGER.

DUAL MODE

The EtherCAT® slave interface provides real-time data to a 3rd party control system, while the internal bus allows full-speed data to be recorded via Dewesoft X in parallel. For the first time, the worlds of data acquisition and control are merged into a single system!

HIGH-END SIGNAL CONDITIONING

R4 data acquisition systems are built around SIRIUS DAQ technology and feature the same versatile and powerful amplifiers for world-leading signal conditioning.

UP TO 64 ANALOG INPUTS

Systems can be configured with up to 4 SIRIUS DAQ slices for a total of 64 analog inputs for connecting virtually any sensor.

UP TO 4 ISOLATED CAN PORTS

Configure up to 4 high speed CAN 2.0b channels with 1 Mbit/sec data throughput with additional support for CCP, OBDII, J1939, and CAN output.

ALL INTERFACES

Interfaces for Wireless LAN, dual GLAN, 4x USB 3.0, GPS, HDMI and 2x synchronization are available.

UP TO 32 COUNTER/ENCODER INPUTS

The system can be configured with up to 32 counter/encoder inputs, or 96 digital inputs - all equipped with our patented SuperCounter® technology.

EtherCAT® MASTER PORT

R4 DAQ systems include an EtherCAT® master port with built-in synchronization, for easy connection to and extension of any of our EtherCAT® based DAQ systems - including KRYPTON DAQ modules or SIRIUS hardware.

POWERFUL AND RELIABLE COMPUTER

R4 DAQ system offers powerful built-in data processing computer and fast and reliable SSD data logging capabilities for a stand-alone operation or USB hub for connecting R4 to external computer.

100 HZ GPS WITH RTK

Optional 10Hz or 100Hz GPS receiver with additional RTK support can be built straight into the R4 DAQ system.

PORTABLE INSTRUMENT SIRIUS® R1DB/R2DB

COMPACT, MOBILE DATA ACQUISITION SYSTEM WITH A BUILT-IN DATA LOGGER, POWERFUL DATA PROCESSING COMPUTER, MULTI-TOUCH DISPLAY AND INTERNAL BATTERIES FOR MAXIMUM PORTABILITY.

ALL INTERFACES

Interfaces for Wireless LAN, dual GLAN, 4x USB 3.0, GPS, HDMI, 2x synchronization are available.

HIGH-END SIGNAL CONDITIONING

R1DB/R2DB data acquisition systems are built on solid SIRIUS DAQ technology, and feature the same powerful, world-leading signal conditioning amplifiers. See the SIRIUS product page for a detailed SIRIUS DAQ technology overview.

UP TO 16 COUNTER/ENCODER INPUTS

Up to 16 counter/encoders or 48 digital input channels, all equipped with our patented SuperCounter® technology.

100 HZ GPS WITH RTK

An optional 10Hz or 100Hz GPS receiver with additional RTK support can be built right into R1DB/R2DB DAQ system.

UP TO 32 ANALOG INPUTS

Systems can be configured with one (R1DB) or two (R2DB) SIRIUS DAQ slices for a total of 32 analog inputs capable of connecting virtually any sensor.

EtherCAT® MASTER PORT

R1DB / R2DB DAQ systems include an EtherCAT® master port with built-in synchronization, for easy connection to and extension of any of our EtherCAT® based DAQ systems - including KRYPTON DAQ modules or SIRIUS hardware.

UP TO 2 ISOLATED CAN PORTS

Up to 2 high speed CAN 2.0b channels with 1 Mbit/sec data throughput with additional support for CCP, OBDII, J1939, and CAN output.

ALL-IN-ONE INSTRUMENT

R1DB/R2DB instruments are stand-alone DAQ systems with the built-in touchscreen LED display, keyboard, a powerful data processing computer, SSD data logging capabilities, and internal Li-Ion batteries (R1DB/R2DB). A version without batteries is also available (R2D).

SIRIUS® R8 RACK SYSTEM

HIGH CHANNEL COUNT DATA ACQUISITION SYSTEM WITH BUILT-IN DATA LOGGER, POWERFUL DATA PROCESSING COMPUTER, TOUCH SCREEN DISPLAY (R8D) AND INTERNAL BATTERIES (R8B, R8DB) FOR MAXIMUM PORTABILITY.

HIGH-END SIGNAL CONDITIONING

R8 data acquisition systems are built around SIRIUS DAQ technology and feature the same versatile and powerful amplifiers for world-leading signal conditioning.

UP TO 128 ANALOG INPUTS

Systems can be configured with up to eight SIRIUS DAQ slices for a total of 128 analog inputs for virtually any sensor.

ALL-IN-ONE INSTRUMENT

R8 instruments are high channel count, standalone DAQ systems with built-in powerful data processing computer, SSD data logging capabilities, touch-screen LED display (R8D and R8DB), and internal Li-Ion batteries (R8B/R8DB) for maximum portability.

UP TO 8 ISOLATED CAN PORTS

Configure up to 8 high speed CAN 2.0b channels with 1 Mbit/sec data throughput with additional support for CCP, OBDII, J1939, and CAN output.

UP TO 64 COUNTER/ENCODER INPUTS

R8 DAQ system can be configured with up to 64 counter/encoder or 192 digital input channels, all equipped with our patented SuperCounter® technology.

UP TO 64 ANALOG OUTPUTS

R8/R8B can be configured with up to 64 analog outputs and can function as a multi-channel function generator, analog replay, or control device with the output voltage signal of ±10V.

EtherCAT® MASTER PORT

R8 DAQ systems include an EtherCAT® master port with built-in synchronization, for easy connection to and extension of any of our EtherCAT® based DAQ systems - including KRYPTON DAQ modules or SIRIUS hardware.

ALL INTERFACES

Interfaces for Wireless LAN, dual GLAN, 4x USB 3.0, GPS, HDMI, 2x synchronization are available.

100 HZ GPS WITH RTK

Optional 10Hz or 100Hz GPS receiver with additional RTK support can be built straight into R8 DAQ system.

RACK SYSTEM SIRIUS® R8RT

HIGH CHANNEL COUNT DAQ SYSTEM WITH HIGH-END SIGNAL CONDITIONING, POWERFUL COMPUTER, DATA LOGGER, REAL-TIME DATA OUTPUT CAPABILITY TO EtherCAT® REAL-TIME CONTROLLER.

DAQ AND CONTROL

The R8RT instrument is an upgrade of our R8 DAQ system. It uses the same DAQ technology, and provides the same data logging and data processing capabilities as the R8. However, the R8RT includes an additional EtherCAT® slave port that can send your real-time data to any 3rd party EtherCAT® master controller.

DUAL MODE

The EtherCAT® slave interface can be used to provide real-time data to a 3rd party control system, while the internal bus allows full-speed recording via Dewesoft X software in parallel. Finally, the worlds of data acquisition and control have come together in one system!

SIRIUS® R3 INDUSTRIAL PC SYSTEM

RACK MOUNTABLE DAQ SYSTEM BUILT INTO STANDARD PC COMPUTER CHASSIS AND INTEGRATED SIRIUS® DATA ACQUISITION SLICES.
READY FOR SIMPLE AND INEXPENSIVE UPGRADE OF PC COMPONENTS.

FULLY SYNCHRONIZED
Every single channel - analog, digital, and CAN - is synchronized with microsecond accuracy.

19" RACK MOUNTABLE
The included PC chassis can be mounted in any 19" rack cabinet.

HIGH-END SIGNAL CONDITIONING
The R3 data acquisition system is built upon SIRIUS DAQ technology, and features the same powerful world-class signal conditioning amplifiers. Check out the SIRIUS product page for a detailed DAQ technology overview.

UP TO 3 ISOLATED CAN PORTS
Up to 3 high-speed CAN 2.0b channels with 1 Mbit/sec data throughput, with additional support for CCP, OBDII, J1939, and CAN output.

DIGITAL/COUNTER/ENCODER INPUTS
Each channel is capable of 3x digital inputs, 1x event counter, encoder, period, pulse-width, duty-cycle. Precise frequency and angle measurement uses patented SuperCounter® technology.

HIGH PERFORMANCE COMPUTER
The PC computer inside is built with standard, off-the-shelf computer components, allowing for easy upgrades of drive, memory, CPU, and other components.

UP TO 48 ANALOG INPUTS
Systems can be configured with up to eight SIRIUS DAQ slices for a total of 48 analog inputs for virtually any sensor.

UP TO 24 COUNTER/ENCODER INPUTS
Up to 24 counter/encoder or 72 digital input channels, all equipped with our patented SuperCounter® technology.

COMPACT SYSTEM SOLUTION SIRIUS® MINI

SMALL AND HIGHLY PORTABLE, USB POWERED DATA ACQUISITION SYSTEM
IDEAL FOR ACOUSTIC, VIBRATION, AND ROTATING MACHINERY ANALYSIS.

COUNTER/ENCODER/DIGITAL INPUTS

The system includes one counter/ encoder input which can be used as 3x digital inputs, 1x event counter, encoder, period, pulse-width, duty-cycle. Precise frequency and angle measurement use patented SuperCounter® technology.

SMALLEST DAQ

SIRIUS mini is our smallest, 4-channel data acquisition system. Fits almost anywhere, suitable for acoustic, vibration, and angle measurements.

USB POWERED

SIRIUS mini does not require any external power supply. It can be powered straight from the USB connection, for example, through a laptop.

UNMATCHED PRICE

SIRIUS mini ships off-the-shelf with high-quality signal conditioning and world-leading, award-winning data acquisition software for the best price on the market.

4 IEPE/VOLTAGE INPUTS

The system includes four high-dynamic analog inputs, dual sigma-delta ADCs with 200 kS/s/ch sample rate, and up to 160 dB dynamic range.

SIRIUS® AMPLIFIERS

HIGH DYNAMIC - DualCoreADC® SIRIUS®

Our DualCoreADC® technology boosts dual 24-bit delta-sigma ADC's with an anti-aliasing filter on each channel, achieving an astonishing 160 dB of dynamic range in the time and frequency domains, with up to 200 kS/s/ch sampling rate per channel. Up to 8 channels per SIRIUS module.

COUNTER INPUT: Most amplifiers can be also ordered with additional counter input featuring event counting, waveform timing, angle, encoder and speed measurements. Each counter has 3 digital inputs and 1 digital output.

	STG	STGM	ACC	CHG	HV	LV
Connectors	DB9, L1B7f, L2B10f	DB9, L2B7f, L2B10f	BNC, TNC	BNC, TNC	BANANA	DB9, BNC, BANANA
Counter version	✓	✓	✓	✓	-	✓
Channels per slice	8					
Data rate / channel	200 kS/sec USB, 20 kS/sec EtherCAT®					
Resolution	24 bit DualCoreADC®					
Bandwidth	70 kHz					
Voltage ranges	±50 V, ±10 V, ±1 V, ±100 mV	±10 V, ±1 V, ±100 mV, ±10 mV	±10 V, ±500 mV	±10 V, ±500 mV	±1200 V, ±50 V	±200 V, ±20 V, ±10 V, ±1 V, ±100 mV
Input coupling	DC, AC 1 Hz (3, 10 Hz SW)	DC	DC, AC 0.1 Hz, 1Hz	DC, AC 0.1 Hz, 1 Hz, 10 Hz, 100 Hz	DC	DC, AC 1 Hz (3, 10 Hz SW)
Sensor excitation	0..20 V max. 0.8W, 0..60mA max 0.5W	0..15 V max. 44 mA	IEPE 2,4,8,12,16, 20 mA	IEPE 4,8,12 mA	-	2..30 V bipolar, 0..24 V unipolar, max. 0.2 A/2 W
Bridge connection	Full, ½, ¼ 350Ω, ¼ 120Ω 3, 4 wire	Full, ½, ¼ 350 Ω, ¼ 120 Ω 3 wire	-	-	-	Full
Programmable shunt	59.88 kΩ, 175kΩ bipolar	100 kΩ bipolar	-	-	-	-
IEPE input	DSI-ACC	DSI-ACC	✓	✓	-	DSI-ACC
Resistance	✓	-	-	-	-	-
Temperature (PTx)	✓	DSI-RTD	-	-	-	DSI-RTD
Thermocouple	DSI-TH	DSI-TH	-	-	-	DSI-TH
Potentiometer	✓	✓	-	-	-	-
LVDT	DSI-LVDT	DSI-LVDT	-	-	-	DSI-LVDT
Charge	DSI-CHG	DSI-CHG	-	100k, 10k pC	-	DSI-CHG
Current	ext. shunt, DSI-20mA, DSI-5A	ext. shunt, DSI-20mA, DSI-5A	ext. shunt	ext. shunt	-	ext. shunt, DSI-20mA, DSI-5A
TEDS	✓	✓	✓	✓	-	✓
Isolation voltage	1000 V	1000 V	1000 V	1000 V	CATII 1000 V	1000 V
Power consumption per channel	2W/ch	1.3 W/ch	1 W/ch	1.2 W/ch	1 W/ch	1.2 W/ch
Advanced functions	Supports all strain types and high input range	Low power, sensor and amplifier balance, bipolar shunt	Sensor error detection, high dynamic range	Sensor error detection in IEPE and CHG mode (injection)	High voltage, high isolation	High sensor power and multi range

HIGH DENSITY HD SIRIUS®

High density SIRIUS module with up to 16 channels per SIRIUS slice is the perfect choice for high channel count applications.

HIGH SPEED HS SIRIUS®

1 MHz 16 bit SAR technology with software selectable alias-free filtering is the perfect choice for transient recording. Up to 8 channels per SIRIUS module.

HD-STGS	HD-LV	HD-ACC	HS-HV	HS-LV	HS-ACC	HS-CHG	HS-STG
DB9, L1B10f	DB9, BNC	BNC	BANANA	DB9, BNC, BANANA	BNC	BNC, TNC	DB9
-	-	-	-	✓	✓	✓	✓
16			8				
200 kS/sec USB, 10 kS/sec EtherCAT®			1 MS/sec USB				
24 bit			16 bit				
70 kHz			2 MHz	1 MHz	500 kHz	500 kHz, CHG: 200 kHz	1 MHz
±10 V, ±1 V, ±100 mV, ±10 mV	±100 V, ±10 V, ±1 V, ±100 mV	±10 V, ±5 V, ±1 V, ±200 mV	±1600 V ... ±20 V	±100 V ... ±50 mV	±10 V ... ±100 mV	±10 V ...±100 mV	±50 V ... ±20 mV
DC	DC	DC, AC 0.1 Hz, 1 Hz	DC	DC, AC 1 Hz (3, 10 Hz SW)	DC, AC 1 Hz (3, 10 Hz SW)	DC, AC 0.1 Hz, 1 Hz, 10 Hz, 100 Hz	DC, AC 1 Hz (3, 10 Hz SW)
0..12 V max. 44 mA	2..30 V bipolar, 0..24 V unipolar, max. 0.2 A/2 W	IEPE 4,8,12 mA	-	2..30 V bipolar, 0..24 V unipolar, max. 0.2 A/2 W	IEPE 4,8 mA	IEPE 4,8,12 mA	0..20 V max. 0.8W, 0..60 mA max 0.5 W
Full, ½, ¼ 350 Ω, ¼ 120 Ω 3 wire	Full	-	-	Full	-	-	Full, ½, ¼ 350 Ω, ¼ 120 Ω 3, 4 wire
100 kΩ	-	-	-	-	-	-	59.88 kΩ, 175 kΩ bipolar
DSI-ACC	DSI-ACC	✓	-	DSI-ACC	✓	✓	DSI-ACC
-	-	-	-	-	-	-	✓
DSI-RTD	DSI-RTD	-	-	DSI-RTD	-	-	✓
DSI-TH	DSI-TH	-	-	DSI-TH	-	-	DSI-TH
✓	-	-	-	-	-	-	✓
DSI-LVDT	DSI-LVDT	-	-	DSI-LVDT	-	-	DSI-LVDT
DSI-CHG	DSI-CHG	-	-	DSI-CHG	-	100k ...1k pC	DSI-CHG
ext. shunt DSI-20mA, DSI-5A	ext. shunt DSI-20mA, DSI-5A	ext. shunt	-	ext. shunt DSI-20mA, DSI-5A	ext. shunt	ext. shunt	ext. shunt DSI-20mA, DSI-5A
✓	✓	✓	-	✓	✓	✓	✓
500 V in pairs	500 V in pairs	500 V in pairs	CATII 1000V	1000 V	1000 V	1000 V	1000 V
1.3 W/pair	1.3 W/pair	1.3 W/pair	1 W/ch	1.2 W/ch	2 W/ch	1.2 W/ch	2 W/ch
Low power, sensor and amplifier balance	High sensor power and multi range	Sensor error detection	High voltage, high bandwidth, high isolation	High sensor power and multi range	Sensor error detection, high speed	Sensor error detection in IEPE and CHG mode (injection)	High speed, supports all strain types and high input range

ONE HARDWARE.

EVERY APPLICATION

EtherCAT®

DAQ SOFTWARE INCLUDED

BUILT TO LAST

HIGH QUALITY DAQ DEVICE

REAL TIME CONTROL

PERFECT SIGNAL CONDITIONING

EXPANDABLE

ONE HARDWARE.

DAQ AND CONTROL SYSTEMS

CAPACITY & COMPATIBILITY
Our devices are capable of storing hundreds of analog and digital channels at full speed while allowing in parallel data to be sent out in real-time to any 3rd party EtherCAT® master controller.

RUGGED AND BUILT TO LAST
Made on our own CNC machines, designed by our mechanical engineers. Proven tough.

SOFTWARE INCLUDED WITH FREE LIFETIME UPGRADE
Award winning Dewesoft X software is included with every instrument. All upgrades to the software are free forever with no hidden licensing costs.

DUAL MODE

IOLITE® INDUSTRIAL REAL TIME DATA ACQUISITION DEVICES

- DUAL EtherCAT®: IOLITE® uses two EtherCAT® buses in parallel. The EtherCAT® primary bus is used for full speed buffered data acquisition to a computer. The EtherCAT® secondary bus is mainly used for real-time data to any 3rd party control system.
- GREAT SIGNAL CONDITIONING: IOLITE® features high-quality amplifiers which offer great signal quality and up to 20 kHz sampling rate.

IOLITE®r

19" rack version with up to twelve slots, dual EtherCAT® interface and redundant power supply

- REDUNDANT POWER SUPPLY: Together with dual EtherCAT® interface provides maximum system reliability.
- MULTIPLE CHASSIS OPTION: IOLITE® can be configured in the 19-inch cabinet compatible chassis or in more rugged SIRIUS®-like compatible chassis.
- GREAT PRICE/PERFORMANCE: IOLITE® offers great price/performance ratio and is suitable for test-bed and industrial applications.

IOLITE®s

SIRIUS form chassis with up to eight slots, dual EtherCAT® interface and redundant power supply

Data acquisition and real-time control front-end system for industrial applications.

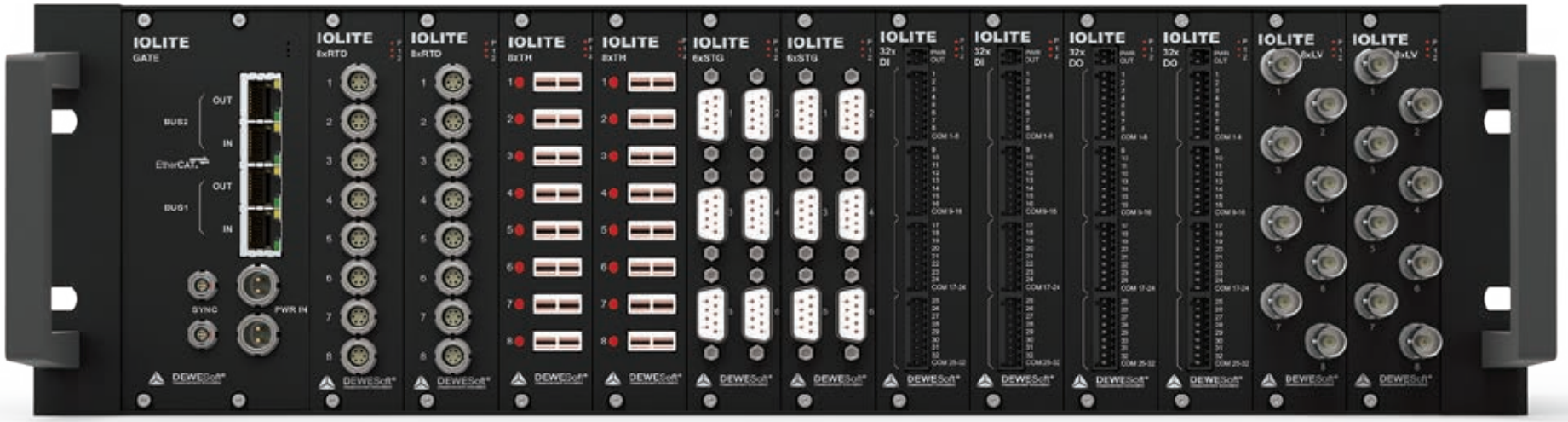
All-in-one solution for
real-time control and feedback monitoring DAQ.

IOLITE® MODULES

AMPLIFIERS

IOLITEi 8xRTD	8 channel-channel isolated PTx temperature, resistance and voltage with Lemo 0B connector.
IOLITEi 8xTH	8 channel-channel isolated universal thermocouple input module with mini TC connector. Accepts K, J, T, R, S, N , E, C, B thermocouple types.
IOLITE 6xSTG	Universal 6 channel differential voltage, current and Full/Half/ Quarter bridge input with DSUB9 connector. Compatible with DSI adapters for IEPE, CHG, 200V, RTD, TH measurements.

IOLITEi 32xDI	32 channel isolated digital input module with screw terminal connection.
IOLITEi 32xDO	32 channel digital output module with screw terminal connections and integrated watchdog function.
IOLITEi 8xLV	8 channel-channel isolated voltage inputs with BNC or screw terminal connectors



SPECS IOLITE®

AMPLIFIERS SPECS

	8xRTD	8xTH	6xSTG	32xDI	32xDO	8xLV
Connectors	L0B6f	Thermocouple	DB9	Terminal block	Terminal block	BNC, Terminal block
#ch per module	8x	8x	6x	32x	32x	8x
Data rate / channel	100 S/sec	100 S/sec	20 kS/sec	40 kS/sec		20 kS/sec
Resolution	24-bit	24-bit	24-bit	digital	digital	24-bit
Bandwidth			0.49*fs			0.49*fs
Voltage ranges	1 V, 100 mV	1 V, 100 mV	±50 V, ±10 V, ±1 V, ±100 mV		open collector	±100 V, ±10 V (±10 V, ±1V on request)
Input coupling	DC	DC	DC, AC 1 Hz			DC
Sensor excitation	0..12 V (bipolar), 0..24 V (unipolar) max. 0.4 W/ch					
Bridge connection	Full, ½, ¼ 350 Ω, ¼ 120 Ω 3-wire					
Programmable shunt	100 kΩ					
IEPE input	DSI-ACC					
Current	20 mA (internal shunt), DSI-5A					
Temperature (PTx)	PT100, 200, 500, 1000, 2000		DSI-RTD			
Thermocouple		K, J, T, R, S, N, E, C, U, B	DSI-TH			
Resistance	1 kΩ, 10 kΩ					
Potentiometer	✓					
LVDT	DSI-LVDT					
Charge	DSI-CHG					
TEDS	✓					
Isolation voltage	1000 V	1000 V	Differential	1000 V	1000 V	1000 V
Power consumption per module	Typ. 2.1 W, Max. 2.7 W	3.2 W	Typ. 5.4 W, Max. 11.1 W	Typ. 1.2 W, Max. 1.9 W	Typ. 1.2 W, Max. 2.0 W	Typ. 2.4 W, Max. 3.5 W
Advanced functions	High isolation	High isolation, support of main TC types	Supports all strain types and high input range		Watchdog	High isolation, high input range

IOLITE® SPECS

AMPLIFIERS SPECS

32xDO	
Digital Output	
Isolated Output Channels	32
Compatibility	Solid state relay
Maximum sink current	0.5 A
Maximum switching voltage	50 V
Maximum update rate	depending on EtherCAT® master
Isolation voltage peak	1000 V channel-to-ground, no channel-to-channel isolation
Additional Specifications	
Input connectors	Terminal block, 2 pole, 4 x 9 pole OMNIMATE SL 2.50 / BLF 2.50/180
Power supply	12 - 48 V DC
Power consumption	Typ. 1.2 W, Max. 2.0 W
Weight	230 g
Slice Dimensions	128.4 x 115.4 x 30.1 mm

32XDI	
Digital Input	
Isolated Input Channels	32
Input low level	-1 V ~ +1 V
Input high level	-48 V ~ -3 V, +3 V ~ +48 V
Input high current @5 V	UIN < 1 mA
Input high current @30 V	UIN < 1 mA
Sampling rate	Simultaneous 40 kS/sec
Overvoltage protection	100 V continuous (250 Vpeak)
Isolation voltage peak	1000 V channel-to-ground & channel-to-channel
Additional Specifications	
Input connectors	Terminal block, 2 pole, 4 x 9 pole OMNIMATE SL 2.50 / BLF 2.50/180
Power supply	12 - 48 V DC
Power consumption	Typ. 1.2 W, Max. 1.9 W
Weight	220 g
Slice Dimensions	128.4 x 115.4 x 30.1 mm

8xRTD		
Analog inputs		
Input types	voltage, resistor or universal PTxxx inputs	
Number of channels	8	
ADC Type	24-bit delta-sigma	
Sampling Rate	Simultaneous 100 S/sec	
Voltage Ranges	**±1 V**	**±100 mV**
Input Accuracy	±0.02 % of reading ±0.01 % of range ±10 µV	±0.02 % of reading ±0.01 % of range ±10 µV
Typical Noise floor @10/100 s/sec	117 dB / 107 dB	111 dB / 101 dB
Gain Drift	Typical 4 ppm/K (max. 10 ppm/K)	
Offset Drift	Typical 0.05 µV/K (max. 0.2 µV/K)	
Gain Linearity	< 0.01 %	
Input Coupling	DC	
Input Impedance	1 MΩ	
Temperature	**PT500, PT1000, PT2000**	**PT100, PT200**
Measurement range	-200 °C to +850 °C	
Accuracy	±0.05 % of reading ±0.2 °C	
Temperature Drift	typ. ±5 ppm/K (max. ±12 ppm/K ±0.003 °C/K)	
Input Connection	3-wire or 4-wire	
Resolution	< 0.001 °C	
Resistance	**0…10 kΩ**	**0…1 kΩ**
Accuracy	±0.02 % of reading ±0.01 % of range	
Input Connection	3-wire or 4-wire	
Additional Specifications		
Input connectors	Lemo 0B 6pin EEA.0B.306.CLN	
Isolation voltage	1000 Vpeak channel-to-ground & channel-to-channel	
Power supply	12 - 48 V DC	
Power consumption	Typ. 2.1 W, Max. 2.7 W	
Weight	260 g	
Dimensions	128.4 x 115.4 x 30.1 mm	

8xTH		
Inputs		
Input type	Isolated universal thermocouple and voltage	
Number of channels	8	
ADC Type	24-bit delta-sigma	
Sampling Rate	Simultaneous 100 S/sec	
Voltage Ranges	**±1 V**	**±100 mV**
Input Accuracy	0.02% +/- 100uV	±0.02 % of reading ±10 µV
Typical Noise floor @10/100 s/sec	114 dB / 105 dB	109 dB / 100 dB
Gain Drift	Typical 4 ppm/K (max. 10 ppm/K)	
Offset Drift	Typical 0.05 µV/K (max. 0.2 µV/K)	
Gain Linearity	<0.01%	
Input Coupling	DC	
Input Impedance	100 MΩ	
Thermocouple	**TC Types: K, J, T, R, S, N , E, C, U, B**	
Accuracy	±0.02 % of reading ±0.5 °C ±10 µV	
Resolution	< 0.001 °C	
Sampling rates	10, 20, 40, 80, 100 S/sec	
Typical Noise	0.007 °C RMS@Type K @ 10 S/sec 0.02 °C RMS@Type K @ 100 S/sec	
Additional Specifications		
Input connectors	Mini Thermocouple connector (copper)	
Isolation voltage	1000 Vpeak channel-to-ground & channel-to-channel	
Power supply	12 - 48 V DC	
Power consumption	3.2 W	
Weight	230 g	
Slice Dimensions	128.4 x 115.4 x 30.1 mm	

SPECS IOLITE®

AMPLIFIERS SPECS

6xSTG				
Analog inputs - Voltage				
Input type	Voltage Full/half/quarter bridge strain Current Potentiometer, Resistance			
Number of channels	6			
ADC Type	24-bit SAR with anti-aliasing filter			
Sampling Rate	Simultaneous 20 kS/sec per channel (software-selectable)			
Voltage Ranges	±50 V	±10 V	±1 V	±100 mV
Input Accuracy	±0.03 % of reading, ±0.02 % of range, ±0.1 mV			
Typical Dynamic Range @10 kS	100 dB	110 dB	130 dB	145 dB
Typical Noise floor @10 kS	103 dB	97 dB	103 dB	94 dB
Typical CMR @400 Hz / 1 kHz	-71 dB / -66 dB	-72 dB / -66 dB	-96 dB / -88 dB	-96 dB / -87 dB
Gain Drift	Typical 10 ppm/K (max. 40 ppm/K)			
Offset Drift	Typical 0.3 µV/K + 5 ppm of range/K, max 2 µV/K + 10 ppm of range/K			
Gain Linearity	< 0.02%			
Input Coupling	DC, AC 1Hz			
Input Impedance	1 MΩ	1 MΩ	20 MΩ	20 MΩ
Overvoltage Protection	In+ to In-: 50 V continuous, 200 V peak (10 msec)			
Analog inputs - Current				
Current ranges	20 mA		2 mA	
Input Accuracy	±0.03 % of reading, ±0.02 % of range, ±2.1 µA			
Internal Shunt Resistor	50 Ω			
Analog input performance				
Bandwidth (-3 dB)	0.49*fs			
Alias-free Bandwidth	DC to 0.453*fs			
Alias Rejection	-100 dB (all sample rates)			
Delay Through ADC	37 / fs			
Oversampling	32			
Excitation Voltage				
Excitation Voltage	Freely programmable (16-bit DAC)			
Predefined Levels	Bipolar: 0, 1, 2, 5, 10 and 12 VDC Unipolar: 0, 2, 5, 10, 15, 24 VDC			
Accuracy	±0.05 % ±2 mV			
Drift	±50 ppm/K ±100 µV/K			
Stability 10 % to 90 % Load	< 0.01 %			
Current Limit	42 mA (550mW max. power)			
Protection	Continuous short to ground			
Excitation Current				
Excitation Voltage	Free programmable (16-bit DAC)			
Predefined Levels	0, 2, 4, 8, 16, 44 mA			
Accuracy	±0.1 % ±2 µA (<10 mA), ±0.5 % ±5 µA (>10 mA)			
Bridge measurement				
Bridge Connection Types	full bridge strain, ½ bridge strain, ¼ bridge strain (3-wire)			
Ranges	2…1000 mV/V free programmable			
Internal Bridge Completion	½ bridge and ¼ bridge 120 and 350 Ω			
Bridge Completion Accuracy	0.05 %; TCR: 5 ppm/K (others on request)			
Internal Shunt Resistor	100 kΩ (others on request)			
Shunt Resistor Accuracy	0.05 %; TCR: 10 ppm/K (others on request)			
Input Short, Sensor Offset Adjust	Software-selectable			
Additional Specifications				
Input connectors	DB9			
TEDS support	Standard + DSI adapters			
Power supply	12 - 48 V DC			
Power Consumption	5.4 W, Max. 11.1 W (7.9 W 120 Ω @ 5 V load, 8.8 W 350 Ω @ 10 V load)			
Weight	340 g			
Slice Dimensions	128.4 x 115.4 x 30.1 mm			

8xLV		
Analog inputs - Voltage		
Input type	Isolated voltage	
Number of channels	8	
ADC Type	24-bit oversampled SAR	
Sampling Rates	Simultaneous 20k, 10k, 5k, 2k, 1k, 500, 200, 100 S/s (software-selectable)	
Voltage Range	**±100 V**	**±10 V**
Accuracy	±0.03 % of reading ±50 mV	±0.03 % of reading ±5 mV
Typ. SNR (10 kS/s, -1 dBFS sine wave @1 kHz)	91 dB	90 dB
Typical noise floor @10 kS	-105 dB	-98 dB
Type. THD (10 kS/s, -1 dBFS sine wave @1 kHz)	-91 dB	-91 dB
Type. SFDR (10 kS/s, -1 dBFS sine wave @1 kHz)	93 dB	92 dB
Typical CMR@400Hz/1kHz	-98 dB/-90 dB	-83 dB/75 dB
Input Coupling	DC	
Input Impedance	1 MΩ	
Overvoltage Protection	In+ to In-: 200 V continuous, 350 Vpeak (100 ms)	
Analog input performance		
Bandwidth (-3 dB)	0.49*fs	
Alias-free Bandwidth	DC to 0.453*fs	
Alias Rejection	-100 dB (all sample rates)	
Delay Through ADC	37 / fs	
Oversampling	32	
Additional Specifications		
Isolation Voltage	1000 Vpeak channel-to-ground & channel-to-channel	
Power Consumption	Typ. 2.4 W, Max. 3.5 W	
Input Connectors	**BNC**	**Terminal block** 2 pole; OMNIMATE SL 2.50 / BLF 2.50/180
Slice Dimensions	128.4 x 127.6 x 30.1 mm	128.4 x 115.4 x 30.1 mm

ONE HARDWARE.

SOFTWARE INCLUDED

OUTDOOR

EXTREME TEMPERATURES

SHOCK-RESISTANT

IP67

EXTREME VIBRATION

WATERPROOF

CUTTING EDGE SIGNAL CONDITIONING

ONE HARDWARE.

RUGGED DAQ SYSTEMS

RUGGED
Instruments are rugged enough to sustain the harshest environments: water, dust, shock, vibration, and extreme temperatures.

DISTRIBUTABLE
Devices can be distributed close to the source of data - close to the sensors, down to a single measurement node

STANDARD INTERFACE
The EtherCAT® bus can be connected to 3rd party masters, as well as Dewesoft X, thanks to the buffered mode.

SOFTWARE INCLUDED WITH FREE LIFETIME UPGRADE
Award-winning Dewesoft X software is included with every instrument. All upgrades to the software are free - FOREVER - and there are never any hidden licensing fees.

HARSH ENVIRONMENT

KRYPTON® RUGGED SYSTEMS

- DISTRIBUTABLE DEVICES: Locate your data acquisition hardware close to the sensors.
- SINGLE CABLE: With up to 100m between devices for power, data and synchronization.
- MADE TO BE EXTREME: IP67, dust proof, waterproof, 100 g shock and vibration resistant, wide temperature operating range.

KRYPTON®

Ultra rugged and distributable data acquisition devices from -40 to +85 °C operating range

KRYPTON® CPU

Compact, highly portable logger for data recording in harsh environments from -40 to +70 °C operating range

KRYPTON® 1 SERIES

Distribute your measurements down to a single channel

RUGGED SYSTEMS SIRIUS® AND SBOX

- SIRIUS® DAQ TECHNOLOGY: DualCoreADC®, high dynamic range 160 dB, high isolation, SuperCounter®.
- MADE TO BE IP67 EXTREME: Dust-proof, water-proof, 100g shock and vibration resistant, wide temperature operating range.

SBOXwe

Ultra rugged and powerful
data logger from -40 to +50 °C

SIRIUS®iwe

High-end signal conditioning
in rugged form factor
from -40 to +60 °C

KRYPTON® WATERPROOF

RUGGED AND DISTRIBUTABLE DATA ACQUISITION MODULES.
EtherCAT® INTERFACE FOR ANALOG AND DIGITAL I/O AND IP67 DEGREE OF PROTECTION.

FROM 3 TO 16 CHANNEL UNITS

Modules are available from a 3 channel unit, ranging up to larger 8 and 16 channel modules.

DISTRIBUTED DAQ

Distributed measurement hardware can be located close to the sensors. This has many advantages compared to traditional DAQ systems, such as shorter cable runs and less potential for signal noise. KRYPTON systems can be distributed down to a single channel.

EtherCAT® DAQ

Protocol with 100Mb/s bus speed is used for data transmission, data synchronization, and power supply. KRYPTONs are connected with a single cable for data, power, and sync.

RUGGED IP67

These modules are built with tough-as-nails IP67 protection - they're ready to go to work in extreme weather and under the harshest conditions.

UP TO 100M BETWEEN UNITS

KRYPTON units can be distributed over the large area with the distances up to 100 meters (328 feet) between DAQ nodes.

UP TO 20 KHZ/CH SAMPLING RATE

Most KRYPTON channels in the EtherCAT® line can achieve sampling rates up to 20 kS/second.

	STG	TH	RTD	ACC	LV	LA	DIO
Connectors	DB9, L2B10f	Thermocouple	L0B6f	BNC	BNC	BNC	DB25
#ch per module	3x, 6x	8x, 16x	8x	4x, 8x	4x, 8x	8x	16xDI, 16xDO 8xDI, 8xDO
Data rate / channel	20 kS/sec	100 S/sec	100 S/sec	20 kS/sec	20 kS/sec	20 kS/sec	20 kS/sec
Resolution	24 bit	24 bit	24 bit	24 bit	24 bit		digital
Bandwidth	0.49 fs	-	-	0.49 fs	0.49 fs	0.49 fs	-
Voltage ranges	±10V, ±1V, ±100mV, ±10mV	±1V, ±100mV	±1V, ±100mV	±10V, ±5V, ±1V, ±200mV	±50 V	±20 mA	CMOS compatible
Input coupling	DC	DC	DC	DC, AC 0.1Hz, 1Hz	DC	DC	DC
Sensor excitation	0...15 V max. 0.4W/ch (45mA limit)	-	-	IEPE 4 mA, 8 mA	-		5 V / 300 mA 12 V / 120 mA Vsupply / 200 mA
Bridge connection	Full, ½, ¼ 350Ω, ¼ 120Ω 3 wire	-	-	-	-		-
Programmable shunt	100 kΩ	-	-	-	-		-
IEPE input	DSI-ACC	-	-	✓	-		-
Resistance	-	-	10kΩ	-	-		-
Temperature (PTx)	DSI-RTD	-	PT100, 200, 500, 1000, 2000	-	-		-
Thermocouple	DSI-TH	K, J, T, R, S, N, E, C, B	-	-	-		-
Potentiometer	✓	-	-	-	-		-
LVDT	DSI-LVDT	-	-	-	-		-
Charge	DSI-CHG	-	-	-	-		-
Current	ext. shunt DSI20mA, DSI5A	-	-	ext. shunt	-		-
TEDS	✓	-	-	✓	-		-
Isolation voltage	Differential	1000 V	1000 V	Differential	1000 V	1000 V	250 V
Power consumption per module	2.4W (4W 120Ω @ 5V load) 3xSTG; 5.9W (8.9W 120Ω @ 5V load) 6xSTG	2.5 W (8xTH) 4 W (16xTH)	2.5 W	4.6 W	3.5 W (4xLV) 6.7W (8xLV)	6.8W	2 W
Advanced functions	Supports all strain types, TEDS support	High isolation, support of main TC types	High isolation	TEDS support	High isolation, high input range	High isolation, 4-20 mA current loop	-

AMPLIFIERS SPECS

3xSTG, 6xSTG	Differential universal and strain module
8xTH, 16xTH	Isolated universal thermocouples module
8xRTD	Isolated module for measurements with resistance temperature detectors
4xACC, 8xACC	IEPE accelerometer amplifier
4xLV, 8xLV	Isolated voltage input module

8xLA	Isolated low current amplifier
16xDI, 16xDO, 8xDI-8xDO	Isolated digital input/output module
GPS JUNCTION	Module for synchronization between SIRIUS or KRYPTON EtherCAT® devices to SIRIUS USB device, IRIG-B-DC or GPS
Sync junction	Module used to inject IRIG-B-DC sync signal from USB device to EtherCAT® line
KRYPTON CPU	Rugged data logger

KRYPTON® 1 WATERPROOF

SMALLEST SIZE SINGLE CHANNEL RUGGED AND DISTRIBUTABLE DATA ACQUISITION MODULES WITH EtherCAT® INTERFACE.

EtherCAT® DAQ

The EtherCAT® protocol with 100Mb/s bus speed is used for data transmission, data synchronization, and for powering the module. KRYPTON 1 modules are connected with a single cable for data, sync, and power.

DISTRIBUTED TO SINGLE CHANNEL

KRYPTON 1 allows distributing DAQ units down to single channel.

RUGGED IP67

All KRYPTON modules are rugged with the IP67 degree of protection and ready for testing in extreme weather and harsh environments.

UP TO 40 kS/sec SAMPLING RATE

Most devices in the KRYPTON 1 product line can achieve sampling rate up to 40 kS/sec.

UP TO 100M BETWEEN UNITS

KRYPTON units can be distributed over the large area with the distances up to 100 meters (328 feet) between DAQ nodes.

SPECIFICATION KRYPTON® 1

	AO	DI	DO	ACC	STG	LV	HV	TH-HV	CNT
Connectors	BNC	DSUB15HD Male	DSUB15HD Female	BNC	DB9	BNC	Banana jack	K-type thermocouple LEMO REDEL	L1T7f
#ch per module	1	4	4	1	1	1	1	1	1
Data rate / channel	1 kS/sec	40 kS/sec		40 kS/sec	40 kS/sec	40 kS/sec	40 kS/sec	100 S/sec	20 kS/sec
Data interface	EtherCAT®, 100 Mbit/s								
Data interface connectors	Lemo 1T (1 cable for data, power and sync, daisy chainable)								
Resolution	18 bit	digital	digital	24 bit	24 bit	24 bit	24 bit	24 bit	100MHz timebase 5ppm, 20ppm max
Bandwidth	Analog 50kHz			0.49 fs	0.49 fs	0.49 fs	0.49 fs	0.5 fs	10 MHz
Voltage ranges	±10 V (DC only)	Digital (Low: < 1 V, High: > 2 V)		±10 V, ±5 V, ±1 V, ±200 mV	±50 V, ±10 V, ±1 V, ±100 mV	±50 V, ±10 V, ±1 V, ±100 mV	±1000V		TTL (Low: <0.8, High > 2V)
Input coupling				DC, AC 0.1 Hz, 1 Hz	DC, AC 1 Hz	DC, AC 1 Hz	DC	DC	
Excitation	±10 V	-		4 mA, 8 mA	0..12 V (bipolar), 0..24 V (unipolar), 0..42 mA, max. 0.4 W/ch	-	-	-	
Bridge connection	-	-	-	-	Full, ½, ¼ 350 Ω, ¼ 120 Ω 3 wire	-	-	-	
Programmable shunt	-	-	-	-	100 kΩ	-	-	-	
IEPE input	-	-	-	✓	DSI-ACC	-	-	-	
Resistance	-	-	-	-	✓	-	-	-	
Temperature (PTx)	-	-	-	-	DSI-RTD	-	-	-	
Thermocouple	-	-	-	-	DSI-TH	-	-	K	
Potentiometer	-	-	-	-	✓	-	-	-	
LVDT	-	-	-	-	DSI-LVDT	-	-	-	
Charge	-	-	-	-	DSI-CHG	-	-	-	
Current	-	-	-	ext. shunt	20 mA (internal shunt), DSI-5A	ext. shunt	-	-	
TEDS	-	-	-	✓	✓	-	-	-	
Isolation voltage	Non-isolated	Functional isolation Ch-Ch and Ch-GND	Galvanically isolated Ch-GND	125 Vrms Ch-GND isolation	125 Vrms Ch-GND isolation	125 Vrms Ch-GND isolation	CATII 1000 V	CATII 1000 V	Non-isolated
Power consumption per module	2 W	1.5 W	2 W	2 W	3 W	1.5 W	1 W	1.3 W	1.2 W
Temperature range	-40 to 85°C	-40 to 85°C	-40 to 85°C	-40 to 85°C	-40 to 85°C	-40 to 85°C	-40 to 85°C	-40 to 85°C	-40 to 85°C

AMPLIFIERS SPECS

4xDI, 4xDO	Four channel digital I/O amplifier
1xAO	Analog output
1xCNT	Single channel SuperCounter® module
1xLV	Isolated low voltage module

1xSTG	Isolated universal and strain amplifier
1xACC	Isolated IEPE accelerometer amplifier
1xHV	Isolated high voltage module
1xTH-HV	Isolated thermocouple module (CATII 1000 V)

SIRIUS® WATERPROOF

EXTREMELY RUGGED, ISOLATED, IP67 RATED, FAST, PRECISE AND DISTRIBUTABLE DATA ACQUISITION SYSTEM WITH EtherCAT® AND USB INTERFACE FOR TESTING IN HARSH ENVIRONMENT.

IP67 DEGREE OF PROTECTION

SIRIUS waterproof is designed for testing in extremely harsh environments. The unit is waterproof, dustproof and can withstand shocks up to 100G.

SENSOR POWER SUPPLY

Each channel provides power for sensor excitation.

UNIVERSAL ANALOG INPUTS

Universal analog amplifiers can accept voltage and full/half/quarter bridge signals natively as well as IEPE, charge, thermocouples, RTD, current, resistance and LVDT signals with the use of DSI adapters.

RUGGED MODULES CONFIGURATION EXAMPLES:

SIRIUSiwe 8xSTGM	8-channel, universal strain gage amplifiers
SIRIUSiwe 6xSTGM, 2xSTGM+	8-channel universal strain gage amplifier with two counter inputs
SIRIUSiwe 16xHD-STGS	16 channel universal strain gage input

160 DB DYNAMIC RANGE

With our DualCoreADC® technology all analog inputs boost dual 24-bit delta-sigma with an anti-aliasing filter, achieving astonishing 160 dB dynamic range in time and frequency domain with 200 kHz sampling rate per channel.

HIGH ISOLATION

High channel-to-channel and channel-to-ground isolation prevents damage to the systems from excessive voltage and avoids ground loops.

-40 TO 60 °C

Extreme testing means extreme temperatures. SIRIUS waterproof is ready.

DIGITAL/COUNTER/ENCODER INPUTS

Each channel is capable of 3x digital inputs, 1x event counter, encoder, period, pulse-width, duty-cycle. Precise frequency and angle measurement uses patented SuperCounter® technology.

FULLY SYNCHRONIZED

Each channel, either analog, digital or CAN is synchronized with microsecond accuracy.

WATERPROOF SBOX®

EXTREMELY RUGGED, IP67 RATED DATA LOGGER AND POWERFUL DATA PROCESSING COMPUTER.
THE PERFECT COMPANION FOR YOUR SIRIUS® WATERPROOF DAQ SYSTEM.

-40 TO 50 °C
Extreme testing means extreme temperatures. SBOX waterproof is ready.

5 USB PORTS
SBOX includes five USB 2.0 ports. All USB ports feature screw-lock connectors.

3 NETWORK INTERFACES
Two gigabit LAN ports and wireless WLAN interface with external antenna ensure maximum connectivity.

IP67 LEVEL PROTECTION
SBOX waterproof is designed for testing in extremely harsh environments. The unit is waterproof, dustproof, and can withstand shock up to 100G.

PERFORMANCE COMPUTER
With built-in Intel Core i7 CPU and 4GB memory, SBOX waterproof is also very capable computer for worry-free, real-time data processing.

100 HZ GPS WITH RTK
Optional 10Hz or 100Hz GPS receiver with additional RTK support can be built straight into SBOX waterproof.

HIGHLY RELIABLE SSD STORAGE
SBOX waterproof provides highly reliable data recording with typical 180 MB/sec write speeds straight into its fast, reliable solid state drive.

EtherCAT® INTERFACE
Built-in EtherCAT® interface port with synchronization for EtherCAT® DAQ devices.

CURRENT SENSORS

MOUNTING PLATES

SIGNAL ADAPTERS

DISPLAYS

ANGLE SENSORS

ACCELEROMETERS

VIDEO CAMERAS

BATTERY PACKS

MICROPHONES

VEHICLE INTERFACES

ONE HARDWARE.

ACCESSORIES, SENSORS & MORE

DSI ADAPTERS
TEDS equipped adapters that convert our DSUB9 universal signal conditioners into direct IEPE, charge, thermocouple, shunt, voltage, LVDT or RTD inputs

DISPLAYS, VIDEO CAMERAS AND BATTERY PACKS
All you need for our data acquisition systems for stand-alone, in-vehicle or remote test and measurement applications

GPS AND IMU DEVICES
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

WIDE VARIETY OF SENSORS
Current clamps, transducers, accelerometers, angle sensors, microphones, and more

ACTUATORS

PRE-BUILT INSTRUMENTS

AFTER
TEN YEARS
CUSTOMERS
STILL
LOVE IT.

DEWE43A

AWARD-WINNING VERSATILE USB DATA ACQUISITION SYSTEM WITH UNMATCHED PRICE/PERFORMANCE RATIO.
ALL IN COMPACT SMALL SIZE.

UNIVERSAL ANALOG INPUTS

The DEWE-43A natively accepts analog voltages and full bridge sensors. With DSI adapters it can even interface with IEPE and charge accelerometers, thermocouple and RTD temperature sensors, half and quarter bridge configurations, current, resistance, and LVDT sensors. The sample rate is up to 200 kS/s/ch using sigma-delta 24-bit ADCs.

ISOLATED CAN INPUTS

High speed CAN 2.0b channels with 1 Mbit/sec data throughput with additional support for CCP, OBDII, J1939, and CAN output. And all full isolated.

COUNTER/ENCODER/DIGITAL INPUTS

Each of the 8 counter inputs can be used as 3x digital inputs, 1 event counter, encoder, period, pulse-width, duty-cycle. Precise frequency and angle measurement use patented SuperCounter® technology.

ISOLATED POWER SUPPLY

The DEWE-43A power supply is internally isolated, completely preventing ground loops.

SENSOR POWER SUPPLY

Each channel provides power for sensor excitation.

FULLY SYNCHRONIZED

Each channel, either analog, digital or CAN is synchronized with microsecond accuracy.

DSI® ADAPTERS

ACCESSORIES

TEDS EQUIPPED ADAPTERS THAT TURN SIRIUS®, KRYPTON® OR IOLITE® DSUB9 VOLTAGE OR STRAIN ANALOG INPUT INTO A TRUE UNIVERSAL INPUT SUPPORTING A WIDE VARIETY OF SIGNALS.

DSI-ACC, DSI-ACC-0.16HZ, DSI-ACC-20MA:
Adapters for connecting IEPE sensors.

DSI-CHG:
Adapter for connecting charge sensors.

DSI-CHG-DC:
Adapter for connecting charge sensors with high input range and large time constant.

DSI-RTD:
Adapter for connecting DSI RTD temperature sensors (Pt100, Pt200, Pt500, Pt1000, Pt2000).

DSI-TH-K, TH-J, TH-T, TH-C:
Adapter for connecting thermocouples.

DSI-V-200, DSI-V-20:
Adapter for extending voltage range of amplifiers.

DSI-20MA, DSI-5A, DSIi-10A, DSIi-20A:
Adapters for current measurements.

DSI-LVDT:
Adapter for connecting LVDT sensors.

MOUNTING PLATES

DS-MOUNT-DISP-12
Mount that fits DS-DISP-12, our 12″ multi-touch LED screen DS-DISP-12, on a SIRIUS or SBOX slice.

DS-MOUNT-19
Mounting plate for fitting SIRIUS and SBOX data loggers into a 19″ rack cabinet.

VIBISO MOUNT
The Viblso mount provides a vibration-isolated base for SIRIUS waterproof and SBOX waterproof DAQ instruments. Measurement units which are mounted on the Viblso mount are suspended on rubber dampers which isolate instruments from high-frequency vibrations for extreme conditions.

DS-MOUNT-1
This mount can be used to mount SIRIUS data acquisition systems and SBOX data processing computers to the wall, floor or any other flat surface.

DS-MOUNT-2K
Top mounting plate for binding KRYPTON DAQ modules to SIRIUS and MINITAURs data acquisition systems, SBOX data loggers and battery packs.

DS-MOUNT-2
General top mount for SIRIUS data acquisition systems and/or SBOX data loggers. Mount can be used to fit small instruments, such as DS-CAN2, or any accessory that needs to be firmly fixed to the DAQ system.

DISPLAYS AND BATTERY PACKS

ACCESSORIES

DS-BP2I, DS-BP4I
Hot-swappable Li-ion battery solutions with the best weight-to-energy ratio (90 Wh for BP2i, and 180 Wh for BP4i).

DS-DISP12
Rugged, high brightness and resolution LED display for mobile, in-vehicle test and measurement applications.

DS-CAM VIDEO CAMERAS

HIGH-SPEED AND RUGGED VIDEO CAMERAS WITH FULL SYNCHRONIZATION CAPABILITY AND REAL-TIME PICTURE COMPRESSION.

IP67 LEVEL PROTECTION

Some camera models are available in IP67 version. Fully waterproof, dustproof and ready for applications in harsh environments.

REAL-TIME COMPRESSION

Dewesoft offers real-time or offline compression and video streaming directly to computer's hard drive.

HIGH-SPEED VIDEO

DS-CAM cameras offer high frame rates with continuous storage. Lowering the resolution you can achieve even higher speeds.

SYNCHRONIZED TO ANALOG

Cameras offer hardware synchronization link to all analog data acquisition instruments. Video and analog data is synchronized frame by frame.

ADDITIONAL CAMERA SUPPORT

DIRECT X CAMERA SUPPORT

Free support for all DirectX compatible cameras. Video from this cameras will be software synced to analog and other sources with ~10ms accuracy.

HIGH SPEED VIDEO CAMERA

Extreme high speed video cameras from Photron are directly supported and perfectly synchronized to other data.

THERMOVISION CAMERAS

Supports FLIR infrared thermal cameras.

VIDEO POST SYNC

Any video file from additional cameras can be synchronized in analysis mode and merged with Dewesoft data files.

GPS AND IMU DEVICES

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/SBAS/RTK (horizontal positioning)	2.5 / 1 / - m	1.2 / 0.8 / 0.02 m	2 / - / 0.02 m	1.2 / 0.5 / 0.01 m	-
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 °	-
Output data rate	10 Hz	100 Hz	100 Hz	500 Hz	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, Omnistar HP/XP/B2, Trimble RTX	-
ADDITIONAL FEATURES					
Dual antenna heading	-	-	-	✓	-
RTK positioning	-	✓	✓	✓	-
HARDWARE					
Operating voltage	5 V *USB powered	9 to 36 V	5 to 36 V *USB powered	9 to 36 V	5 to 36 V *USB powered
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
INERTIAL SENSORS					
			Accelerometer	Gyroscope	Magnetometer
Range (dynamic)	-	-	2g, 4g, 16g	250 °/s, 500 °/s, 2000 °/s	2g, 4g, 8g
Noise density	-	-	150 µg/√Hz	0.009 °/s/√Hz	210 µg/√Hz
Non-linearity	-	-	< 0.05 %	< 0.05 %	< 0.05 %
Bias stability	-	-	60 µg	3 °/hr	-

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.

CAN INTERFACES

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

2 and 4 port CAN port are fanless by default, and even 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.

RAW DATA ANALYZER

Graphical interface for easy CAN decoding and finding signals without a CAN DBC.

DBC AND ARXML FILE SUPPORT

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

CAN FD, XCP, FLEXRAY AND LIN

Using third party hardware, additional interfaces are supported.

CLAMPS & TRANSDUCERS

INTERFACES & SENSORS

HIGH-ACCURACY SENSORS FOR AC/DC CURRENT MEASUREMENT AND POWER ANALYSIS. FROM CURRENT CLAMPS, HIGH-PRECISION ZERO FLUX CURRENT TRANSDUCERS, SHUNTS AND ROGOWSKI COILS.

UP TO 30 000 AMPS

Dewesoft offers a very wide range of current measurement ranges up to 30 000 (30 thousand) amps.

FLEXIBLE

There are more than 1000 different current sensors available on the market. If you want to connect your own or other sensors we are happy to help you here. Dewesoft instruments allow connecting any type of current transducers.

-40°C TO +85°C

Dewesoft offers current transducers with wide temperature range - ideal for winter testing (-40°C) or summer testing (+85°C).

INTEGRATED SENSOR POWER SUPPLY

Current clamps and zero-flux transducer can be powered straight from the DAQ instrument like R2DB, R8 or with external SIRIUS slice compatible chassis.

HIGH ACCURACY

Highly precise zero flux current transducers or fluxgate compensated clamps are a perfect fit for most demanding power measurements for E-mobility and inverter motors application.

AC/DC CURRENT MEASUREMENT

Dewesoft offers high-accuracy zero-flux current transducers, Rogowski coils, current clamps and shunts for AC and/or DC current measurement.

CURRENT TRANSDUCERS







	IT 60-S	IT 200-S	IT 400-S	IT 700-S	IT 1000-S	IN 1000-S	IN 2000-S
Primary Current Range DC, RMS Sinus	60 A	200 A	400 A	700 A	1000 A	1000 A	2000 A
Overload Ability Short Time (100 ms)	300 Apk	1000 Apk	2000 Apk	3500 Apk	4000 Apk	5000 Apk	10000 Apk
Max. burden resistor (100 % of Ip)	10 ohm	10 ohm	2.5 ohm	2.5 ohm	2.5 ohm	4 ohm	3.5 ohm
di/dt (accurately followed)	> 25 A/µs	> 100 A/µs	> 100 A/µs	> 100 A/µs	> 100 A/µs	> 100 A/µs	> 100 A/µs
Temperature influence	< 2.5 ppm/K	< 2 ppm/K	< 1 ppm/K	< 1 ppm/K	< 1 ppm/K	< 0.3 ppm/K	< 0.1 ppm/K
Output Ratio	100 mA at 60 A	200 mA at 200 A	200 mA at 400 A	400 mA at 700 A	1 A at 1000 A	666 mA at 1000 A	1 A at 2000 A
Bandwidth (0.5 % of Ip)	DC ... 800 kHz	DC ... 500 kHz	DC ... 500 kHz	DC ... 250 kHz	DC ... 500 kHz	DC ... 440 kHz	DC ... 140 kHz
Linearity	< 0.002 %	< 0.001 %	< 0.001 %	< 0.001 %	< 0.001 %	< 0.003 %	< 0.003 %
Offset	< 0.025 %	< 0.008 %	< 0.004 %	< 0.005 %	< 0.005 %	0.0012 %	0.0012 %
Frequency Influence	0.04 %/kHz	0.06 %/kHz	0.06 %/kHz	0.12 %/kHz	0.06 %/kHz	0.1 %/kHz	0.1 %/kHz
Angular Accuracy	< 0.025° + 0.06°/kHz	< 0.025° + 0.05°/kHz	< 0.025° + 0.09°/kHz	< 0.025° + 0.18°/kHz	< 0.025° + 0.09°/kHz	< 0.01° + 0.05°/kHz	< 0.01° + 0.075°/kHz
Rated isolation voltage rms, single isolation CAT III, pollution deg. 2 IEC 61010-1 standards EN 50178 standards	 2000 V 1000 V	 2000 V 1000 V	 2000 V 1000 V	 1600 V 1000 V	 300 V 300 V	 1000 V -	 1000 V -
Test voltage 50/60 Hz, 1 min	5.4 kV	5.4 kV	5.4 kV	4.6 kV	3.1 kV	4.2 kV	6 kV
Inner diameter	26 mm	26 mm	26 mm	30 mm	30 mm	38 mm	70 mm
Dewesoft Shunt	5 ohm	5 ohm	2 ohm	2 ohm	1 ohm	1 ohm	1 ohm

CURRENT CLAMPS AC/DC

INTERFACES & SENSORS







	DS-CLAMP-200DC	DS-CLAMP-500DC	DS-CLAMP-500DCS	DS-CLAMP-1000DC	DS-CLAMP-150DC	DS-CLAMP-150DCS	DS-CLAMP-1800DC
Type	Flux Gate sensor	Flux Gate sensor	Flux Gate sensor	Flux Gate sensor	Hall sensor	Hall sensor	Hall sensor
Range	200A DC or ACrms	500 ADC or AC rms	500 ADC or AC rms	1000 ADC or AC rms	150 A rms / 300 A peak	150 A rms / 300 A peak	1800A DC or ACrms
Bandwidth	DC to 500 kHz	DC to 100 kHz	DC to 200 kHz	DC to 20 kHz	DC to 100 kHz	DC to 100 kHz	DC to 20 kHz
Accuracy	0.3 % of reading	0.3 % of reading	0.3 % of reading	0.3 % of reading	1 % + 2 mA	1 % + 2 mA	0 - 1000 A: ±2.5 % of reading ±0.5 A 1000 - 1500 A: ±3.5 % of reading 1500 - 1800 A: ±5 % of reading
Phase	≤ 0.1 ° (up to 100 Hz)	≤ 0.1 ° (up to 100 Hz)	≤ 0.1 ° (up to 100 Hz)	≤ 0.1 ° (up to 100 Hz)	-	-	-
TEDS	Fully supported	Fully supported	Fully supported	Fully supported	Fully supported	Fully supported	Fully supported
Sensitivity	10 mV/A	4 mV/A	4 mV/A	2 mV/A	20 mV/A	20 mV/A	1 mV/A
Resolution	±1 mA	±1 mA	±1 mA	±1 mA	±1 mA	±1 mA	±200 mA
Overload Capability	500 A (1min)	1000 A DC	720 A DC	1700 A DC	500 A DC (1min)	500 A DC (1min)	2000 A DC (1min)
Dimensions (Ø opening)	153 x 67 x 25 mm (Ø 20 mm)	238 × 116 × 35 mm (Ø 50 mm)	153 x 67 x 25 mm (Ø 20 mm)	238 x 114 x 35 mm (Ø 50 mm)	205 x 60 x 15 mm ((Ø 32 mm)	106 x 100 x 25 mm ((Ø 25 mm)	205 x 60 x 15 mm (Ø 32 mm)

CURRENT CLAMPS AC / ROGOWSKY COILS AC

	DS-CLAMP-5AC	DS-CLAMP-15AC	DS-CLAMP-200AC	DS-CLAMP-1000AC
Type	Iron-Core	Iron-Core	Iron-Core	Iron-Core
Range	5 A	15 A	200 A	1000 A
Bandwidth	5 kHz	10 kHz	10 kHz	10 kHz
Accuracy	1 - 12 A: ± 0,5 % of reading 0.5 - 1 A: ± 1 % of reading 5 mA - 0,5 A: ± 2 % of reading	1% for currents of 1 - 15 A 2.5% for currents < 1 A	1% for currents of 100 - 240 A 2,5% for currents of 10 - 100 A 3,5% for currents of 0,5 - 10 A	0,3% for currents of 100A - 1200 A 0,5% for currents of 10A - 100 A 2 % for currents < 1A
Phase	1 - 12 A: ± 1 ° 0.5 - 1 A: ± 1 ° 5 mA - 0.5 A: ± 2 °	≤ 3° for currents of 1 - 15 A ≤ 5° for currents < 1 A	≤ 2,5° for currents of 100 - 240 A ≤ 5° for currents of 10 - 100 A not specified for currents of 0,5 - 10 A	0,7° for currents of 100A - 1200 A 1° for currents of 10A - 100 A not specified for currents of < 1A
TEDS	Fully Supported	Fully Supported	Fully Supported	Fully Supported
Sensitivity	100 mV/A	100 mV/A	10 mV/A	1 mV/A
Resolution	-	0.01 A	0.5 A	0.001 A
Overload Capability	-	Crest Factor of 3	Crest Factor of 3	1200 A for 40 minutes
Dimensions (Clamp opening)	102 x 34 x 24 mm (Ø 15mm)	135 x 51 x 30 mm (Ø 22mm)	135 x 51 x 30 mm (Ø 22mm)	216 x 111 x 45 mm (Ø 53mm)

Other Current Transducers for AC and DC measurement from 300 mA up to 4000 A on request.

	DS-FLEX-3000-17	DS-FLEX-3000-35	DS-FLEX-3000-35-HS	DS-FLEX-3000-80	DS-FLEX-30000-120
Type	Rogowski coil	Rogowski coil	Rogowski coil	Rogowski coil	Rogowski coil
Range	3 A, 30A, 300 A, 3000 A	3 A, 30A, 300 A, 3000 A	3000 A	3 A, 30A, 300 A, 3000 A	3 A, 300 A, 3000 A, 30000 A
Bandwidth	3 A: 10 Hz to 10 kHz Others: 10 Hz to 20 kHz	3 A: 10 Hz to 10 kHz Others: 10 Hz to 20 kHz	5 Hz - 1MHz	3 A: 10 Hz to 10 kHz Others: 10 Hz to 20 kHz	3 A: 10 Hz to 5 kHz Others: 10 Hz to 20 kHz
Accuracy	≤1,5 %	≤1,5 %	≤1,5 %	≤1,5 %	≤1,5 %
Coil Length	170 mm (Ø 145 mm)	350 mm (Ø 100 mm)	350 mm (Ø 100 mm)	800 mm (Ø 250 mm)	1200 mm (Ø 380 mm)
TEDS	Not Supported	Not Supported	Fully Supported	not supported	Not Supported

	DSIi-10A	DSIi-20A	DS-SHUNT-05
Type	Current Transducer	Current Transducer	Shunt
Current range	10 AC/DC	20 AC/DC	5A
Bandwidth	100 kHz	100 kHz	-
Accuracy	0.3%	0.3%	0,1%
Resistance	-	-	50 mOhm

ACCELEROMETERS

INTERFACES & SENSORS







	I1T-50G-1	13TI-50G-1	I1TI-50G-2	C1T-100G-1	I1TI-500G-1	I1AI-500G-1	I3T-50G-1
Number of axis	1	3	1	1	1	1	3
Sensitivity	100 mV/g	100 mV/g	100 mV/g	50 pC/g	10 mV/g	10 mV/g	100 mV/g
Range	50 g	50 g	50 g	100 g	500 g	500 g	50 g
Type	IEPE	IEPE	IEPE	Charge	IEPE	IEPE	IEPE
Frequency range	+/- 5 %: 0.3 to 5000 Hz	+/- 10 %: 2 to 5000 Hz	+/- 10 %: 0.3 to 10 000 Hz	+/- 8 %: up to 5000 Hz	+/- 10 %: 1 to 10 000 Hz	+/- 10 %: 1.1 to 10 000 Hz	+/- 10 %: 0.3 bis 10 000 Hz
TEDS	yes	yes	no	no	yes	yes	yes
Features	Miniature size	Case isolated, triaxial	Case isolated, industrial	High temperature	Case isolated, modal	Ultra-miniature	Low noise, triaxial
Dimensions	10.2 x 10.2 x 10.2 mm	1 5.5 x 15 x 15 mm	17.5 x 42.2 mm	12.7 x 24.4 mm	19.4 x 12.7 x 16.1 mm	9 x 6 mm	12 x 12 x 11 mm
Weight	4.3 g	10 g	44 g	25 g	10 g	2 g	5.6 g
Temperature range	-51 °C … +85 °C	-51 °C … +85 °C	-51 °C … +121 °C	-51 °C … +191 °C	-40 °C … +85 °C	-51 °C … +121 °C	-51 °C … +82 °C

ANGLE SENSORS

TACHO SENSORS

	DS-TACHO2	DS-TACHO3	DS-TACHO4
Light source	LED	Laser (red class 2)	LED
Housing	Stainless steel	Stainless steel	Stainless steel
Cable length	2.5m cable	2.5m cable	5m optical fiber and trigger box
Frequency range	Up to 4kHz	Up to 4kHz	up to 1MHz
Distance to object	Up to 1m	Up to 7.5m	from 1-10 mm
Power supply	3-15VDC, 45mA	3-15VDC, 45mA	10-30VDC
Operating temperature	-10°C to +70°C	-10°C to +70°C	-10°C to +70°C
Dimensions	73mm length, 16mm diameter	73mm length, 16mm diameter	M6 x 20mm with 2.5m cable
Connector	L1B7m connector for SIRIUS and DEWE-43 counter input	L1B7m connector for SIRIUS and DEWE-43 counter input	L1B7m connector for SIRIUS and DEWE-43 counter input
Accessories	30cm reflector band	30 cm reflector band	1m reflector band with 2mm black/white grid

TACHO LEVEL CONVERTER

DS-TACHO1- tacho level adapter	
Description	Converts analog tacho signal to digital signal with adjustable trigger level
Trigger/re-trigger level	±10 mV … ±2 V (adjustable with screwdriver)
Max input voltage	±50 Vdc, ±100 Vac
Power supply output	5VDC (max current depending on used Dewesoft device: e.g. DEWE-43:max 800 mA)

MICROPHONES

INTERFACES & SENSORS

MICROPHONES

	46AE - 1/2″ CCP Free-field Standard Microphone Set	146AE - 1/2″ CCP Free-field Rugged Microphone Set IP67	46BE 1/4″ CCP Free-field Standard Microphone Set w/o cable	46DE 1/8″ CCP Pressure Standard Microphone Set
Frequency range (±1 dB)	5-10 kHz	5-10 kHz	10-40 kHz	10 - 25 kHz
Frequency range (±2 dB)	3.15-20 kHz	3.15-20 kHz	4-80 kHz	6.5 - 70 kHz
Dynamic range lower limit with GRAS preamplifier	17 dB(A)	18 dB(A)	35 dB(A)	52 dB(A)
Dynamic range upper limit with GRAS CCP preamplifier	138 dB	138 dB	160 dB(A)	174 dB
Set sensitivity @ 250 Hz (±2 dB)	50 mv/Pa	50 mV/Pa	3.6 mV/Pa	/
Set sensitivity @ 250 Hz (±3 dB)	/	/	/	0.8 mV/Pa
IEC 61094-4 Compliance	WS2F	WS2F	WS3F	manufactured within same tolerances
Temperature range, operation	-30 to 85 °C	-40 to 125 °C	-30 to 85°C	-30 to 70°C
Temperature range, storage	-40 to 85 °C	-40 to 85 °C	-40 to 85°C	-40 to 85°C
TEDS	yes	yes	yes	yes
Weight	33 g	35 g	8 g	7 g

SOUND INTENSITY PROBE

50GI-R CCP Intensity Probe with Remote Control	
Sound-intensity microphone pair 40GK, phase-matched	½" Free-field
Preamplifiers 26CB	Phase-matched
Frequency response and phase-matching	IEC 61043 class 1
Frequency range (±2 dB)	IEC 61043 Class 1
Frequency range with 100 mm spacer	30 Hz – 1 kHz
Frequency range with 50 mm spacer	80 Hz – 1.5 kHz
Frequency range: with 25 mm spacer	120 Hz – 5 kHz
Frequency range: with 12 mm spacer	200 Hz – 10 kHz
TEDS	yes
Weight	400g

MODAL HAMMER

IH-440N-1	
Number of axis	1
Sensitivity	50 mV/lbf (=11,24 mV/N)
Range	100 lbf (=444,82 N)
Type	IEPE
Frequency range	75 kHz resonance frequency
TEDS	yes
Features	modal hammer with TEDS
Dimensions	221 x 71 mm
Weight	100 g (head)
Temperature range	-40 °C … +65 °C

ACTUATORS

SHAKERS

Permanent Magnet Shaker				
	PM-20	PM-100	PM-250	PM-440
Output Force (Sinus)	20 N	100 N	250 N	440 N
Frequency range	0 - 12 kHz	0 – 8 kHz	0 – 5 kHz	0 – 5 kHz
Displacement (Pk-Pk)	5 mm	10 mm	25 mm	25 mm
Max Acceleration	30 g	45 g	80 g	80 g
Amplifier (**I**ntegrated, **E**xternal)	I	I	E	E

- Embedded power amplifier and signal generator for PM-20, PM-100
- Lightweight, durable, portable and easy to use
- Adjustable trunnion base provides high degree of flexibility
- Broad frequency range

Modal Shaker				
	MS-20	MS-100	MS-250	MS-440
Output Force (Sinus)	20 N	100 N	250 N	440 N
Frequency range	0 – 12 kHz	0 – 8 kHz	0 – 5 kHz	0 – 5 kHz
Displacement (Pk-Pk)	5 mm	10 mm	25 mm	25 mm
Max Acceleration	40 g	60 g	100 g	100 g
Amplifier (**I**ntegrated, **E**xternal)	I	I	E	E

- Embedded power amplifier and signal generator for MS-20, MS-100
- Modal stinger can be easily adjusted by the through-hole armature
- Lightweight, durable, portable and easy to use
- Adjustable trunnion base provides high flexibility
- Up to 25mm stroke and broad frequency range

Inertial Shaker				
	IS-5	IS-10	IS-20	IS-40
Output Force (Sinus)	5 N	10 N	20 N	40 N
Frequency range	10-1000Hz	10-3000 Hz	10-3000 Hz	10-3000 Hz
Displacement (Pk-Pk)	1 mm	5 mm	8 mm	12 mm
Total mass	0,06 kg	0,24 kg	0,3 kg	1,2 kg
Amplifier (**I**ntegrated, **E**xternal)	E	E	E	E

- Compact and lightweight design
- Superior low frequency performance
- Any angle mounting
- Low friction bearing guided

YOUR SOLUTION.

REAL-TIME CONTROL FRONT-END

FULLY SYNCHRONIZED INPUTS

STRAIN

VOLTAGE

TEMPERATURE

DATA ANALYSIS

STORING

YOUR SOLUTION.

DATA RECORDING & CONTROL

SYNCHRONIZED DATA RECORDING FROM A WIDE VARIETY OF SOURCES
All data sources: analog, vehicle interfaces, inertial, video and make others are perfectly synchronized and recorded simultaneously.

PARALLEL REAL TIME CONTROL INTERFACE
In parallel-to-lossless data acquisitions all signals are available in real time to act as front-end of control systems.

TRIGGERED TRANSIENT RECORDING
Vast variety of trigger conditions can be set for capturing transients.

NETWORKED DATA ACQUISITION
Systems can be easily combined together to create large array of channels for largest tests performed in the industry.

ALL APPLICATIONS AND INDUSTRIES
Automotive, Aerospace, Industrial ... whether it's a few channels or thousands.

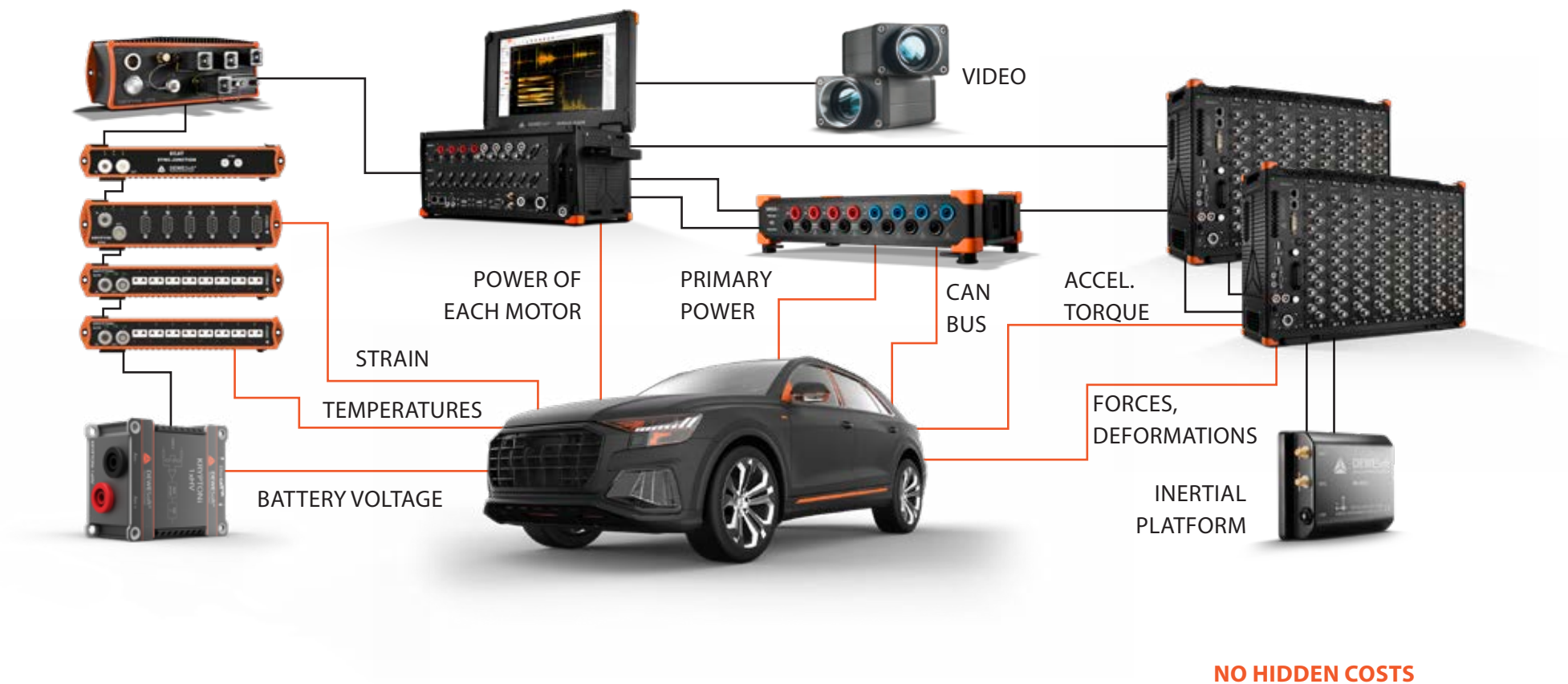
CAPTURE DATA TO NETWORK

ETHERCAT CONTROL AND ACQUISITION

SCALABLE TO HUNDREDS OR THOUSANDS OF CHANNELS

SYNCHRONIZED DATA RECORDING FROM VARIOUS SOURCES

TESTING ISN'T JUST ANALOG INPUTS FROM ONE SOURCE ANY MORE. TODAY'S COMPLEX TESTS CAN INVOLVE OUTPUTS FROM INERTIAL PLATFORMS, BUS DATA (CAN, ARINC, ETC.), VIDEO, AND SO MUCH MORE. ONLY DEWESOFT PUTS IT ALL TOGETHER, SYNCHRONOUSLY.



MODULAR AND EXPANDABLE
Systems can be gradually expanded from one to thousands of channels for any measurement challenge.

EASY TO USE AND VERSATILE
Get your measurements in 30 seconds.

AWARD WINNING DEWESOFT X3
One software for all measurement applications. Easy to use, fast learning curve, no programming needed.

PLUG AND PLAY
Any device, sensor or signal.

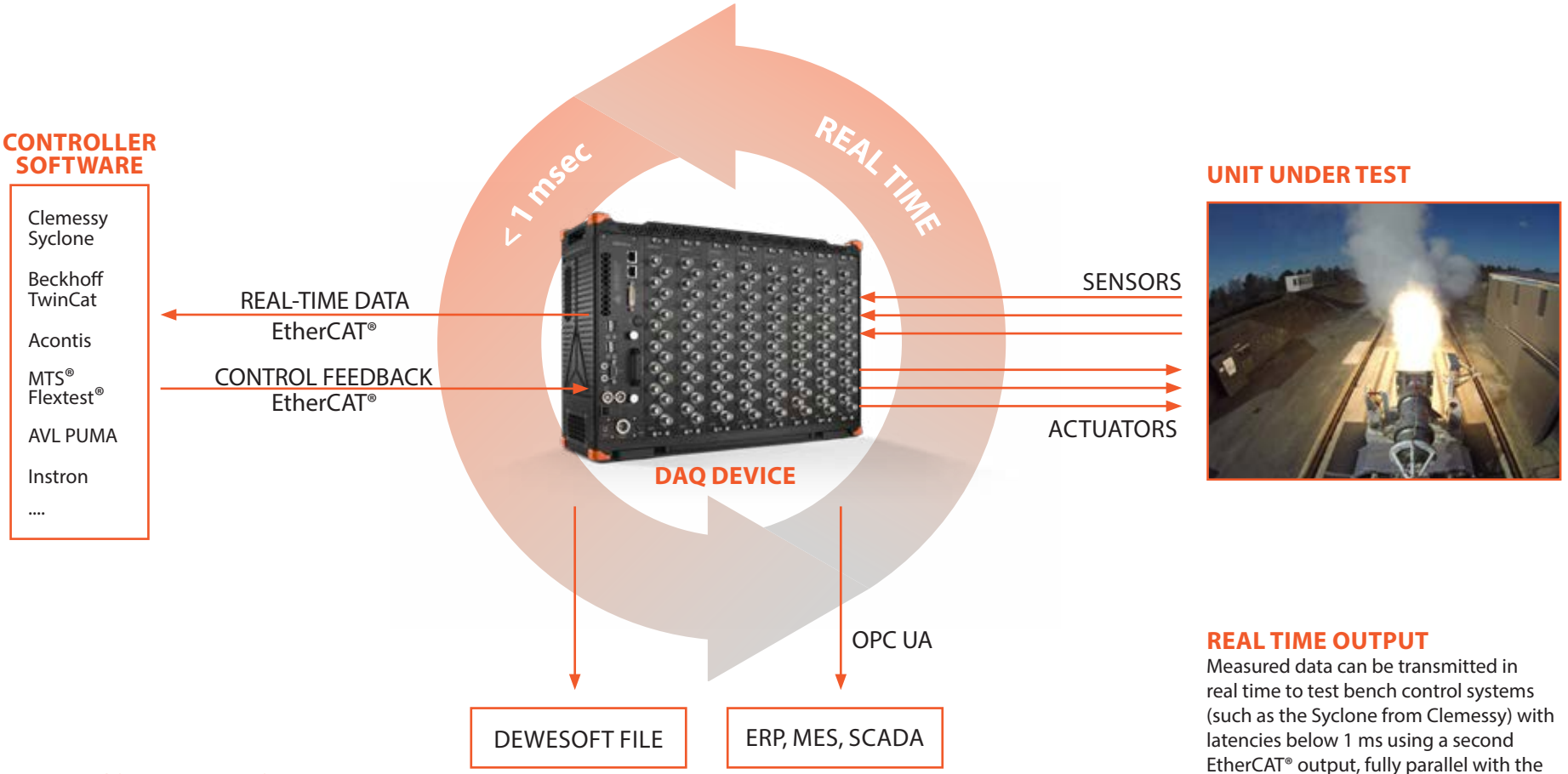
FULLY SYNCHRONISED
Data from various sources are perfectly aligned. Analog, Digital, Counter, vehicle buses, Video ...

NO HIDDEN COSTS
Free lifetime software upgrades, no maintenance fees, free online training courses.

TOTAL SOLUTION
Dewesoft hardware and software forms total solution for all test and measurement applications.

REAL-TIME CONTROL SYSTEM FRONT-END

DATA ACQUISITION, CONTROL SYSTEM FRONT-END FOR ROCKET AND AIRCRAFT PROTOTYPE AND PRODUCTION TESTING.



FLEXIBLE CONFIGURATION

More than 1000 simultaneous channels – and extreme storage speeds.

TIME SAVING

By using one system for data acquisition and control, the time required to setup test bench is reduced typically by 40% compared to traditional methods.

ALL-IN-ONE SYSTEM

Performance testing, vibration, noise, order tracking, balancing, power analysis, thermal and stress testing – these are just a few Dewesoft application areas.

DATA MONITORING

Test operators can monitor the tests from a safe distance using Dewesoft NET distributed technology.

REAL TIME OUTPUT

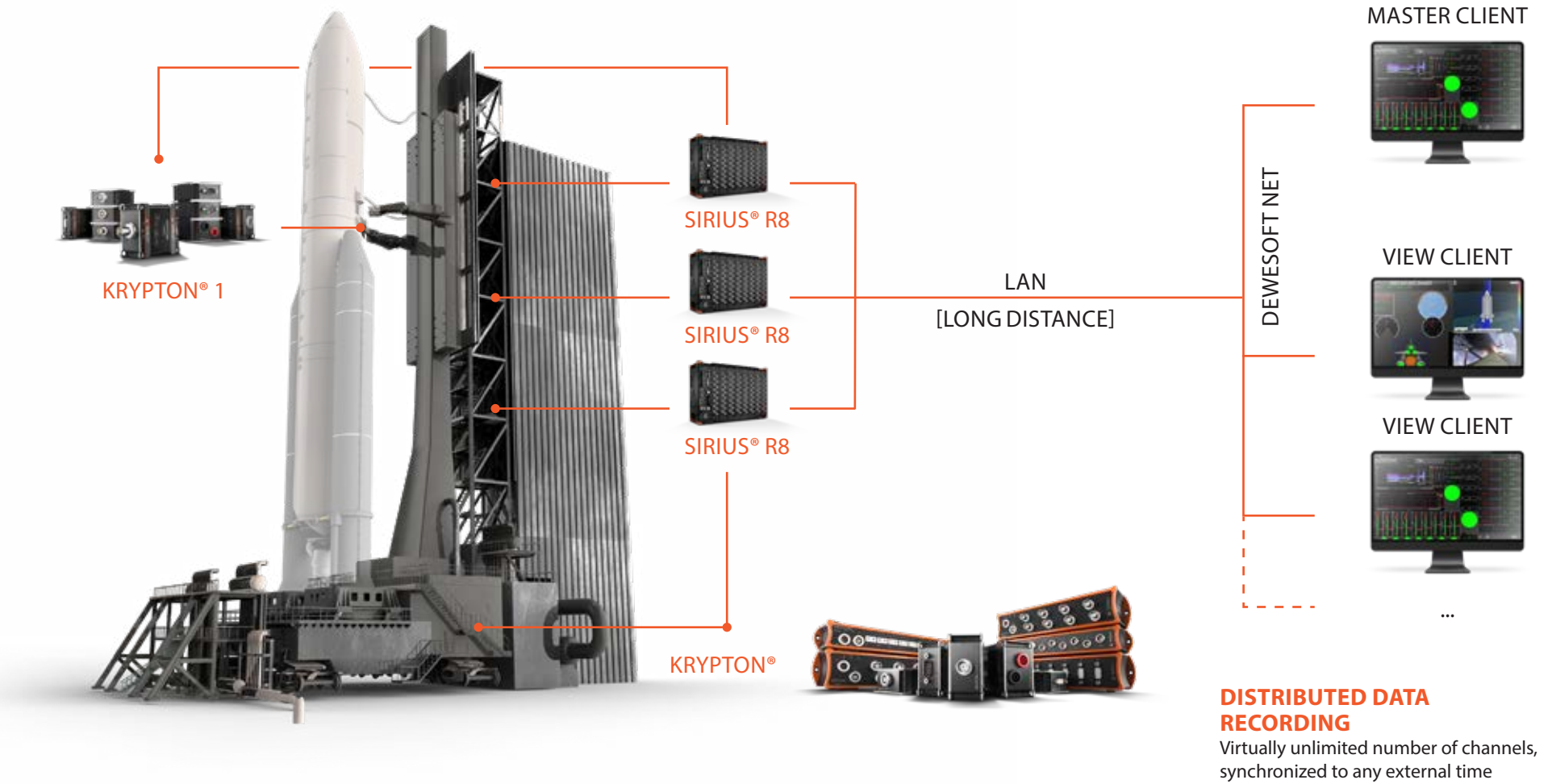
Measured data can be transmitted in real time to test bench control systems (such as the Syclone from Clemessy) with latencies below 1 ms using a second EtherCAT® output, fully parallel with the data acquisition. This greatly reduces system complexity and costs - and improves results.

COST SAVING

Conditioned data are sent digitally, reducing complexity and eliminating conversion and re-conversion errors and inefficiencies.

HIGH CHANNEL COUNT DATA RECORDING

DEWESOFT SYSTEM ARE WIDELY USED FOR DATA ACQUISITION FOR LAUNCH PLATFORMS ALL AROUND THE WORLD.



UNLIMITED CHANNEL COUNT

Dewesoft systems can acquire data from thousands of channels from any combination of sensors – even at extremely high sample rates.

RUGGED SYSTEMS

Dewesoft systems are qualified to be used in most rugged conditions with high temperature, shock and vibration.

REAL TIME VIEW CLIENTS

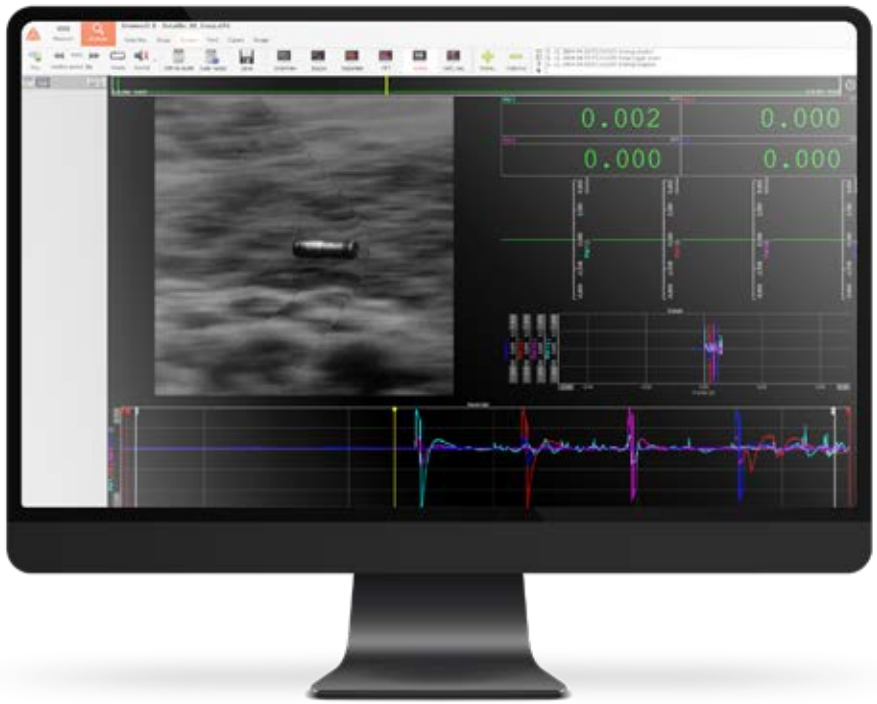
Data can be observed in real-time by any number of view clients, located anywhere on the network.

DISTRIBUTED DATA RECORDING

Virtually unlimited number of channels, synchronized to any external time source. Example: install systems with small or large channel counts at different locations (launch gantry, control room, etc.) and stream data in real-time to a central client. Data are also stored locally in case of network fault, and can be re-synchronized with the central data.

HIGH SPEED AND TRANSIENT RECORDING

DEWESOFT CAN ACQUIRE HIGH-SPEED DATA FROM TRANSIENT EVENT INCLUDING LIGHTNING, POWER SUPPLY INTERRUPTION, BLAST AND EXPLOSION TESTING.



STREAMING

When there's no way to predict the trigger event in advance, data can be streamed continuously to disk, at speeds up to and beyond 500 MB/sec! This is also ideal for unrepeatable events like spacecraft launch, or destructive tests.

ROBUST, ISOLATED CONDITIONING

Dewesoft signal conditioners acquire voltage, IEPE, charge, strain, high voltage or current signals – and all fully isolated from other channels and ground.

BALLISTICS AND MUNITIONS TESTING

These applications typically require synchronization of a variety of data sources, including pressure sensors, and other sensors distributed at the impact site. Dewesoft can synchronize remote and local measurements, and even integrate high-speed video with the data.

TRANSIENT RECORDING

Advanced triggering capabilities in every Dewesoft system allow you to capture any event.

VARIOUS SOURCES

Dewesoft can acquire high-speed video and other data sources with perfect synchronization.

YOUR SOLUTION.

HIGH BANDWIDTH > 1 MHZ

HIGH PRECISION: <0.03%

HIGH ISOLATION: 1600 V DC

PRECISE

EN50160

SCALABLE

HIGHLY ACCURATE

POWER ANALYZE

YOUR SOLUTION.

POWER

SMALLEST FOOTPRINT
SIRIUS® technology allows us to build the smallest power analyzer in the world

HIGHLY ACCURATE
Though extremely small, the Dewesoft power analyzer is highly accurate - 0,03% accuracy

FLEXIBLE AND SCALABLE
Dewesoft is much more than just a power analyzer. All other capabilities of Dewesoft are just a click away, such as mechanical measurements or combustion analysis

POWER QUALITY TESTIN

HYBRID ANALYZER

SMALLEST FOOTPRINT

POWER ANALYZER

HIGH-SAMPLING RATE, HIGH-BANDWIDTH, AND HIGH-ACCURACY HARDWARE FOR POWER ANALYSIS ON ELECTRIC MOTORS, INVERTERS, TRANSFORMERS, SWITCHES AND ANY OTHER ELECTRONIC EQUIPMENT. IN CONJUNCTION SENSORS CAN BE CONNECTED FOR TEMPERATURE, VIBRATION, RPM AND TORQUE MEASUREMENT.

FULLY ISOLATED

Our worry-free solution provides sensor isolation (channel-to-ground), as well as channel-to-channel isolation, and even excitation isolation! Less noise, no ground loops, and the best possible signal quality.

1600 V DC / CAT II 1000 V/ CAT III 600 V

Direct input and acquisition of high voltage signals.

CURRENT SENSORS

We offer high-accuracy current sensors like zero-flux current transducers, AC/DC current clamps, Rogowsky coils and shunts with the power supply out of the box.

0,03% ACCURACY

We offer high accuracy amplifiers and sensors for voltage and current measurement with accuracy as high as 0,03%.

1 MS/S SAMPLING RATE

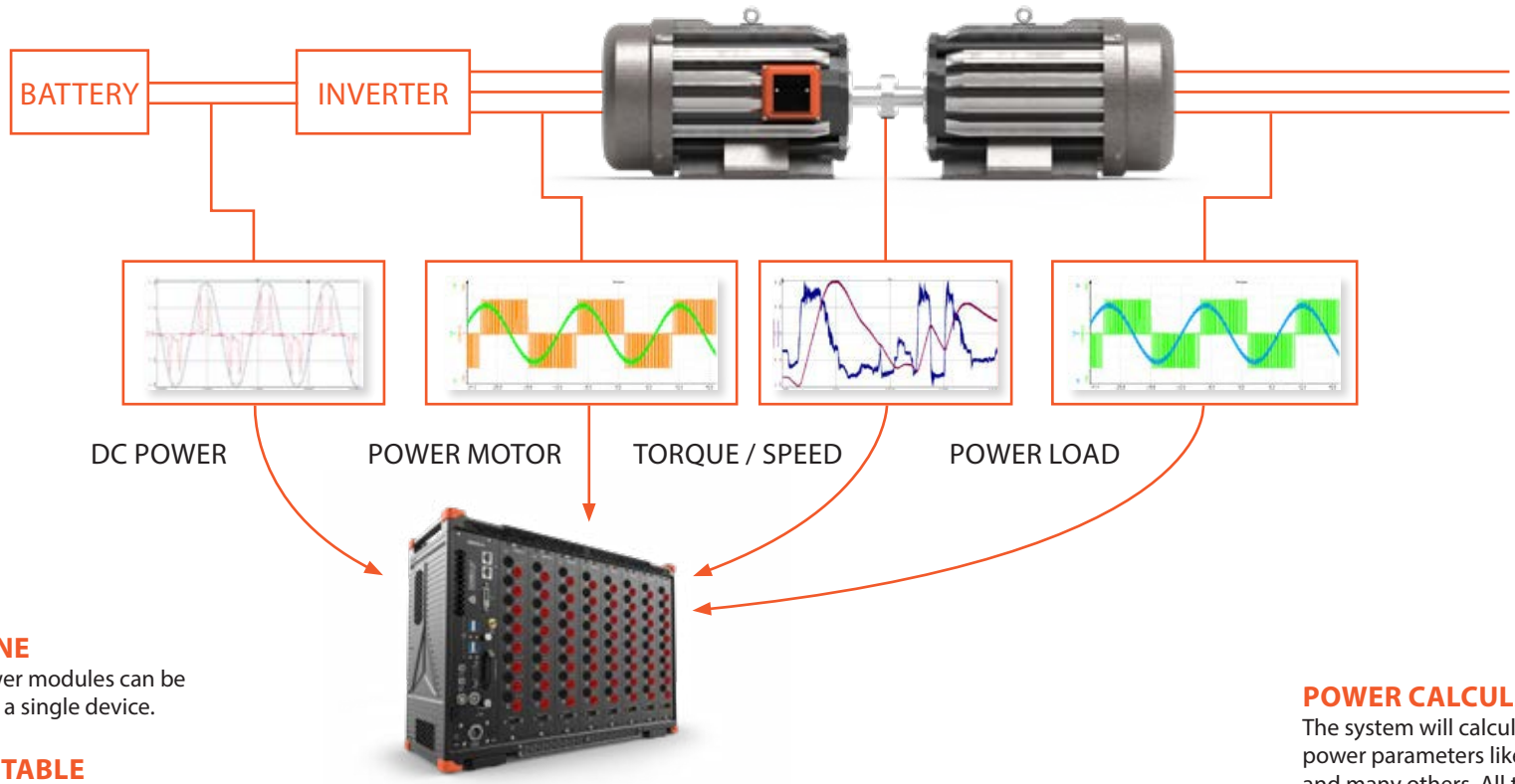
Dewesoft data acquisition hardware features high sampling rate amplifiers with 1 MS per second sampling rate.

ADVANCED ONLINE AND OFFLINE MATH PROCESSING

Dewesoft X includes an easy-to-use mathematics engine. You can apply math functions in real time, as well as during post-processing.

ALL-IN-ONE SOLUTION

OUR POWER ANALYZER ISN'T JUST THE SMALLEST ONE IN THE WORLD - IT'S ALSO THE MOST CAPABLE.
FLEXIBLE HARDWARE COMBINED WITH DEWESOFT X CREATES A WHOLE NEW WORLD OF TESTING POSSIBILITIES
FOR ELECTRICAL MEASUREMENT APPLICATIONS.



ALL-IN-ONE
Multiple power modules can be integrated in a single device.

DISTRIBUTABLE
Several devices can be distributed across the world and are still perfectly synchronized for failure location analysis.

HIGH PRECISION POWER ANALYSIS
High-accuracy Dewesoft hardware combined with Dewesoft X Power software guarantees reliable measurement results.

RAW DATA
Raw Data is essential for detailed analysis of your electric machine. Transients and Oscillations can be captured continuously or by a trigger condition. Power values in conjunction with Raw data allow for immediate anomaly detection.

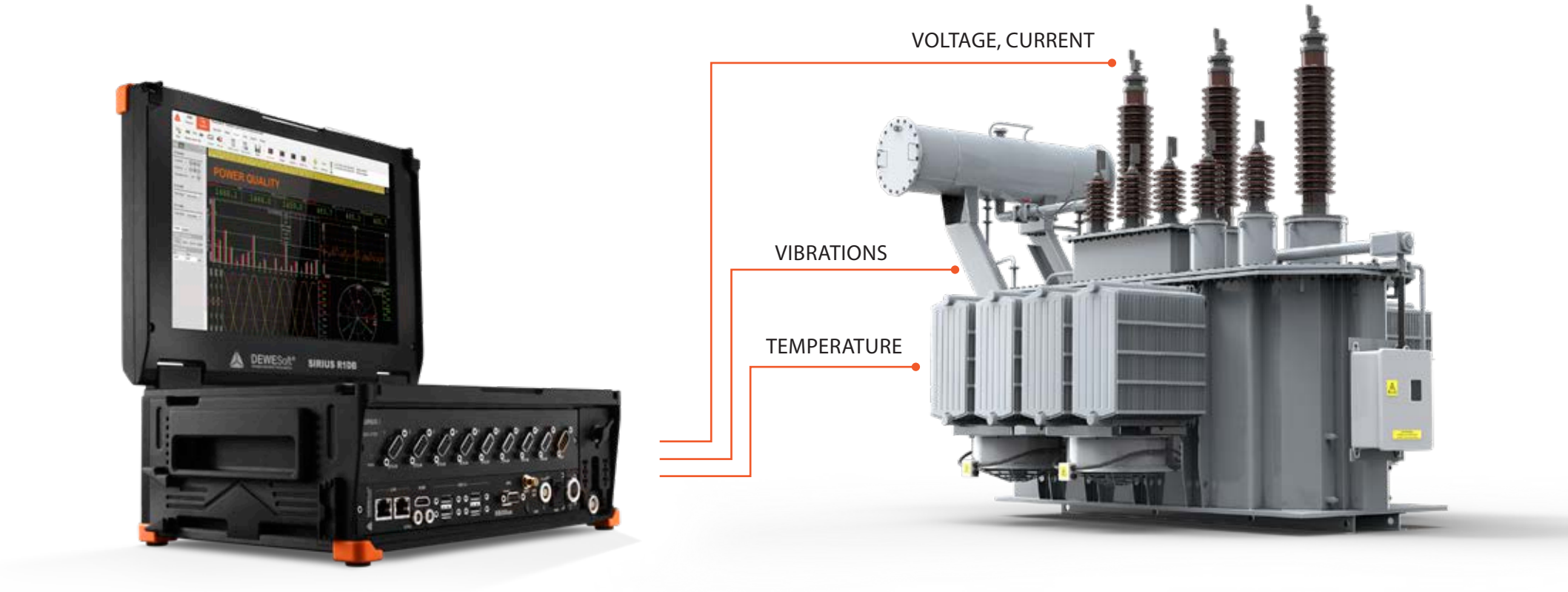
STATIC AND DYNAMIC TESTING
Our sophisticated Power calculation algorithms ensure amazing results during both static and dynamic recording conditions. Analysis of both low-speed wind turbine power (<10 Hz), up to high-speed electric vehicle motors (<3000 Hz) is possible. Detailed analysis of period-based values is also included.

POWER CALCULATIONS
The system will calculate more than 100 power parameters like P, Q, S, PF, cos phi and many others. All these calculations can be done online or in post-processing.

SCOPE AND FFT
In addition to the power analysis other useful tools and visualisations are Scope, Vector Scope, Harmonic FFT, 2D FFT, and 3D FFT. For example the 3D FFT of a motor run-up will yield valuable information about the behaviour of the machine in a single plot.

POWER QUALITY ANALYZER

MEASURE ALL THE POWER QUALITY PARAMETERS ACCORDING TO IEC 61000-4-30 CLASS A. DO MORE DETAILED ANALYSES E.G.: RAW DATA STORING, BEHAVIOUR AT FAULTS, CALCULATION OF ADDITIONAL PARAMETERS AND MORE.



HARMONICS UP TO 150 kHz

Measure and analyze harmonics for voltage, current and THD with frequencies up to 150 kHz. All measurements according to international standards (e.g. IEC-61000-4-7). In addition to the RMS values of each harmonic, the phase angle, active power, reactive power and the impedance are also calculated.

SYMMETRICAL COMPONENTS

Calculation of positive, negative and zero sequence system for voltage, current as well as for active, reactive and apparent power.

THD CALCULATION

Calculation of THD (overall harmonic content) for voltage and current up to the 3000th order.

INTERHARMONICS & HIGHER FREQUENCIES

Measure and analyze interharmonics and higher frequencies. The higher frequency parts can be grouped in 200 Hz bands and/or 2000 Hz bands up to 150 kHz.

FLICKER, FLICKER EMISSIONS & RVCS

Automatic flicker and flicker emission parameters calculation according to IEC-61400-4-15 and IEC-61400-21 standards.

WIND & SOLAR TESTING

THE POWER ANALYSIS MODULE ALLOWS FOR COMPREHENSIVE TESTING OF RENEWABLE POWER GENERATION SOURCES LIKE WIND, SOLAR OR COMBINED HEAT AND POWER (CHP) UNITS. PERFORM ALL OF THAT WITH A SINGLE INSTRUMENT.

POWER PERFORMANCE

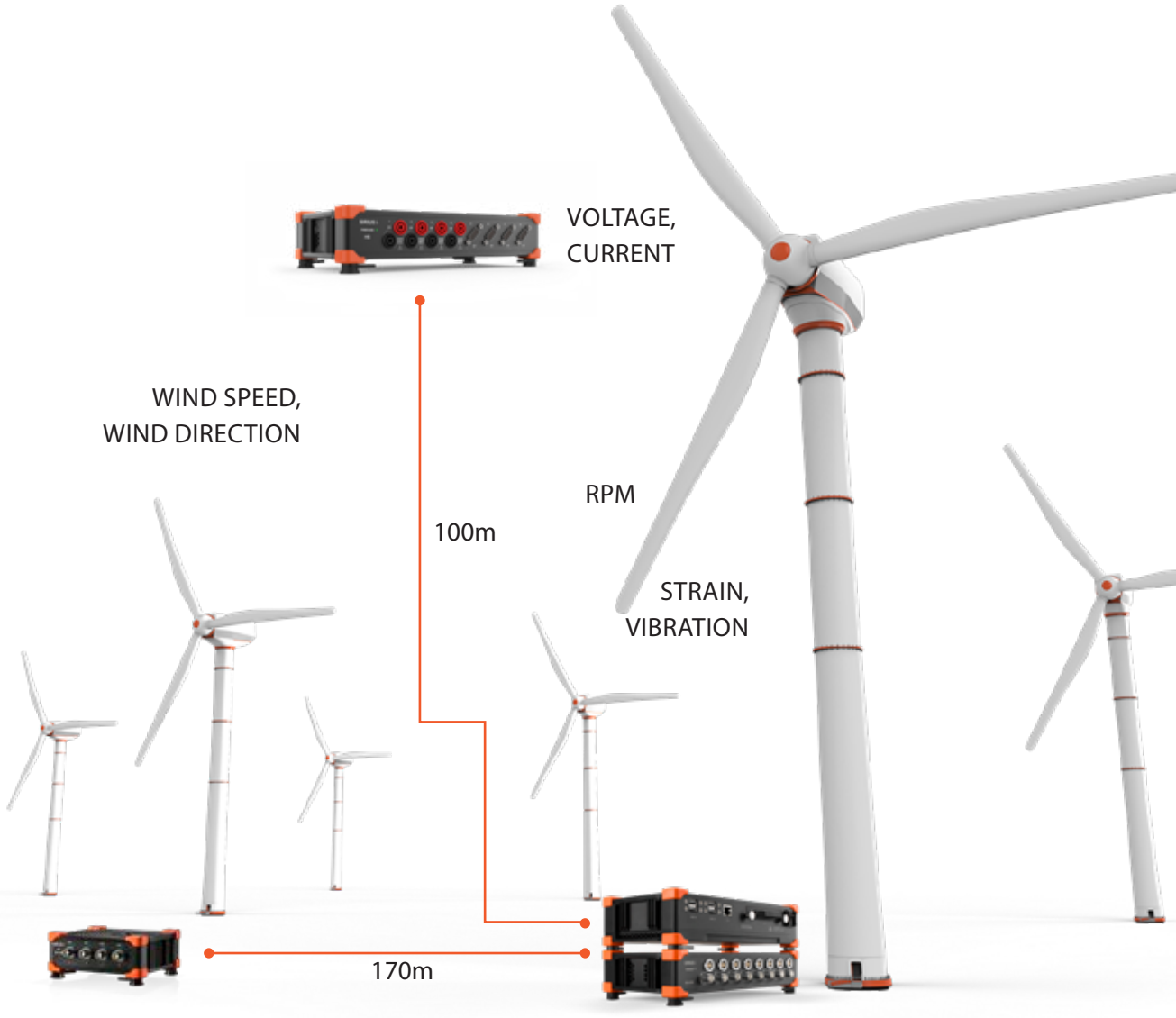
A highly accurate Power Analysis for static & dynamic operation at any point (Rotor, Inverter, Grid). Evaluation of Reactive Power provision and power/frequency behaviour. Additional acquisition of wind speed allows for a Power Performance evaluation according to IEC61400-12.

BEHAVIOUR AT FAULTS

Using raw data for Low Voltage Ride Through (LVRT) analysis. Calculation of symmetrical components (Positive, Negative, Zero-Sequence) as Period Values and calculation of Half-Wave RMS values allows for the evaluation of any kind of fault. All tests can be fully automated using the Sequencer function.

POWER QUALITY ANALYSIS

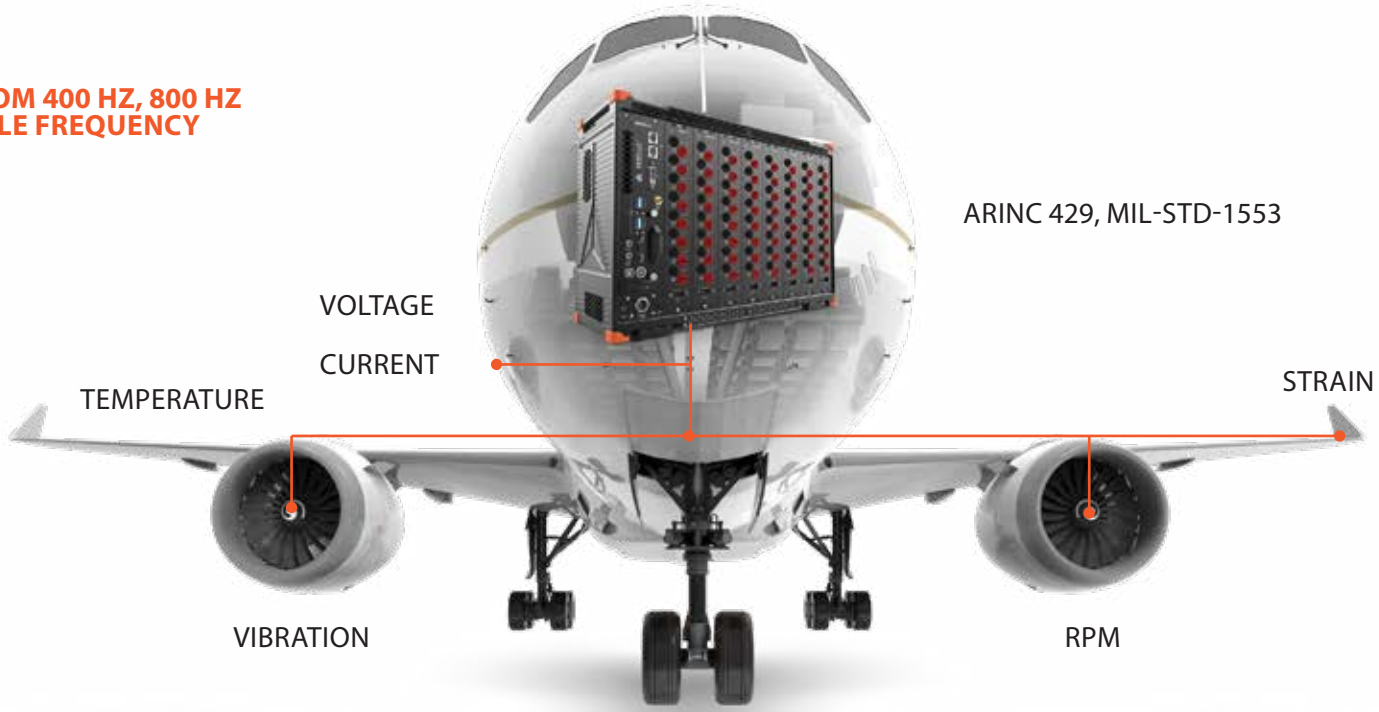
Calculation of all required parameters like Harmonics, Interharmonics, Higher Frequencies, THD, Unbalance, Flicker coefficient, Flicker Emission and evaluation according to international standards (IEC61400-21, FGW-TR3, VDE AR4105, etc.)



ELECTRICAL GRID AND POWER SYSTEM TESTING

THE DEWESOFT POWER ANALYSER IS USED IN A WIDE RANGE OF APPLICATIONS. ANY KIND OF ELECTRICAL EQUIPMENT CAN BE TESTED.

POWER FROM 400 HZ, 800 HZ OR VARIABLE FREQUENCY



ELECTRICAL GRID

The typical application is the Power Quality Analysis according to standards and regulations. This system is the perfect tool for troubleshooting. The combined functionalities of a Power Quality Analyser, Scope and Raw Data Logger will find the root of any problem.

RAILWAY

Trains or Railways are operated either with DC or AC at different system frequencies (16.7 Hz, 25 Hz, 50 Hz, 60 Hz). Applications are Pantograph & Conductor Rail testing, Short Circuit tests, Interference Current Analysis, Power Quality and Power System testing.

AIRCRAFT

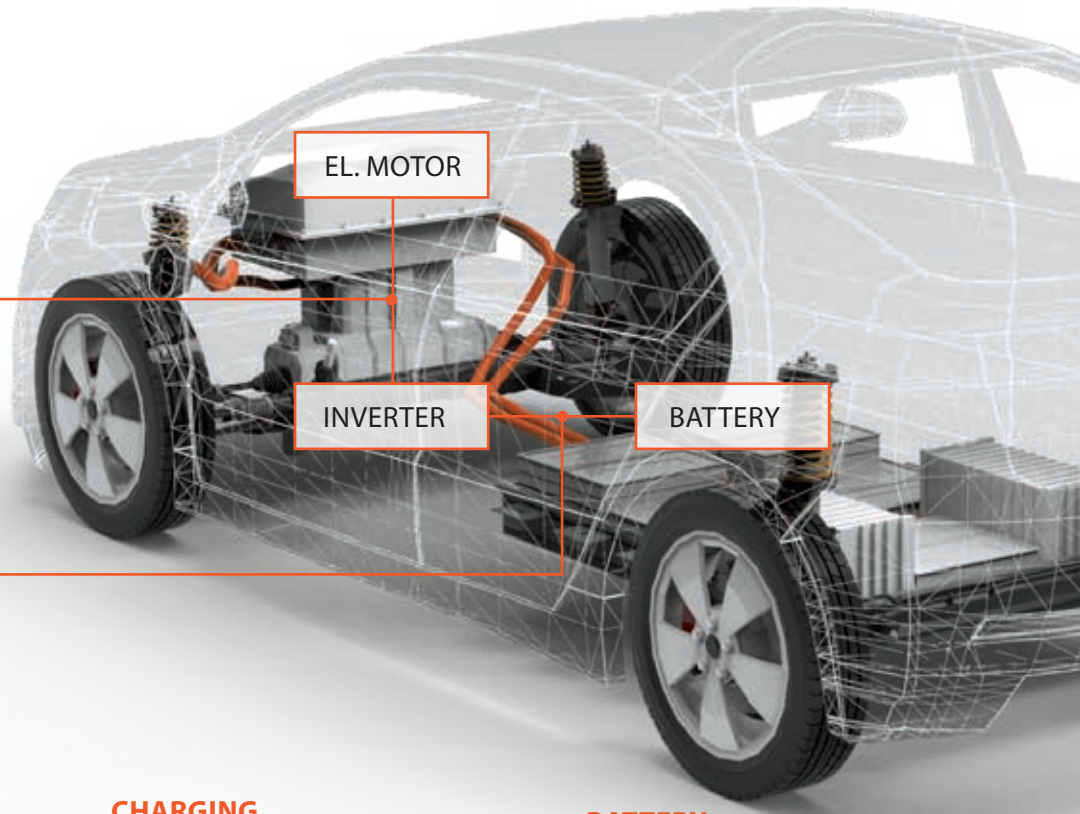
Aircraft are often operated at 400 Hz or 800 Hz and in addition have standard 50 Hz AC as well as DC systems. PQ Analysis with Harmonic Measurement up to 150 kHz according to ABD or EUROCAE standards, Fault and Transient Recording and Generator testing are just a few of the applications.

MARINE

Electrical Power Systems of ships include electrical equipment like generators, motors, inverters and pumps, etc. which are operated at different voltage levels and frequencies. Testing and Troubleshooting of all the equipment as well as Power Quality Analysis are typical applications here.

ELECTRIC VEHICLE TESTING

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



HIGH ISOLATION
Specially designed amplifiers allow for the measurement of voltages and temperatures of up to 1.6 kV DC.

MOTOR & INVERTER
Any kind of motor (1-12 phase AC) and any kind of inverter (DC-AC, AC-AC and switching frequencies up to 100 kHz) can be measured and analyzed by the power module.

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

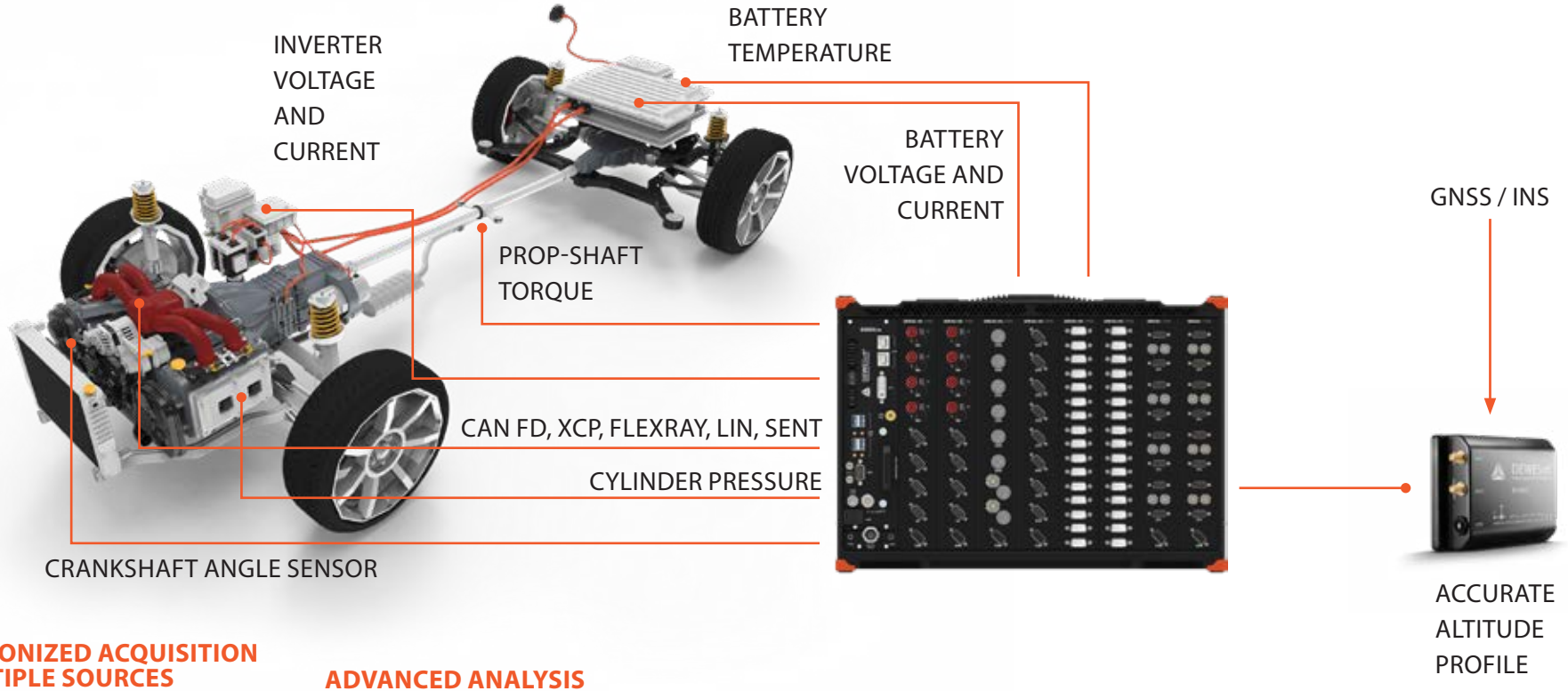
CHARGING
Power Quality Analysis, Energy & Efficiency and Troubleshooting of EV Charging stations complement the features for EV testing.

WINTER & SUMMER TESTS
This is made possible by the wide temperature operating range of our instruments.

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

ALL-IN-ONE HYBRID ENGINE ANALYZER

HIGH-ACCURACY COMBUSTION ANALYZER SYSTEM FOR ENGINE RESEARCH, DEVELOPMENT AND OPTIMIZATION AS WELL AS TESTING OF IGNITION SYSTEMS, EXHAUST SYSTEMS, AND VALVE CONTROL GEAR.



SYNCHRONIZED ACQUISITION OF MULTIPLE SOURCES

Synchronized acquisition of other sources, like CAN, OBDII, LIN, J1939, FlexRay, XCP/CCP, Video, etc., is possible within the same system.

ADVANCED ANALYSIS

The same system can be used to perform simultaneous online analysis of torsional and rotational vibration, order tracking, combustion noise, sound power and more…

FLEXIBLE HIGH SPEED ANALOG INPUTS

Analog inputs with 1 MS/sec sampling rate and sensor supply. Any sensor and signal type - Charge, IEPE, High voltage, Current, Strain, Torque, Temperature...

TEST-BED AND INCA® INTEGRATION

The system can send combustion analysis results to the testbed via AK-protocol or to ETAS INCA® and similar systems via CAN or XCP.

STOCK CRANK-ANGLE SENSOR SUPPORT

The system allows direct connection of any gear-tooth sensor. From one gap to multiple gaps, with any number of missing teeth and asymmetric number of teeth between gaps.

HYBRID TESTING

With fully synchronized acquisition and processing of built-in power analyzer, Dewesoft is a perfect tool for testing of hybrid vehicles.

FUNCTIONALITIES

POWER ANALYSIS

Functionality	Dewesoft Power Analyzer
Power Analysis for DC and AC	✓
Power Analysis	P, Q, S, PF, cos phi, D (Distortion), DH (Harmonic distortion), QH (reactive power of harmonics) (for each phase and total)
Fundamental Power	P_H1, Q_H1, S_H1, cos phi_H1, phi_H1 (for each phase and total)
Voltage and Current	RMS, RM, AVE (star and delta)
Energy Calculation	Total, positive and negative (e.g. Recuperation)
Efficiency	✓
Wiring Schematics	DC, 1-phase, 2-phase, 3-phase delta, 3-phase star, 3-phase V, 3-phase Aron, 6-phase (R2DB, R8D), 7-phase (R2DB, R8D, 12-phase (R8D))
Star-Delta Calculation	✓ (waveform and RMS values)
Frequencies	16.7 Hz, 25 Hz, 50 Hz, 60 Hz, 400 Hz, 800 Hz, Variable from 0.5 Hz up to 1.5 kHz
Frequency Source	Voltage, current, external
Period Values	U, I, P, Q, S, symmetrical components for ½, 1, 2 or 4 periods and selectable Overlap up to 99%
Number of Cycles for Power Calculation	5 - 12
Power Averaging	Selectable - starting from 1ms , Multiple Averaging (e.g. 20 ms, 60 s, 600 s) possible

POWER QUALITY

Functionality	Dewesoft Power Analyzer
Harmonics (according to IEC61000-4-7)	up to 150 kHz for voltage, current, active-, reactive power, phase angle and impedance
Variable Sidebands and Half Sidebands (according to IEC61000-4-7)	✓
Harmonic Smoothing Filter (according to IEC61000-4-7)	✓
Interharmonics (according to IEC61000-4-7)	✓
Total Harmonic Distortion (THD) (according to IEC61000-4-7)	Voltage and current (Total, odd and even) - selectable up to 150 kHz
Total Interharmonic Distortion (TIHD) and K-factor (according to IEC61000-4-7)	Voltage and current (Total, odd and even) - selectable up to 150 kHz
Higher Frequencies (according to IEC61000-4-7)	up to 150 kHz (grouping in 200Hz bands)
Flicker (according to IEC61000-4-15)	selectable PST and PLT
Flicker Emission (according to IEC61400-21)	✓
Rapid Voltage Changes (according to IEC61000-4-15)	selectable steady state and hysteresis
Symmetrical Components (according to IEC61000-4-30)	Zero-, positive- & negative system for voltage and current (absolute or relative to fundamental)
Additional Symmetrical Components (according to IEC61400-21)	Active and reactive parts for zero-, positive- & negative system

SOFTWARE FUNCTIONALITY

Functionality	Dewesoft Power Analyzer
Power Analysis	✓
Power Quality Analysis	✓
Database Storing	✓
Post Processing	✓
Math Library	✓
Data logging - Raw data storing	✓ (data Storing in Full Sampling rate of 1 MS/s per channel)
Scope	✓ (up to 8 graphs in one diagram, Zoom In- and Out)
Vector Scope	✓ (1-, 2-, 3-phase systems)
FFT	✓ (up to ½ of Sampling Rate)
Harmonic FFT	✓ (up to ¼ of Sampling Rate)
Transient Recording	✓ (up to 1 MS/s)
Triggering Channels	Analog, Digital, Counter, Math, Power, etc.
Triggering options	Simple edge (rising, falling), Window (two-levels: entering, leaving), Pulsewidth (longer or shorter than duration), Window and Pulsewidth, Slope Trigger (rising or falling slope with steepness)


HARSH ENV
VEHICLE DYNAMICS
DEWESoft® SIRIUS R2DB
ROAD LOAD DATA

IRONMENT TESTING

YOUR SOLUTION.

FATIGUE

VEHICLE ANALYSIS

WIDE VARIETY OF SOURCES - ALL SYNCHRONIZED
Dewesoft supports wide variety of analog and digital measurements, vehicle bus systems, GPS, inertial platforms, video, … everything perfectly synchronized

EXTREMELY DEEP IN FUNCTIONALITY
A single software provides perfect analysis tools for vehicle dynamics, road load data analysis, ADAS, electric, hybrid and combustion analysis, harsh testing, brake test, brake squeal and others

SOFTWARE INCLUDED WITH FREE LIFETIME UPGRADE
Award winning Dewesoft software is included with every instrument. All upgrades to the software are free forever with no hidden licensing costs.

ADAS

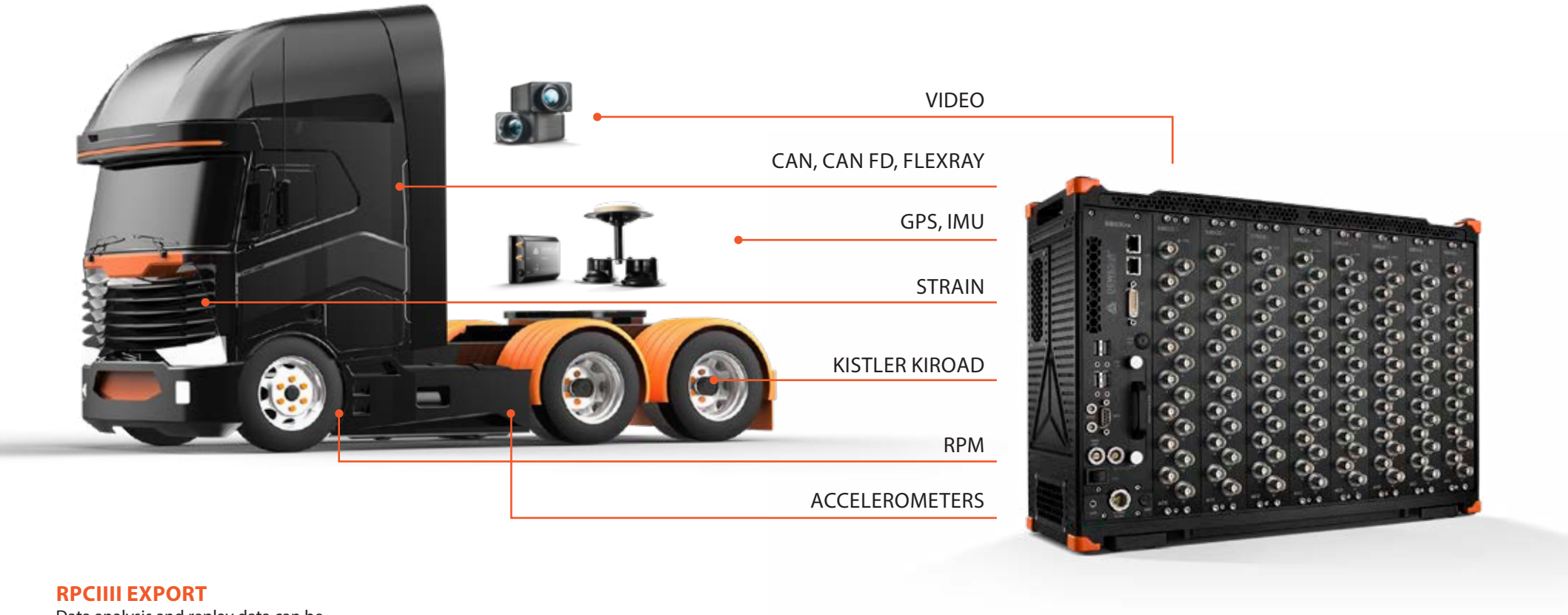
BRAKE TES

N ANALYSIS

HYBRID ANALYZE

ROAD LOAD DATA ANALYSIS

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



RPCIIII EXPORT

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

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

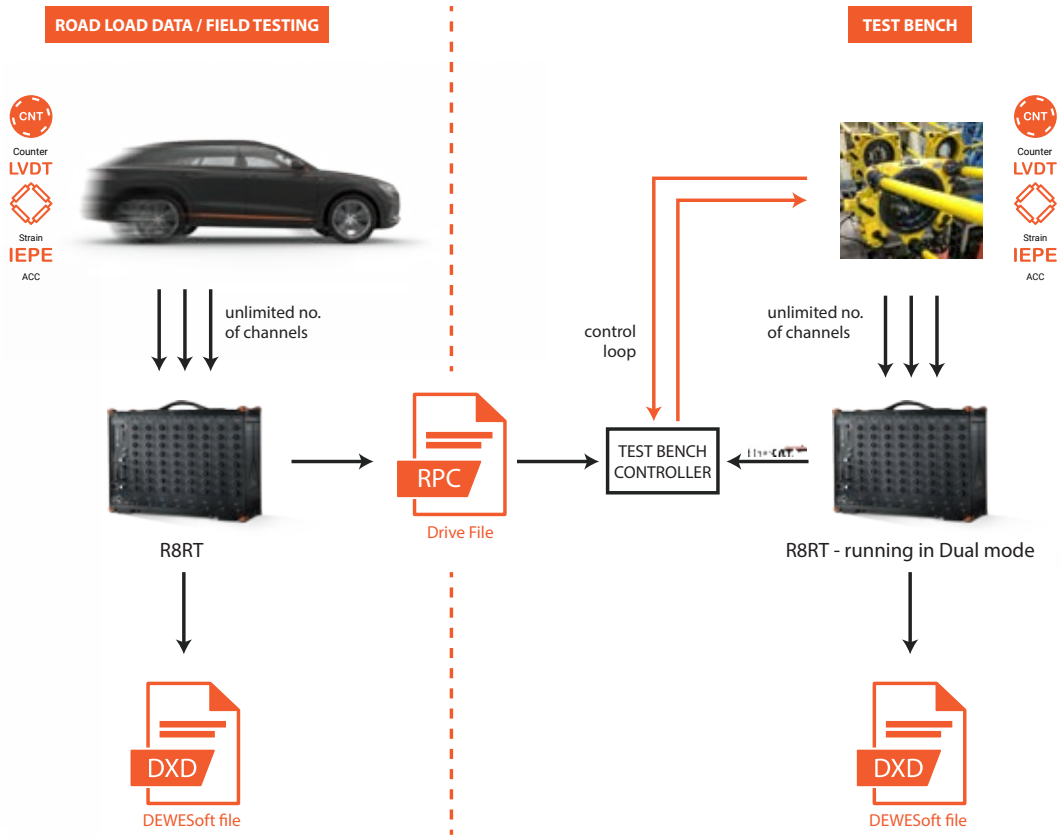
Combine different applications and analysis with the same system. Vehicle dynamics, combustion analysis, vibration, etc. can be combined in one synchronized data file.

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

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.

ANALOG 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.

BRAKE NOISE

DETECT AND TRACK BRAKE NOISE 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

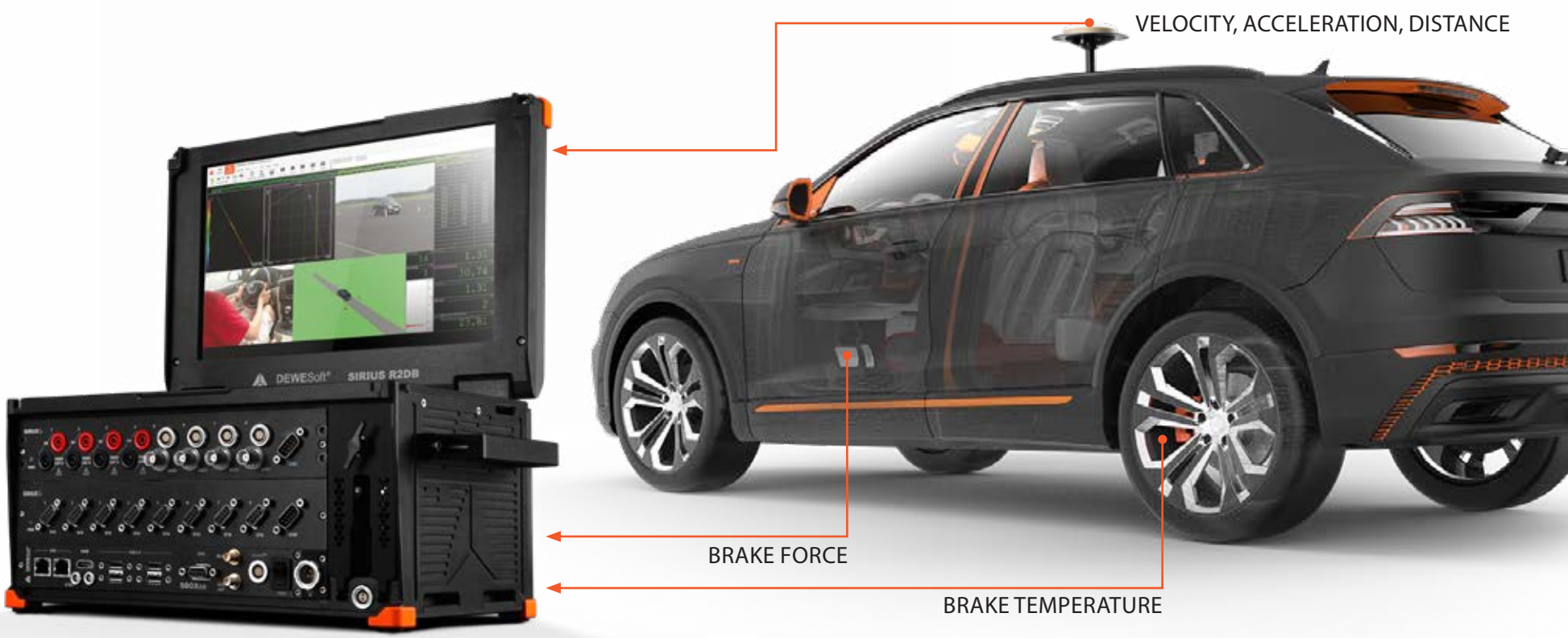
The number of microphone and accelerometer channels is not limited by the software.

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.

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 WORKFLOW AND REPORTS

Automated testing procedures and reporting.

BRAKE PEDAL SENSOR

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

BRAKE TEMPERATURE

Measures and logs multiple brake temperature and pressure channels.

REAL-TIME RESULTS

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

ONLINE CALCULATIONS

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

SUPPORTS STANDARDS

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

POLYGON AND GPS SOLUTIONS

THE DEWESOFT POLYGON OPTION IS THE MOST VERSATILE AND WIDELY USED TOOL FOR PERFORMANCE TESTS. ALONG WITH THE NEW OPENSTREETMAPS WIDGET, 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

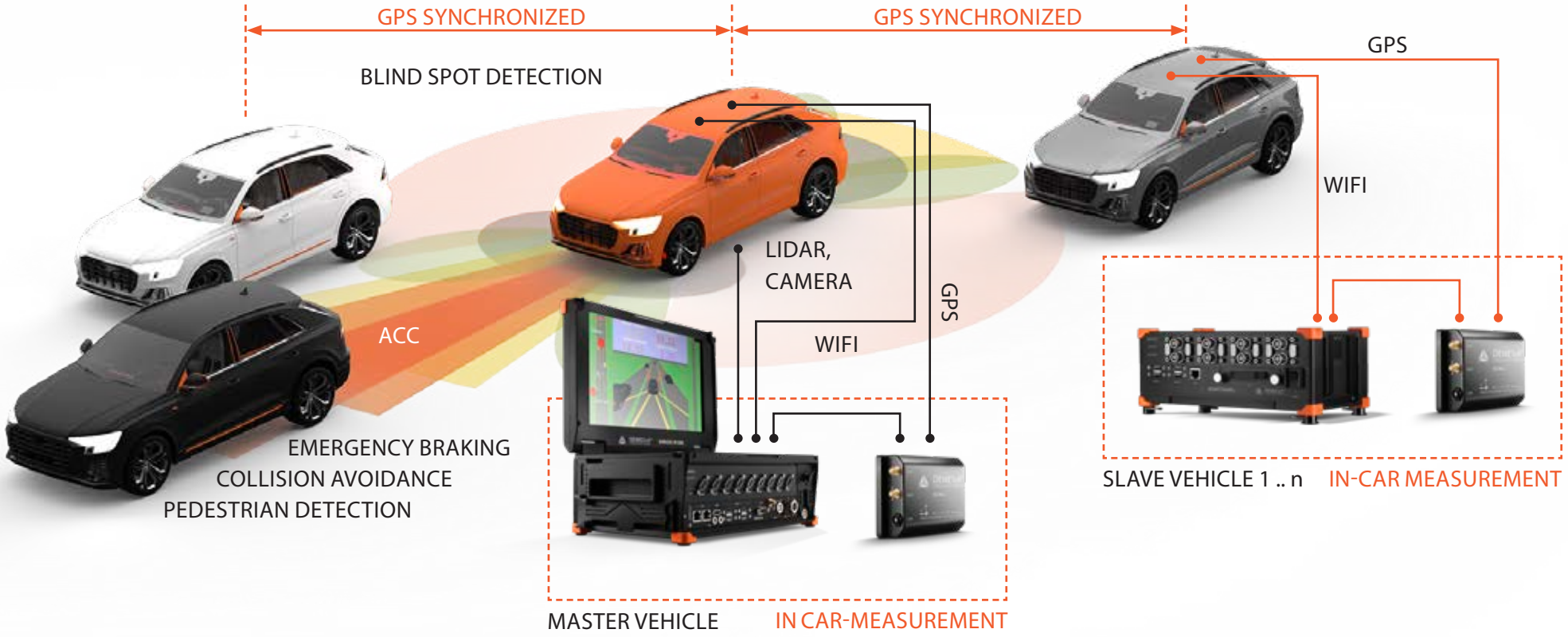
Suitable for ground, air (high G testing, performance testing) or sea (handling tests, pass by noise, obstacle avoidance test) applications.

NEW MAP WIDGET

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.

ADAS TESTING

EASY-TO-USE ADAS VALIDATION SYSTEM WITH THE LATEST GPS AND IMU TECHNOLOGIES WITH 2 CM 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 2 cm 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 WIDGET

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.

VEHICLE DYNAMICS - VTS

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

AUTOMATED WORKFLOW

Pre-defined testing maneuvers 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

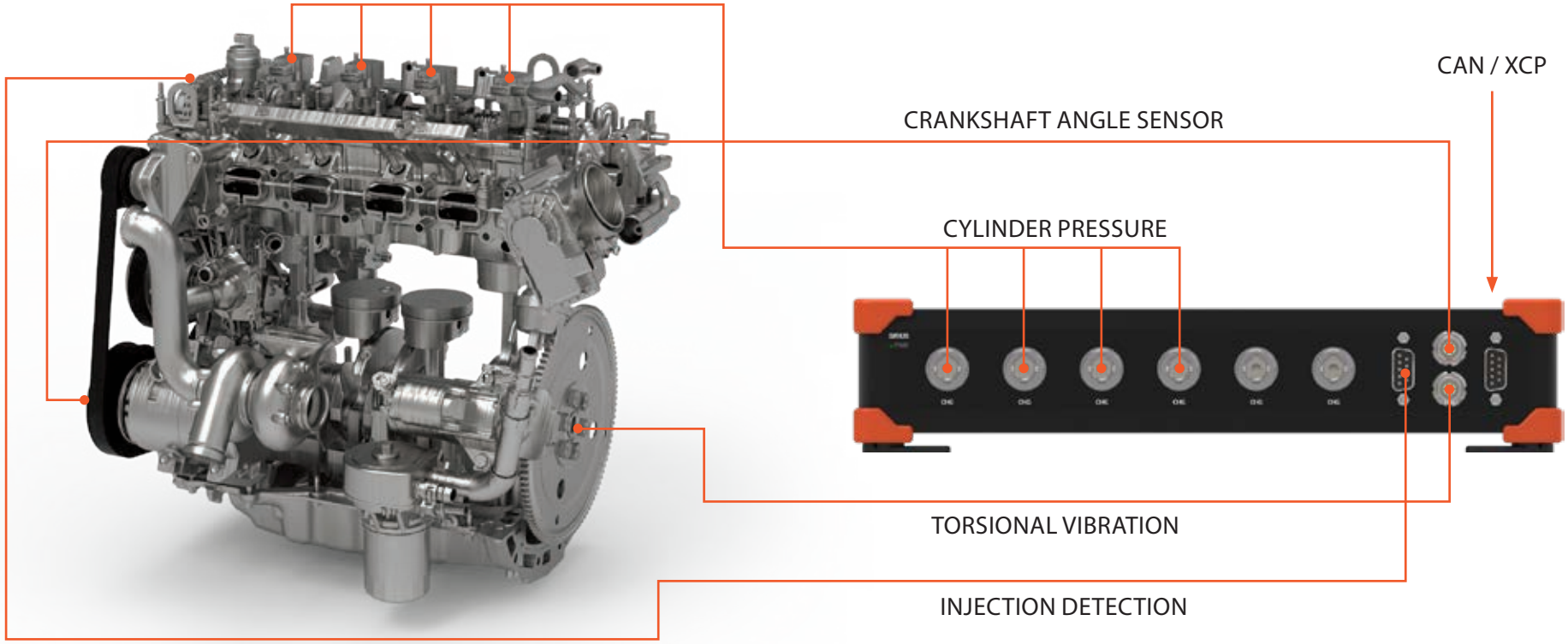
DS-IMU devices with single or dual antenna GPS provide accurate positioning and on-device calculations of slip angle, velocities, distances…

AUTOMATED RESULTS AND STATISTICS

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

COMBUSTION ANALYSIS

COMPLEX MEASUREMENTS MADE EASY WITH OUR 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...

HIGHEST ACCURACY
Angle resolution from 2° to 0.025° crank angle.

PERFECT INTEGRATION
Interface to testbed via AK-protocol for laboratory use, CAN or XCP output for mobile use.

READY FOR ANY ENGINE
Cylinder deactivation, variable compression ratio, dual polytropic coefficient with automatic detection and input.

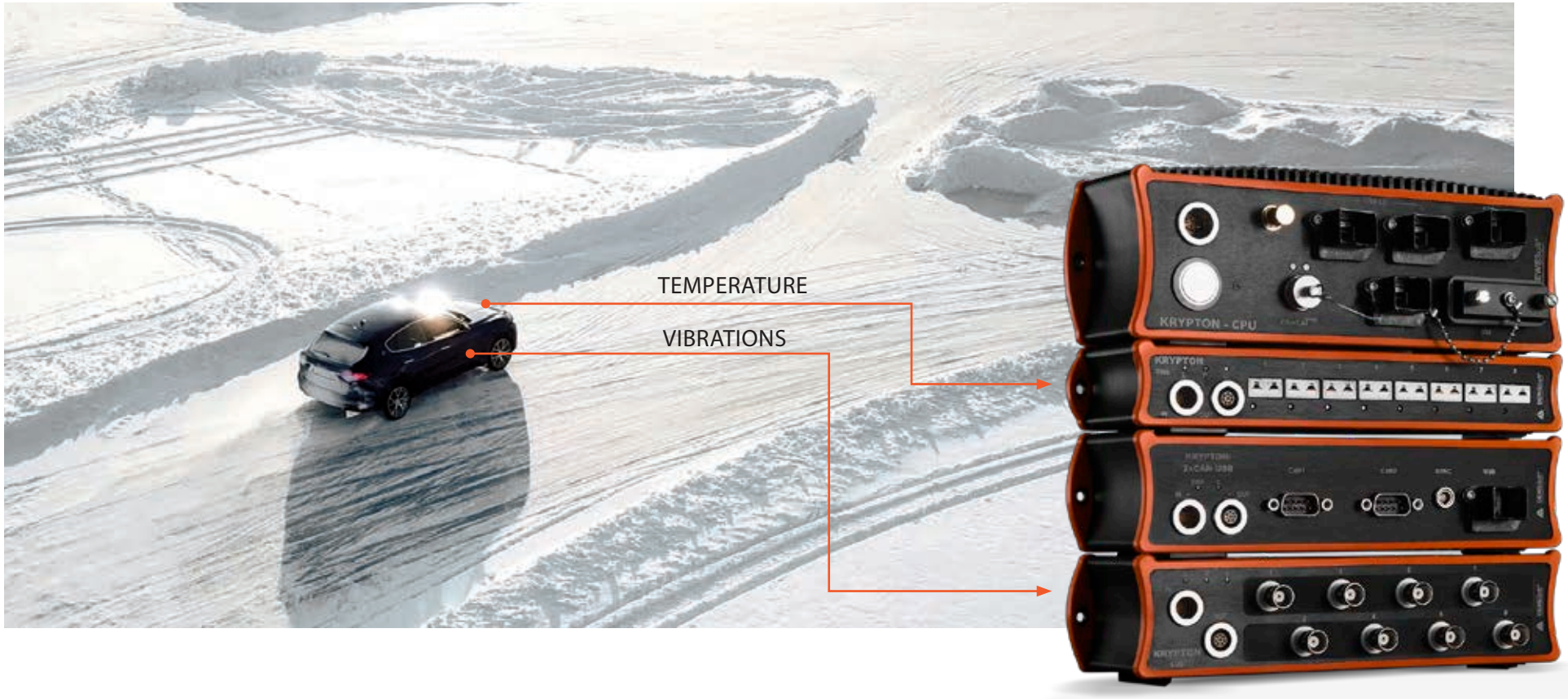
ADVANCED CALCULATIONS
Knock detection, thermodynamics, polytropic coefficient, compression curve...

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, SENT, ModBus, OPC UA, Flexray, Ethernet, GPS, Video,...

HARSH ENVIRONMENT TESTING

ROBUST DAQ SYSTEMS WITH IP67 DEGREE OF PROTECTION, OPERATING TEMPERATURE BETWEEN -40°C AND +85°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°C TO 85°C TEMPERATURE RANGE
The SIRIUS waterproof and KRYPTON lines of DAQ system offer a wide temperature range from -40°C up to 85°C suited for the harshest environments on Earth.

> 100 G SHOCK RATING
Instruments offer high 100G shock rating.

DUST, SHOCK, MUD AND WATER PROOF
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

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.


YOUR SOLUTION.
SLM
SOUND POWER
SOUND INTENSITY
SINE PROCESSING
RT60
MO
FFT ANALYZER

BALANCING

TORSIONAL VIBRATIONS

YOUR SOLUTION.

DYNAMIC SIGNAL ANALYSIS & NVH

PERFECT HARDWARE

SIRIUS® DualCoreADC® with 160 dB dynamic range is perfect for sound and vibration measurements. SuperCounter® technology provides precise data synchronization with angular domain.

EXTREMELY DEEP IN FUNCTIONALITY

One software program provides analysis tools for FFT analysis, octave analysis, sound level meter, sound power, sound intensity, RT60, order tracking, balancing, modal analysis, human body vibration, SRS and more.

FLEXIBLE AND SCALABLE

Dewesoft is much more than just NVH & acoustic analyzer. All other capabilities of Dewesoft like mechanical measurements or combustion analysis are just a click away.

ORDER TRACKING

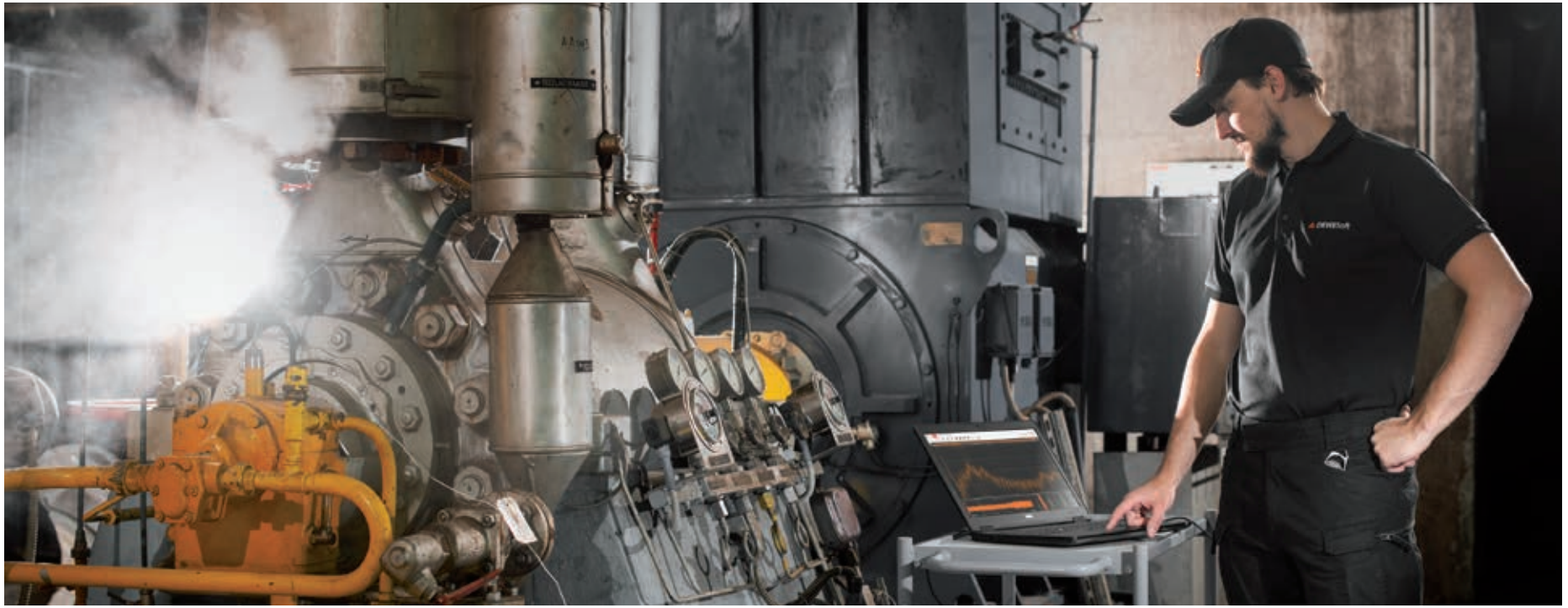
DAL ANALYSIS

OCTAVE ANALYZER

FFT ANALYZER

ROTATING MACHINERY

THE FFT ANALYZER IN DEWESOFT HAS IT ALL: TOP PERFORMANCE, ADVANCED CURSOR FUNCTIONS, HIGH FREELY SELECTABLE LINE RESOLUTION, FLEXIBLE AVERAGING AS WELL AS ADVANCED FUNCTIONS FOR IN-DEPTH ANALYSIS.



AVERAGING
Overall (averaged) FFT with linear, peak and exponential averaging or block-based calculation is available.

ANY LINE RESOLUTION
Selectable line resolution up to 64k lines for most demanding tasks.

CURSORS AND MARKERS
Maximum marker, free marker, zoom marker, sideband marker, harmonic marker, RMS marker.

ADVANCED MATH
Auto spectrum, cross spectrum, complex spectrum, waterfall spectrum, cepstrum (for bearing faults, speech processing), full FFT (for rotor whirl analysis), STFT (for non stationary signals), envelope detection (for bearing fault analysis).

CURSOR VALUE ESTIMATE
Innovative window interpolation technique allows precise amplitude and frequency estimation.

OCTAVE ANALYZER

ROTATING MACHINERY

OCTAVE ANALYSIS IS AN INDISPENSABLE TOOL FOR SOUND MEASUREMENT AS WELL AS PREDICTIVE MONITORING. DEWESOFT OCTAVE ANALYSIS SOLUTION MEETS ALL OF THE IEC AND ANSI CLASS I SPECIFICATIONS FOR OCTAVE FILTERS.

FREQUENCY SOUND WEIGHTING

Standard frequency weighting curves (A, B, C, D and Z) can be applied directly in frequency domain for analysis of sound.

SYNTHESIZED ANALYSIS

Extremely fast calculation from the frequency domain in large channel count systems.

AVERAGING

Linear, peak and exponential averaging or block-based calculation.

RESOLUTION UP TO 1/24 OCTAVE

For deep analysis of data very narrow band analysis up to 1/24th octave.

TRUE OCTAVE ANALYSIS

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.

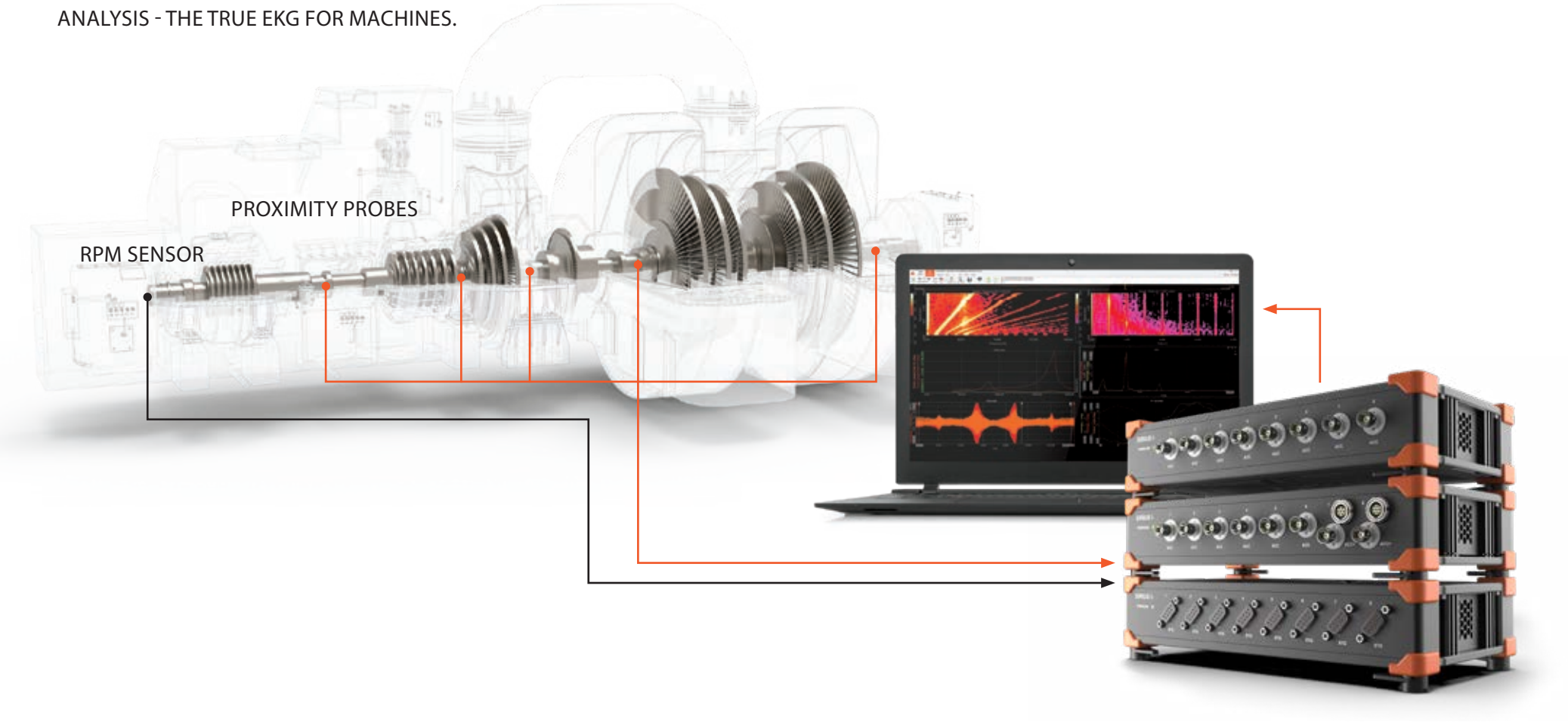
SEAMLESS ACOUSTIC SUITE INTEGRATION

The Octave analyzer is perfectly integrated with sound level, sound power, sound intensity and other modules for advanced sound analysis.

ORDER TRACKING

ROTATING MACHINERY

DETERMINE THE OPERATION CONDITION OF ROTATING MACHINES (RESONANCES, STABLE OPERATION POINTS, DETERMINING CAUSES OF VIBRATIONS). EVEN MORE POWERFUL IN COMBINATION WITH OTHER MATH MODULES LIKE TORSIONAL ANALYSIS, COMBUSTION OR POWER ANALYSIS - THE TRUE EKG FOR MACHINES.



TIME, FREQUENCY AND ORDER DOMAIN - AT THE SAME TIME

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

ANGLE SENSOR SUPPORT

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 10nsec resolution using SuperCounter® technology.

ADVANCED MATH

Any order and time domain harmonics can be easily extracted with amplitude and phase, available versus rotational speed or time in run up or coast down modes.

RICH VISUALIZATION

Frequency and order 3D waterfall plots provide a great tool to determine machine condition. Nyquist, Bode and Campbell plots are available for presentation of the data. Orbit analysis with raw or order view is an efficient tool for turbo-machinery analysis.

ROTATIONAL AND TORSIONAL VIBRATIONS

ROTATING MACHINERY

ROTATIONAL AND TORSIONAL VIBRATION MODULE ALONG WITH ORDER TRACKING ARE A STRONG TOOL TO TROUBLESHOOT SHAFTS IN AUTOMOTIVE, INDUSTRIAL OR POWER-GENERATION APPLICATIONS.

EASY SENSOR SETUP

The Math module supports any type of sensor output, and the sensor type can be totally different at each end of the rotor. SuperCounter® technology provides 10ns resolution in determining rotational angle and speed.

ACCESS TO ALL DATA

All data, such as reference angle, individual sensor rotational angle, speed and acceleration, torsional angle and velocity are readily available for advanced analysis.

ADVANCED MATH

Different input filters and rotational DC filters are available as well as the option to enter rotational speed ratio for gearbox analysis.

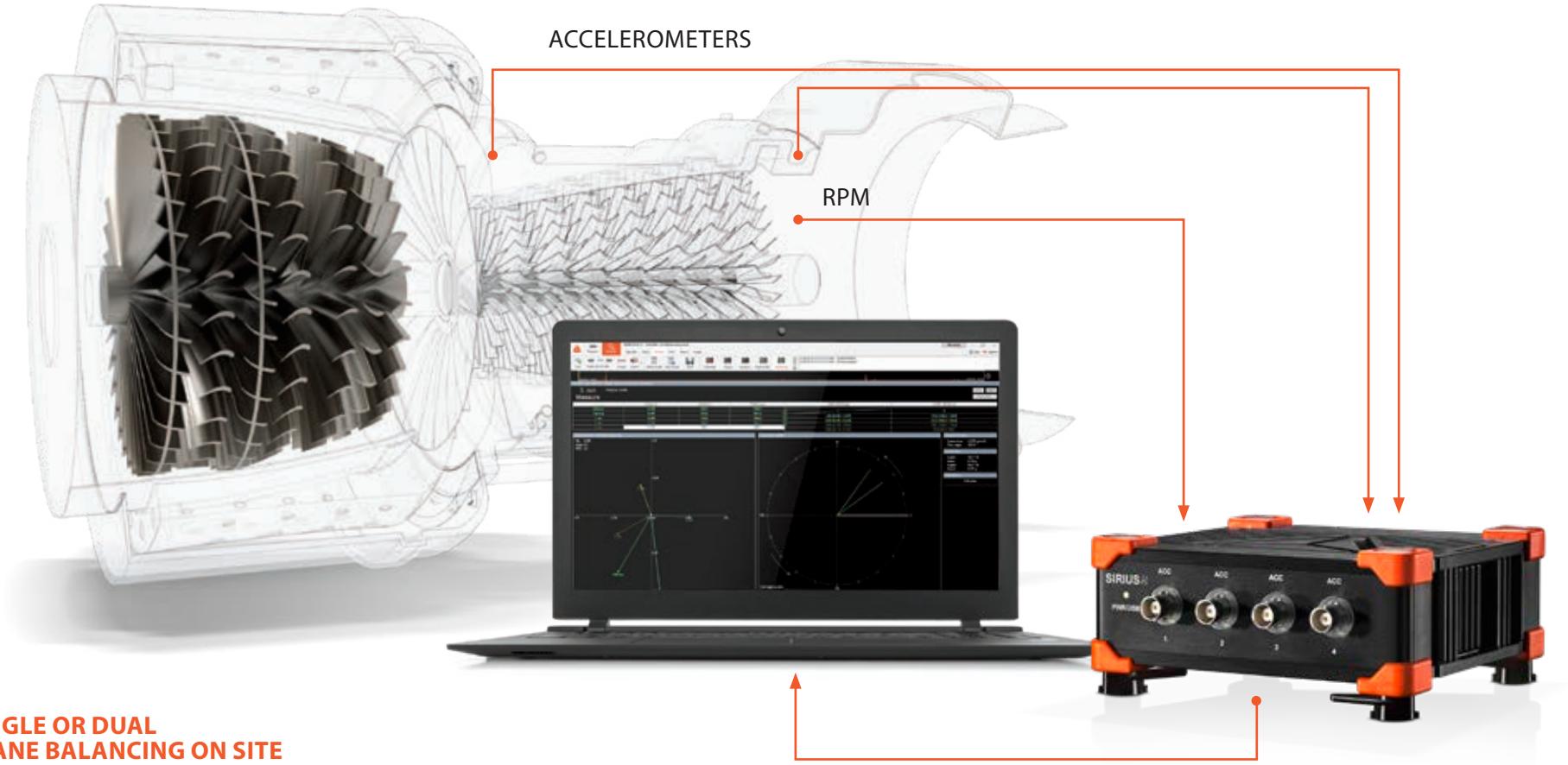
ORDER TRACKING INTEGRATION

Closely combined with order tracking, advanced data analysis is available based on the same angle sensors as the source of frequency.

BALANCING

ROTATING MACHINERY

BALANCED ROTORS ARE ESSENTIAL FOR SMOOTH OPERATION OF ROTATING MACHINERY. IMBALANCE WILL CREATE HIGH VIBRATIONS, REDUCING MACHINE LIFE, CAUSING MATERIAL DEFECTS AND DOWN TIMES. THE BALANCING MODULE IS THE TOOL TO ELIMINATE IMBALANCE ON SITE.



SINGLE OR DUAL PLANE BALANCING ON SITE

Perform single plane (narrow disc) or dual plane (long shaft) balancing.

RICH VISUALIZATION

Results from all runs are displayed in order to ease a decision for the next steps and to evaluate the stability of the measurement. RPM display has color indicator to determine in-out range.

SIMPLE STEP-BY-STEP PROCEDURE

Users are guided through the balancing steps for flawless operation including setup of angle sensor with live preview. Multiple modules can be combined for multi-axis balancing to save time and improve the quality of balancing.

WEIGHT SPLITTING

Adds the possibility to split needed balancing weight into equidistantly spaced points, for example holes on the rotor.

STORAGE OF INFLUENCE VECTOR

Influence vectors can be stored so that additional test runs are not needed for repetitive balancing of the same machine.

SHOCK RESPONSE SPECTRUM (SRS)

STRUCTURAL DYNAMICS

MECHANICAL SHOCK PULSES ARE OFTEN ANALYZED IN TERMS OF THE SHOCK RESPONSE SPECTRUM. THE SRS ASSUMES THAT THE SHOCK PULSE IS APPLIED AS A BASE INPUT TO AN ARRAY OF INDEPENDENT SINGLE-DEGREE-OF-FREEDOM SYSTEMS.

SUPPORTED STANDARD
Shock response spectrum calculation according to ISO 18431-4.

ADVANCED MATH
All relevant mathematics (positive max., negative max., maximax in either primary, residual or composite) are calculated. Results in frequency domain spectrum can be shown as acceleration, velocity or displacement. Support for pseudo-velocity and static acceleration determination.

DAMPING/QUALITY FACTOR
The selection of the damping ratio or quality factor is easily updated.

EASY SETUP & USE
The setup of sensors and the system is fast and simple; automatic shock detection based on the threshold method.

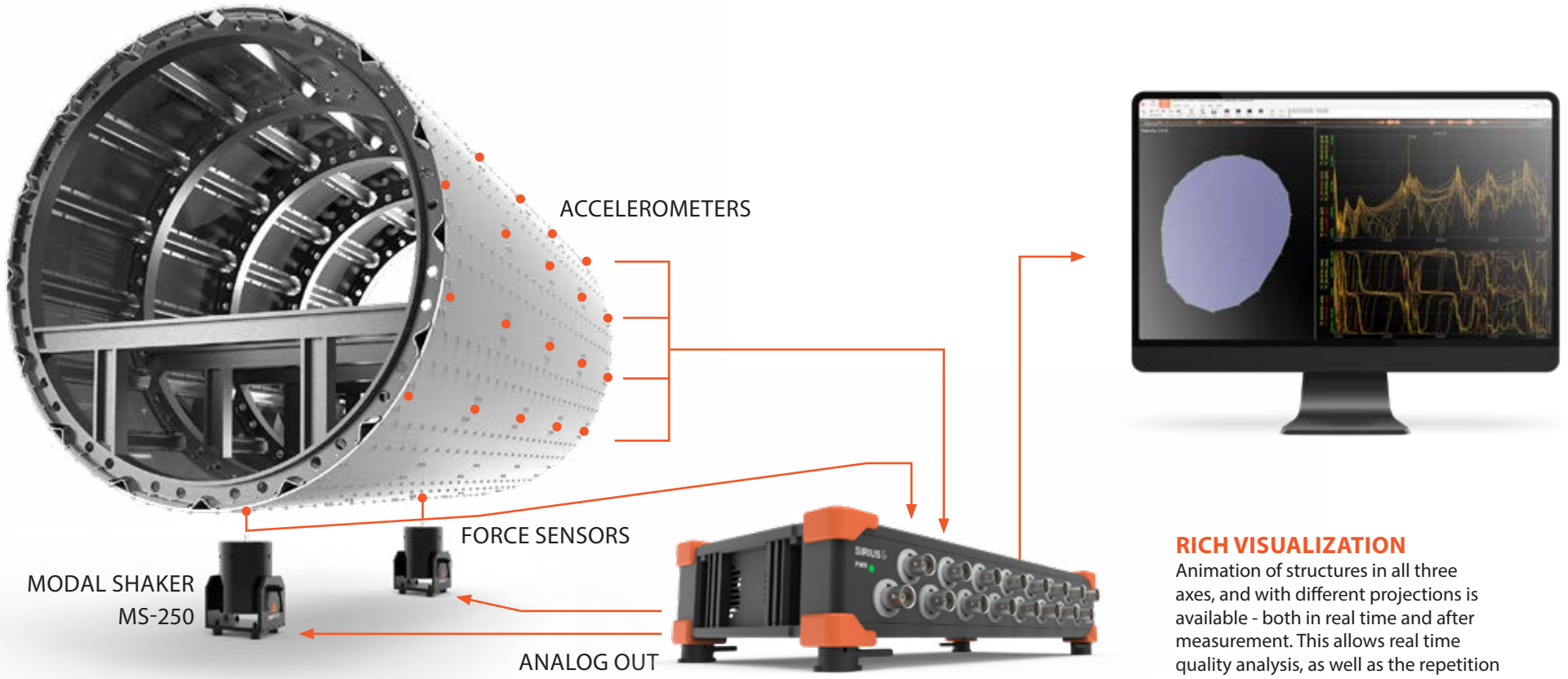
DATA EXPORT
Data can be exported in virtually any data format used for NVH analysis.

SELECTABLE FREQUENCY SPAN
Freely definable calculation range for the frequency spectrum.

MODAL ANALYSIS

STRUCTURAL DYNAMICS

MODAL TEST IS AN INDISPENSABLE TOOL TO DETERMINE THE NATURAL FREQUENCIES AND MODE SHAPES OF ANY STRUCTURE - OFFERS EASY TO USE OPERATION WITH FAST SETUP WHILE PROVIDING RICH VISUALIZATION AND ANIMATION OF RESULTS.



IMPACT HAMMER MODE

Allows grouping, rejecting and repeating measurement points; multiple reference and excitation points are supported. Ability to move excitation and response points ensures full flexibility when performing measurements.

SHAKER MODE

In combination with built-in function generator module, the system allows any type of excitation; Sine, Noise, Burst and Chirp.

ADVANCED MATH

Operating deflection shapes (ODS), mode indicator functions (MIF) and 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.

RICH VISUALIZATION

Animation of structures in all three axes, and with different projections is available - both in real time and after measurement. This allows real time quality analysis, as well as the repetition of any measurement at any point. The Modal Circle tool determines the exact resonance, and calculates the viscous or structural damping factor.

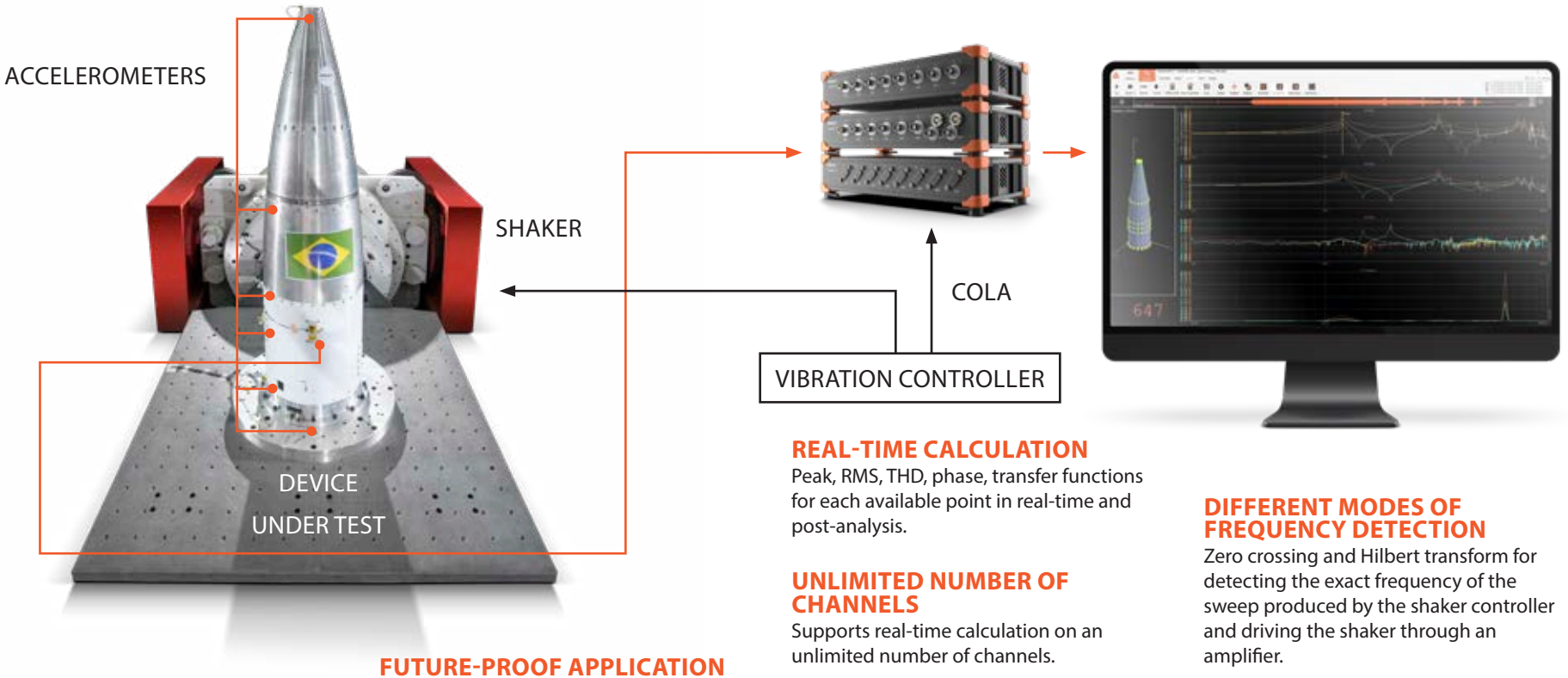
UNV IMPORT/EXPORT

Geometry can be created using either the built-in editor, or imported from a UNV file. All data, from raw time domain to auto spectrum and FRFs can be exported using standard UNV file format.

SINE PROCESSING

STRUCTURAL DYNAMICS

STRUCTURAL DYNAMICS CHARACTERIZATION,
DURABILITY AND FATIGUE TESTING, DESIGN VALIDATION AND QUALIFICATION.



DATA EXPORT
Data can be exported in virtually any data format used for NVH analysis.

ONLINE AND OFFLINE ANIMATION
Determine the quality of results - animation of structure in all three directions with different projections during (and after) measurement.

FUTURE-PROOF APPLICATION
Lifetime free upgrades and support.

STORE AUTOMATICALLY
Automatic storing on desired trigger conditions.

TEDS SUPPORT
Save time by using teds accelerometers which are supported by Dewesoft X3 and on all Dewesoft hardware.

REAL-TIME CALCULATION
Peak, RMS, THD, phase, transfer functions for each available point in real-time and post-analysis.

UNLIMITED NUMBER OF CHANNELS
Supports real-time calculation on an unlimited number of channels.

COMPLETE SINE PROCESSING TESTS
Directly integrates with your existing shaker and controller, needing only the COLA signal to sync perfectly.

EASY TO SET UP AND USE
Simply connect the accelerometers and COLA signal, assign the correct channels and start measuring.

DIFFERENT MODES OF FREQUENCY DETECTION
Zero crossing and Hilbert transform for detecting the exact frequency of the sweep produced by the shaker controller and driving the shaker through an amplifier.

UNMATCHED POWER OF CALCULATION
Runs octave and FFTs simultaneously on all channels and all in real-time.

DEWESOFT QUALITY AND FLEXIBILITY
Simply add additional parameters to the same measurement system and expand your measurement chain in seconds.

SOUND LEVEL METER

ACOUSTICS

COMPLIANCE WITH INTERNATIONAL STANDARDS. MAXIMUM ACCURACY AND HIGH DYNAMIC RANGE HAVE BEEN RE-IMAGINED WITH THE DEWESOFT APPROACH. REGARDLESS OF THE ACOUSTICS MEASUREMENT, SLM PLUGIN IS ALWAYS AT THE HEART OF IT.

ADVANCED MATHEMATICS - ALL AT THE SAME TIME

Predefined standard frequency weighting A, B, C, D, and Z), time weighting (Fast, Slow or Impulse), sound pressure level, equivalent, peak, minimum & maximum sound pressure levels, sound energy, impulsivity of sound, statistical noise level (LAF1, 5, 10, 50, 90, 95 and 99 % classes of values) are all available at the same time.

UNMATCHED FLEXIBILITY

SLM 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.

SUPPORTED STANDARD

IEC 61672 Class 1 sound level meter

RICH VISUALIZATION

Flexible displays offering digital meters, analog bars, time domain recorders, narrow band FFT and octave analyzers can be freely combined to show your SLM data in real time as well as in post processing.

HIGH DYNAMIC RANGE

Our top-of-the-class data acquisition hardware with 160 dB dynamic range in the time and frequency domain allows direct input of IEPE compatible microphones. Supported automatic recognition of microphones with TEDS. Dewesoft data acquisition system can be scaled for any number of microphones which can be effortlessly calibrated with a calibrator.

SOUND POWER

ACOUSTICS

WIDELY ESTABLISHED SOUND POWER MEASUREMENTS WITH FAMILIAR, DISTINCTIVE USER INTERFACE AND INDUSTRY UNMATCHED FLEXIBILITY. RATING AND COMPARISON OF DIFFERENT NOISE SOURCES WITH EASE AND EXACTNESS WHILE SIMULTANEOUSLY MONITORING ANY NUMBER OF ADDITIONAL PROCESS PARAMETERS.

HEAVY MACHINERY

Includes measurement procedures for testing heavy machinery.

SUPPORTED STANDARDS

Fully compliant with relevant sound power standards **ISO 3741,ISO 3743-1, 3743-2, ISO 3744, ISO 3745, ISO 6393, ISO 6394, ISO 6395 and ISO 6396.**

RAPID REAL-TIME AND OFFLINE CALCULATION

All calculated parameters are available during measurement as well as offline; rapid calculation of correction factors K1 (background noise measurement), K2 (room correction with integrated RT60 module), C1, C2 and C3 (deviations due to meteorological reasons - temperature and barometric pressure); support for raw time domain data storing and offline sound power calculation.

PREDEFINED REPORT

After testing, present your results using our pre-defined and yet flexible report templates.

GUIDED STEP-BY-STEP PROCEDURE

You will be guided step by step through the entire measurement procedure, with our clear and comprehensive user interface.

REVERBERATION TIME RT60

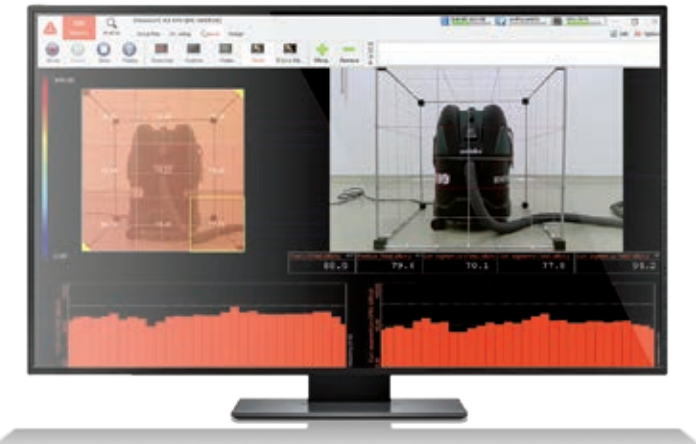
Expand your measurement with RT60 and perform room ratings yourself, using the same software interface. Template for absorption coefficient included!

**RT60 plugin sold separately.*

SOUND INTENSITY

ACOUSTICS

NOISE SOURCE DETERMINATION BROUGHT TO AN ENTIRELY NEW LEVEL. SOUND INTENSITY MEASUREMENTS IN A SIMPLE AND INTUITIVE WAY WITH PRECISION AND FLEXIBILITY UNMATCHED IN THE INDUSTRY. FOR EXAMPLE: MEASURING PROCESS PARAMETERS AND RECORDING VIDEO IN PARALLEL.



PHASE CALIBRATION

Straightforward, automated phase calibration and correction with a single button click.

IEC 61672 CALIBRATED

Complete measurement chain of sound intensity solution can be calibrated according to **IEC 61672.**

QUICK SOUND SOURCE IDENTIFICATION

Effortlessly identify noise sources with an easy-to-use interface.

ADAPTED FOR INDUSTRY

No need for a special environment - perfect for measuring on big chillers, transformers and other large-scale industrial applications.

SUPPORTED STANDARDS

Complies to Sound Intensity-based Sound Power calculation - **Discrete points method (ISO 9614-1)** and **Scanning method (ISO 9614-2).**

UNMATCHED FLEXIBILITY

Measurement of additional process parameters like vibration, video and others, everything perfectly synchronized.

SUPPORTED HARDWARE

Plug and play support for different intensity probes from all major manufacturers, integrating full remote control functionality.

SOUND QUALITY

ACOUSTICS

PRODUCT SOUND ENGINEERING ANALYSIS AND CHARACTERIZATION OF PRODUCT SOUND .
THE INDISPENSABLE TOOL FOR SOUND ENGINEERING - MAKE YOUR PRODUCT SOUND RIGHT.

POWERFUL METRICS
Articulation index, speech intelligibility, noise rating and criterion.

MONAURAL AND BINAURAL ANALYSIS
Select desired measurement method before measuring or measure both at the same time.

FUTURE-PROOF APPLICATION
Lifetime free upgrades and support - our solutions are constantly being improved.

REAL TIME AND POST ANALYSIS
Calculation of metrics is supported in real time as well as in post analysis.

LOUDNESS & SHARPNESS
Calculation according to **ISO 532-1** and **ISO 532-2.**

MEASUREMENT EXPANDABILITY
Bundled with award-winning Dewesoft X Professional - advanced and easy-to-use data acquisition and analysis software.

TIME-VARYING AND STATIONARY SIGNALS SUPPORT
No limits when it comes to different use cases.

POWERFUL DAQ SYSTEM
Bundled with renowned SIRIUS DAQ system supporting sampling rates of 200kHz.

REVERBERATION TIME RT60

ACOUSTICS

WHEN ROOM ACOUSTICS PROPERTIES ARE THE ISSUE, RT60 SOLUTION REPRESENTS AN ESSENTIAL TOOL. EASY SETUP ENABLES RELIABLE MEASUREMENT FOR EFFECTIVE MODIFICATION OF ROOM PARAMETERS AND EASY TO ACHIEVE DESIRED REVERBERATION TIME.

DIRECT MICROPHONE INPUT

Our data acquisition hardware with 160 dB dynamic range allows direct input of IEPE compatible microphones with support for TEDS automatic recognition. Data acquisition system can be scaled for any number of microphones.

EVALUATION RANGES

Different evaluation ranges for reverberation of time estimation are supported (T20, T30 and T60).

SUPPORTED STANDARDS

Fully complies with the **ISO 354** standard using integrated response method.

PARAMETER ESTIMATION

Estimation of modal decay parameters from noise measurements of reverberant and resonating systems using **Lundeby method.**

ABSORPTION COEFFICIENT CALCULATION

Calculate absorption coefficient and make a report with provided report template.

HUMAN BODY VIBRATION

MEASURE THE EFFECT OF VIBRATION ON THE BODY OF A HUMAN BEING. THE EXTRACTED PARAMETERS ALLOW THE JUDGMENT OF RISKS FOR WORKERS EXPOSED TO VIBRATION. WHOLE-BODY AND HAND-ARM MEASUREMENT IS SUPPORTED ACCORDING TO INTERNATIONAL STANDARDS.

SUPPORTED STANDARDS

ISO 5349, ISO 8041, ISO 2631-1 and ISO 2631-5.

ADVANCED MATH

All data like RMS, Peak, Crest, VDV, MSDV, MTVV, Weighted raw, al (ISO 2631-5), al and D (ISO 2631-5) are available.

DATA ANALYSIS

Dewesoft X is the basis for R&D work related to reduction of the vibration due to its deep data analysis functionality.

WHOLE BODY VIBRATION

Applicable to motions transmitted from workplace machines and vehicles to a person's body through a supporting surface.

HAND ARM VIBRATION

Sensors are installed on special adapters for fixing on a handle or between fingers.


YOUR SOLUTION.
COMMERCIAL
TELEMETRY ENCODER
CHAPTER 10
SPACECRAF
PCM TELEM
CHAPTER
DEWESoft SIRIUS R2DB
MILITARY
MIL-STD-1553

T

YOUR SOLUTION.

E T R Y

4

AEROSPACE

COMPATIBLE WITH ARINC-429 AND MIL-STD-1553
Dewesoft can directly connect and decode data from these standard aerospace bus systems, either directly from the aircraft or from telemetry stream.

FULLY SYNCHRONIZED WITH THE OTHER DATA
Each channel from these interfaces is synchronized with other data with at least millisecond accuracy.

USED BY NASA, AIRBUS, RAYTHEON LOCKHEED MARTIN, BOEING...
Dewesoft systems are in use all around the world by the biggest and best aerospace facilities and manufacturers.

A R I N C - 4 2 9

I N E T

F R A M E S Y N C

S O F T W A R E D E C O M

TELEMETRY IRIG CHAPTER 4 PCM

DECODE AND VISUALIZE DATA FROM TELEMETRY IRIG CHAPTER 4 PCM COMPLIANT DATA INTERFACES

PCM TELEMETRY FRAME SYNC

The SIRIUS PCM-FS2 instrument is a dual frame sync IRIG Class II decommutator with up to 40 MBit/s data rates.

SOFTWARE DECOM

A software decommutator offers full range of decoding for normal commutated, super and sub commutated parameters, embedded frames, fast switching of decommutator.

PCM ENCODER

Dual PCM output up to 40 MBit/s in real time from Dewesoft analog data, Chapter 10, simulated data and other sources.

INDUSTRY STANDARD

Dewesoft decom is widely used in most advanced telemetry labs around the world working closely together with major vendors of flight recorders and ground equipment.

IRIG CHAPTER 10 AND INET TELEMETRY

COMPLETE IRIG-106 CHAPTER 10 ACQUISITION AND ANALYSIS SOLUTION FOR EVERY KIND OF DATA SOURCE USED TODAY.

IRIG-106 CHAPTER 10

Dewesoft X can fully decode, visualize and analyze Chapter 10 data from PCM, analog, Video, MIL-STD-1553, ARINC-429, serial, Ethernet, CAN and GPS streams inside the CH10.

iNET

Data decoding from up-to-date telemetry standards.

ONLINE AND OFFLINE MODE

Dewesoft X can read and process stored CH10 files as well as connect live to Ethernet CH10 stream during the mission.

ONE SYSTEM SOLUTION

A single system solution with the integrated digital receiver and PCM processing.

RAW DATA

Raw data are always stored - providing optimal possibilities for offline data processing.

SYNCHRONIZED ACQUISITION

All data sources are synchronized down to microsecond accuracy using GPS or IRIG time.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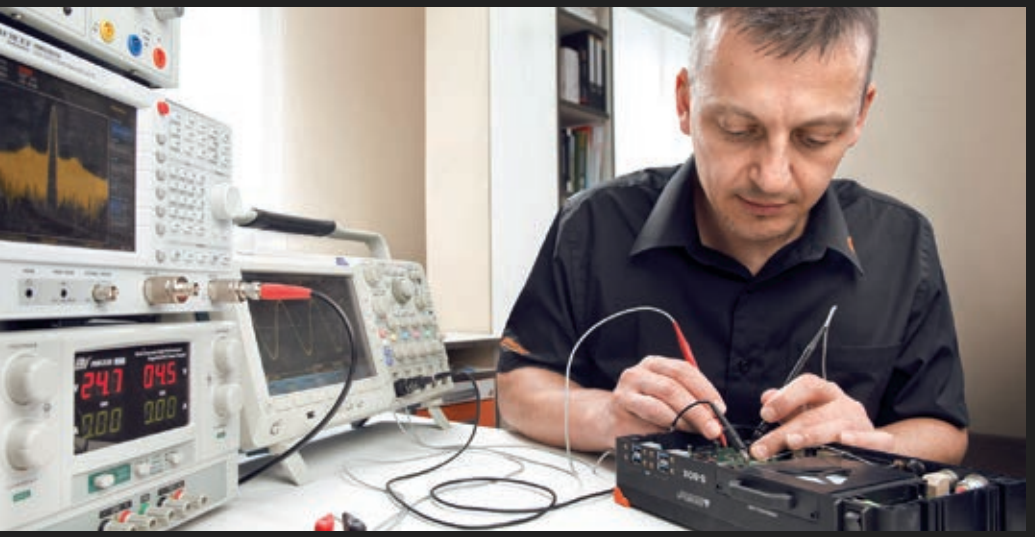



automotive
testing
technology international
Software Innovation
of the Year

OUR COMPANY.

EVERYTHING
IN HOUSE

Slovenia is our operational center which houses all of our development and manufacturing facilities. In this location you'll find our R&D offices, Testing facilities, Mechanical workshop, Production facilities and Marketing and communications center.

HIGHEST
QUALITY

We are fully committed to the highest standards of quality for our development and manufacturing processes as well as to preserving the environment. As such, Dewesoft is a TÜV SÜD certified ISO 9001 and 14001 company.

IT’S NOT JUST ABOUT **GREAT PRODUCTS**

Emotions and values are what makes us human.
They shape passionate work, strong products and long-lasting relationships.
Cooperation and mutual trust is important when it comes to business.

That's why we operate worldwide on a base of our core values.

WE ARE
COMMITTED, ACCOUNTABLE, TRANSPARENT, CARING

We care for you - our clients, we care for our co-workers, for society and the environment. Only upon the base of common core value we can create great and long lasting business cooperation.

IT'S ABOUT
SHARING VALUES

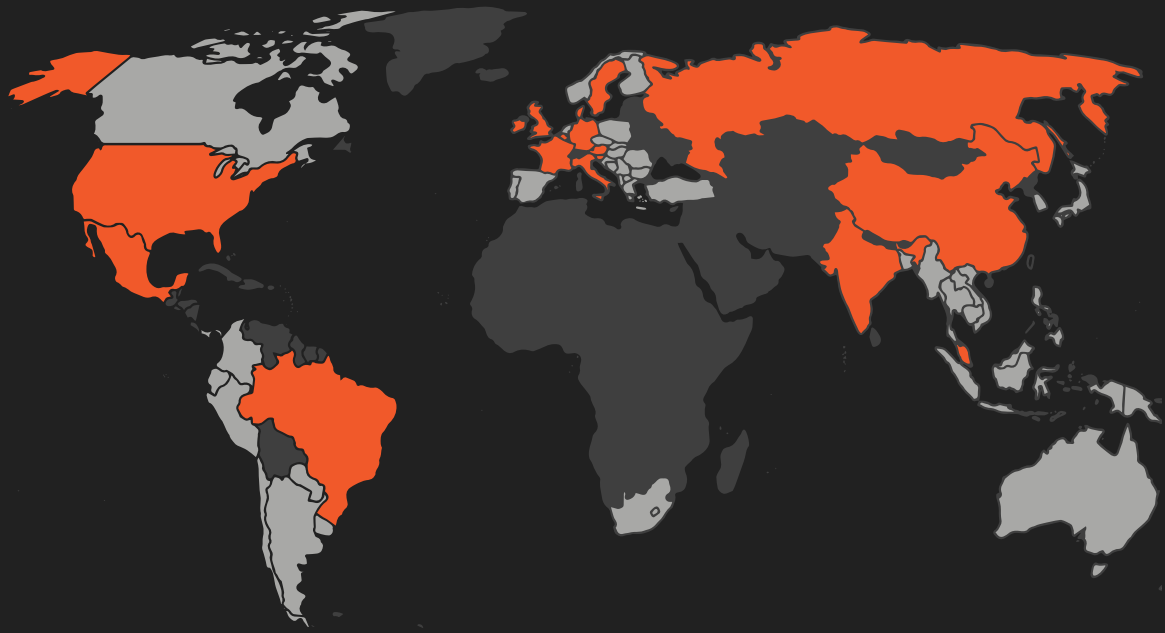
IT'S NOT **JUST ABOUT US** IT'S ABOUT THE **FUTURE OF THE SOCIETY** WE LIVE IN.

We feel responsible to improve the world that we all share, and leave it better for the generations that follow. Our kids. Your kids, and grandchildren.

The most meaningful thing we can do is help others to achieve their goals. That's why we share our knowledge, equipment, and labs to young entrepreneurs in our own start-up community of more than 20 technology innovation companies.

"BE THE CHANGE YOU WANT TO SEE IN THE WORLD"

-Gandhi



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

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GC2020-V2.1.