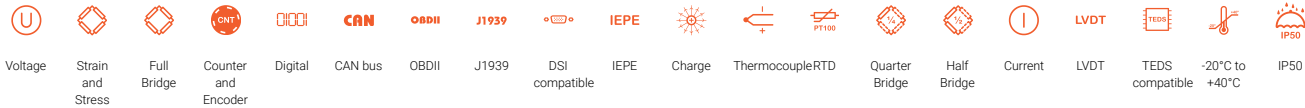# DEWE-43A
USB DATA ACQUISITION SYSTEM

Award-winning and versatile 8-channel **USB data acquisition system** with unmatched price/performance ratio and hand-size footprint. 8 universal analog inputs, 8 digital/counter/encoder inputs, and two high-speed CAN bus inputs.

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| Voltage | Strain and Stress | Full Bridge | Counter and Encoder | Digital | CAN bus | OBDII | J1939 | DSI compatible | IEPE | Charge | Thermocouple | RTD | Quarter Bridge | Half Bridge | Current | LVDT | TEDS compatible | -20°C to +40°C | IP50 |

MAIN FEATURES

- **UNIVERSAL ANALOG INPUTS: DEWE-43A** can accept voltage and full-bridge signals natively. IEPE, charge, thermocouples, half-bridge, quarter bridge, RTD, current, resistance, and LVDT signals with the use of DSI adapters.

- **SENSOR POWER SUPPLY:** Each analog channel on the DEWE-43A provides power for sensor excitation.

- **ISOLATED CAN INPUTS: DEWE-43A** includes two high-speed CAN 2.0b channels with 1 Mbit/sec data throughput. Both ports offer additional support for CCP, OBDII, J1939, and CAN output.

- **ISOLATED POWER SUPPLY: DEWE-43A** power supply is internally isolated which is eliminating the possibility of ground loops.

- **24-BIT SIGMA DELTA ADC: DEWE-43A** is equipped with 24-bit sigma-delta analog-to-digital converters with an anti-aliasing lter. The analog sampling rate is software selectable up to 200 kS/s per channel.

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

- **FULLY SYNCHRONIZED:** All channels, either analog, digital, or CAN are synchronized with microsecond accuracy to each other. Multiple DEWE-43A instruments can be daisy chained and synced together.

- **SOFTWARE INCLUDED WITH FREE LIFETIME UPGRADES:** Easy to use, yet very robust in functionality, award-winning DewesoftX data acquisition software is included. The software comes with lifetime free upgrades and no hidden costs, bringing you intuitive configuration, smart sensors, advanced storage, and analysis capabilities.

Reliable DAQ System

DEWE-43A weighs under two pounds and is small enough to fit in your hand. And yet inside this small box beats the heart of a giant.

When you need an instrument with stellar specifications, and yet with a budget friendly price tag, DEWE-43A will not let you down.

But don't get confused by a great price. The build quality is not compromised. We carefully design our instruments and CNC every unit out of a solid block of aluminum. This way, the instrument is not only tough, but also light for maximum portability.

DEWE-43A is an ideal solution for various dynamic data acquisition applications. It will help you solve most demanding test and measurement challenges. It is used around the world and really proven to be a **Swiss Army Knife** for every test and measurement engineer.

Easy to Use DAQ

Using DEWE-43A does not require any complex configuration setups or programming.

With **plug and play** functionality, smart sensors, and advanced TEDS sensors support, making measurements with DEWE-43A is easier than riding a bike. You will get it right the first time and you will be ready to measure in no time.

Getting precise and graphically rich results is as easy as ever. Just drag and drop one of the many flexible visual

Precise Counter and Encoder Measurement

DEWE-43A utilizes our patented technology called **SUPERCOUNTERS**® in every of its eight counter/encoder inputs

Counter inputs can measure RPM and angle of rotating machines. In comparison to standard counters, which only output integer numbers one sample later (e.g. 1, 1, 2, 2, 3, 4), SUPERCOUNTERs® are able to extract the accurate values like 1.37, 1.87, 2.37, etc. **fully synchronized for time and amplitude**. This is done by measuring the exact time of the rising edge of the signal with an additional counter. Our SUPERCOUNTERs® work on a 102.4 MHz time base, independent from the current sampling rate.

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

Synchronization

DEWE-43A data acquisition hardware is capable to acquire different signals like analog, CAN, counter, encoder, and digital. With the power of included Dewesoft X software, you can easily acquire and combine data from additional interfaces like GPS, Flexray, XCP, Ethernet, Serial, PCM telemetry, and many more.

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

Synchronized video can be added for free. Dewesoft includes powerful video engine and has support for simple DirectX web cameras, high speed video cameras that are fully synced to analog data, and also 3rd party thermal cameras.

Expand Channel Count

If the channel count on one DEWE-43A DAQ instrument is not enough our flexible design allows you to easily extend channels at any time.

You can either synchronize multiple DEWE-43A instruments together or extend input channel count with any of our other DAQ systems such as SIRIUS or KRYPTON, or even navigational instruments or CAN interfaces.
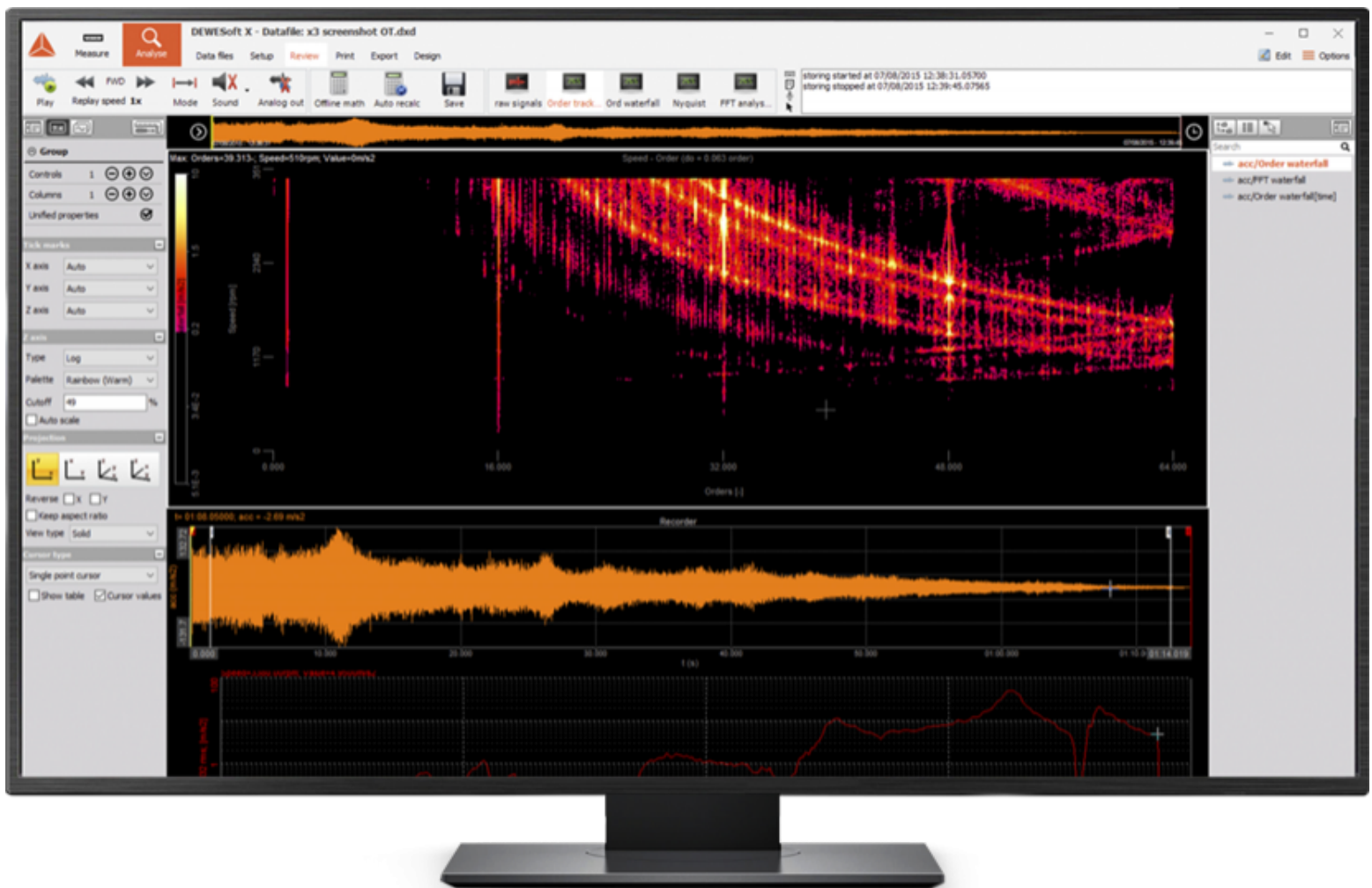
The configuration for working with multiple instruments is as easy as working with single unit and thanks to synchronization technologies (internal or external IRIG, GPS) data will always be perfectly synchronized.

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Data Acquisition Software Included for Free

All Dewesoft data acquisition systems are bundled with award-winning DewesoftX data acquisition software. DewesoftX is the world's most advanced and easy-to-use **data acquisition and signal processing software**. Its flexibility and endless functionality for signal processing will help you solve all your test and measurement needs. Our DAQ software gives you many advantages over other DAQ systems. Functionalities like **plug-and-play**, **hardware auto-detection**, **smart TEDS sensors**, **advanced storing, real-time displays, and a never-ending math library** will elevate your measurement and analysis capabilities to a whole new level.

And the best part? DewesoftX DAQ software offers **lifetime FREE software updates and technical support** to all users. Software is evolving all the time. New major releases are released every 3 months constantly adding new features, optimization, and other improvements. No hidden upgrade costs.

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Plug and Play

Connecting the DAQ system and sensors could not be faster or easier. DewesoftX software will automatically detect the connected DAQ systems and TEDS-equipped sensors and will configure the entire channel configuration for you. Features like:

- hardware auto-detection,
- smart sensors,
- sensor database,
- advanced TEDS sensor support,
- automatic unit conversion,
- real-time signal preview,
- store setup files

will make you ready for measurement in seconds. Spend less time configuring your DAQ systems and be more productive. Time is money!

Measure and Store

Powerful storing capabilities with more than **500 MB/s sustained stream rates** mean you can always store data at full speed and never again worry about losing data that could compromise your tests. DewesoftX software features:

- real-time data acquisition,
- synchronized acquisition of analog, counter, video, GPS, CAN bus, and many other sources,
- advanced triggering and alarms,
- single or multi-file storage,
- remote and distributed network storing,
- automated test sequences.

Even if you store gigabytes of data, our innovative data file format will ensure you can load and analyze your data as fast as in a blink of an eye.

Analyse and Publish

From NVH to Power Analysis and much more. Forget about using several and complex software solutions just to record, store, analyze, and visualize your data. DewesoftX offers **all-in-one** advanced data visualization, analysis, and reporting tools:

- online and offline mathematics,
- flexible real-time visual displays,
- synchronized video support,
- PDF reporting tools,
- data export to many standard file formats,
- unlimited FREE licenses to view and analyze stored data files.

DewesoftX is designed with the mindset of a test engineer and offers a complete testing solution in a single software package that is a joy to use.

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Applies to Products

MINITAURs

Versatile 8-channel data acquisition system and data logger with cutting edge signal conditioning at an attractive price with analog, counter, and CAN inputs.

KRYPTON

Rugged and distributed EtherCAT data acquisition system for field measurement in extreme and harsh environments. KRYPTON DAQ systems offer IP67 degree of protection and can operate in the extreme temperature range from -40 to +85°C and offer high shock protection.

SIRIUS

The world's most versatile, powerful, high-dynamic USB and EtherCAT data acquisition system. Connect any signal and sensor. Packed with the latest DAQ technology. Free DAQ software included.

IOLITE Rack

Data acquisition and real-time control front-end system with dual EtherCAT buses for industrial testing applications. All-in-one solution for real-time control and feedback monitoring. Watch the IOLITE presentation video.

IOLITE

Standalone, distributed, and cost-effective data acquisition device with high-end signal conditioning for monitoring and industrial applications. Free software included.

SIRIUS mini

Small and highly portable, USB powered 4-channel data acquisition system. SIRIUS mini offers a 160 dB dynamic range and is ideal for vibration analysis and acoustic noise measurements.

DSI Adapters

DSI adapters are TEDS IEEE 1451.4 equipped sensor adapters that turn any of our DSUB9 universal analog input amplifiers into direct IEPE, charge, thermocouple, shunt, voltage, LVDT or RTD input.

SBOX

Powerful data processing computer and highly reliable SSD data logger for SIRIUS modular data acquisition systems for mobile and field test and measurement applications.

KRYPTON CPU

KRYPTON CPU is the smallest, a highly portable and extremely rugged IP67 data logger and data processing computer for data recording and analysis in extremely harsh environments with wide operating temperature range -40 to +70°C. It perfectly completes the KRYPTON data acquisition modules to form a stand-alone DAQ system.

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