DEWESoft

DEWESoft Software Turns our Hardware into a Powerful Data Acquisition System

Our award-winning data acquisition package is second to none when it comes to both pure recording power and ease of use. Normally it is a difficult balancing act to provide lots of capability and performance, without making the user interface cumbersome and hard to learn. But with careful and innovative design, we have done exactly that!

The software can act as a simple multi-meter or recorder as well as a sophisticated combustion analyzer or power analyzer. Or anything in between these extremes, like a FFT analyzer, transient recorder, etc.

Over 10 years DEWESoft evolved into a great data acquisition software and is Nr.1 in synchronous acquisition of vastly different signals like analog, digital, CAN, GPS, PCM, counter, video, etc. In 2010 with the release of version 7, DEWESoft takes a big step toward become a very powerful data analysis tool for a wide range of test & measurement applications. Since many years you can utilize math channels in the measure mode for online calculations. Starting with version 7.0, captured data can be re-calculated in the analyze mode using the large suite of calculation (math) functions available in the measure mode. This eliminates the CPU performance limitations and thus provides unlimited offline calculation power.

Key Features of DEWETRON systems running DEWESoft

- *Fast and easy setup*
- *Perfect sync of vastly different signals like analog, digital, counter, CAN, XCP, GPS, Video, ARINC, 1553, etc.*
- *Powerful online data processing, MATH functions, filters, statistics, reference curves*
- *Attractive online display of all kind of data, creation of displays is a matter of seconds*
- *Analog, digital or CAN data output; powerful function generator, alarms, CAN messages*
- *Build test procedures in a form of workflow diagram by means of sequencer*
- *Fast data analysis, reload GByte files in seconds*
- *Post processing, large suite of calculation (math) functions*

Example: Performing a 10th order notch filter on 128 channels being sampled at 200 kS/s each. This is not possible online. But in analyze mode it´s easy. Simply record the data and then filter it afterwards (math functions are non-destructive, i.e., they do not affect the raw channels).

Another important new feature is the sequencer which provides a way to automate test procedures.

Hardware Support

DEWESoft supports all DEWE-ORION series A/D cards as well as some third-party cards, like Spectrum cards for transient recording. Multiple cards of the same family are supported for high channel counts.

In front of the A/D cards typically comes signal conditioning units, and there is a huge range of DEWETRON conditioners which are all perfectly implemented into the software.

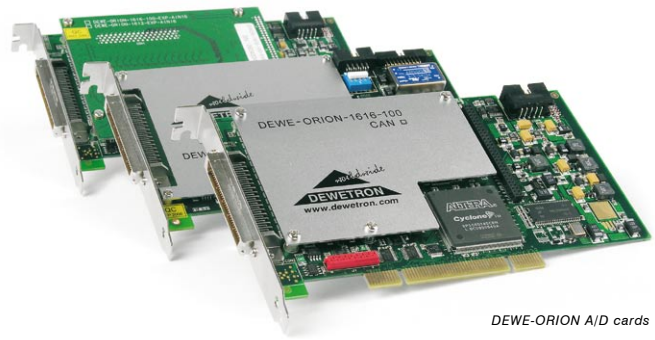
Besides the analog inputs DEWESoft supports the digital I/Os, counters and CAN interfaces of the DEWE-ORION series cards.

To acquire video streams in sync with the analog data there is a selection of DEWE-CAM cameras.

Further bus systems like PCM telemetry, XCP, ARINC, 1553, etc. are supported, too. DEWETRON offers the appropriate hardware for all of these.

For position and speed measurements there is a choice of high performance DEWE-VGPS sensors. Or use low-cost sensor which is NMEA compatible for simple position plotting and mapping applications.

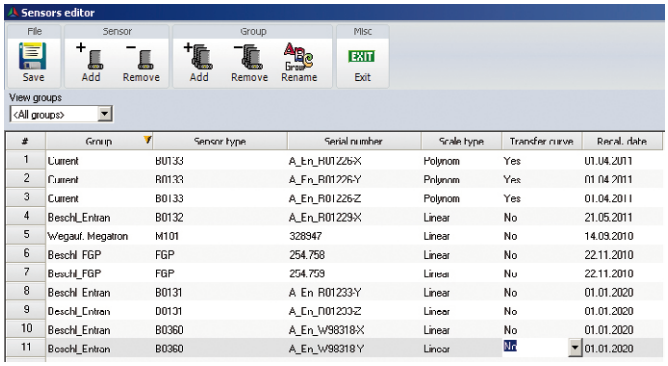
DAQx modules



DEWE-ORION A/D cards

Sensor Database and TEDS (Technical Electronic Data Sheet)

The DEWESoft data acquisition software suite was developed especially for measurement technicians, thus simple sensor "connection" is a major topic. Basic settings like sensor setup are easily done. TEDS technology of newer sensors is supported on both the hardware and software side, so that all settings follow automatically, preventing user errors and saving a huge amount of time. For sensors without TEDS, there are numerous options for manual scaling as well as an integrated sensor database to make settings as efficient as possible.

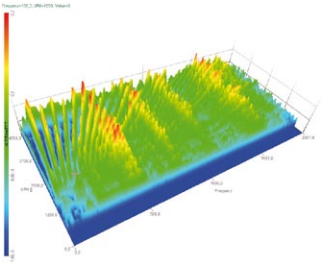


Video Recording

A camera is a perfect sensor for many applications and a lot of people like to use it in their data acquisition. Video is a useful test documentation, providing a visual record of the test conditions and setup. I can also be used for more in-depth analysis, as you can imagine. There is nothing quite like seeing your data replayed with synchronized video – this DEWETRON innovation provides a whole new level of context and understanding of your test data than you could ever imagine.

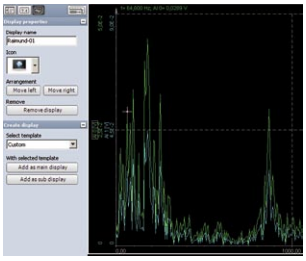
3D Graph

In the properties panel there is a function that allows you to edit the properties of the selected display, and to create new displays, and rearrange them. You can rename any display, and select a different icon for it. Of course you can add sub-displays to any main display.



Display Screens

One of the most powerful and yet easy to use aspect of DEWESoft is the creation of displays. Of course a few standard displays like Recorders, Oscilloscope, FFT, Meters, Bars, 2D and 3D graphs, etc. are built-in for you. But this is only the beginning. You simply can create custom displays according to the needs of specific test.

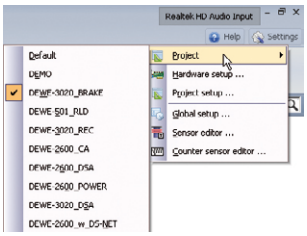


Project Setup

The project files setup the measurement instruments in seconds including complete hardware setup, measurement configuration, and sensor calibration.

Since DEWESoft version 7 you can create "Projects" at the hardware setup screen level, where each project contains all of the settings for any hardware that you own. You can have an unlimited number of hardware setups, which you can freely name and edit. When you start DEWESoft 7, it will automatically load the last hardware setup that you used, of course … but if you have changed the hardware, you can simply choose a different project from the "Settings" menu, and a completely different hardware setup will be loaded.

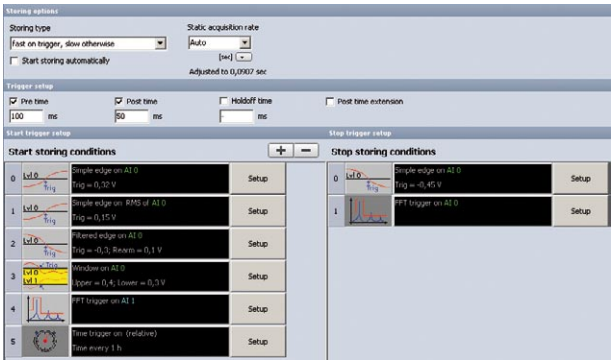
Even when using the same hardware, projects allows using different folders for setup, data and exported files. So you can create John and George projects for different users and work without interfering or you can create e.g. Road-Load and DSA projects for different tasks.



Recording

You can control recording as simple as pressing the START, STORE and STOP buttons. But there are also versatile trigger options to e.g. only store data if a trigger event occurs or to store at a slow rate usually but store at a fast rate at a trigger event with definable pre- and post times.

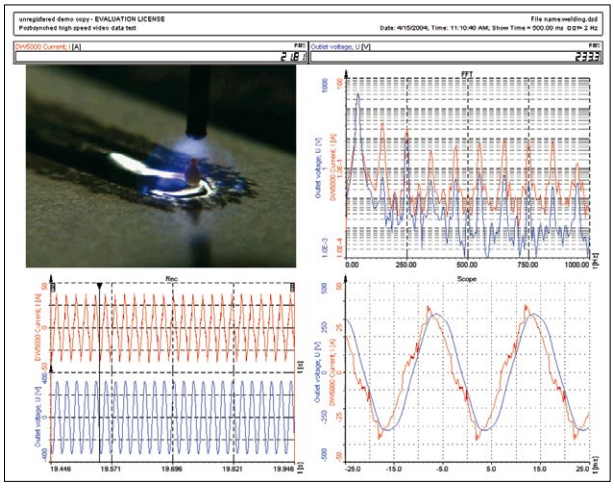
There is a large suite of calculation (math) functions which can be applied to any channels.



Analyze – Replay, Re-calculate, Export

In Analyze mode you can replay any captured data file, zoom in, make cursor measurements, print reports and export the data to a wide variety of formats, like Flexpro, Excel, Matlab, Diadem and many more.

Since version 7 all the powerful math functions such as math formulas, filtering, statistics, power analysis, frequency response function, order tracking, torsional vibration, engine combustion analysis, sound analysis, human vibration analysis, and others can also be applied off-line to captured data. So you can simply store the raw data and do all the processing off-line, on any computer, anywhere. This allows you to work with the data as you were at the test bench or on the proving ground.



DEWESoft 7 Versions

	DS-7-EVAL Evaluation	DS-7-LT Lite	DS-7-SE Standard	DS-7-PROF Professional	DS-7-DSA DSA	DS-7-EE Enterprise
High speed acquisition cards						
DEWETRON Orion series	✓	✓	✓	✓	✓	✓
DEWESoft USB	✓	✓	✓	✓	✓	✓
National Instruments	✓	✓	✓	✓	✓	✓
Data Translation	✓	✓	✓	✓	✓	✓
Spectrum	✓	-	✓	✓	✓	✓
Multiple Card Support	✓	-	-	✓	✓	✓
Sound card	✓	✓	✓	✓	✓	✓
Low/medium speed acquisition devices						
DEWESoft DS-NET	✓	✓	✓	✓	✓	✓
DEWETRON PAD/CPAD/EPAD	✓	✓	✓	✓	✓	✓
Other sources						
CAN/J1939 devices	✓	option	option	option	option	✓
GPS receivers	✓	✓	✓	✓	✓	✓
Timing cards	✓	-	-	✓	✓	✓
Gyro platform	✓	option	option	option	option	option
Kistler wheels	✓	option	option	option	option	option
J1587/J1708 devices	✓	option	option	option	option	option
PCM telemetry	✓	option	option	option	option	option
ARINC/1553 devices	✓	option	option	option	option	option
ScramNET	✓	option	option	option	option	option
Video devices / Thermal imaging						
DirectX cameras	✓	✓	✓	✓	✓	✓
DEWETRON DEWE-CAM	✓	-	-	✓	✓	✓
Basler camera	✓	-	-	✓	✓	✓
Photron hi-speed	✓	-	-	✓	✓	✓
Video post synchronization	✓	-	-	✓	✓	✓
Signal conditioning						
DEWETRON DAQP / DAQN / MDAQ / MSI amplifiers	✓	-	✓	✓	✓	✓
Other						
Sensor database	✓	✓	✓	✓	✓	✓
TEDS support	✓	-	✓	✓	✓	✓
Outputs						
Alarm monitoring	✓	-	✓	✓	✓	✓
Analog replay of data	✓	-	✓	✓	✓	✓
CAN output	✓	-	option	option	option	✓
2-channel function generator	✓	-	option	option		✓
Multichannel function generator	✓	-	option	option	option	✓
Online/Offline Math						
Formula editor, Filters, Statistics, Reference curve, Latch, Combustion noise, Angle sensor math	✓	✓	✓	✓	✓	✓
Human body vibration	✓	-	option	option	✓	✓
Order tracking	✓	-	option	option	✓	✓
Torsional vibration	✓	-	option	option	✓	✓
Sound level	✓	-	option	option	✓	✓
Power module	✓	-	option	option	option	✓
Combustion analyzer	✓	-	option	option	option	option
FRF	✓	-	-	option	✓	✓
SRS	✓	-	-	-	✓	✓
Sound power	✓	-	-	-	FlexPro script	FlexPro script
Data export						
FlexPro, MS Excel, Diadem, Matlab, UNV, Famos, Nsoft, Text, Sony, RPCIII, ComTrade, WAV, BWF, ATI, SDF, WFT, Clipboard, Google earth, CAN messages	✓	✓	✓	✓	✓	✓
Graph export (clipboard)	✓	✓	✓	✓	✓	✓
Screen export (to AVI)	✓	✓	✓	✓	✓	✓
Distributed acquisition (DEWE-NET)						
Client unit	✓	✓	✓	✓	✓	✓
Measurement unit	✓	-	option	option	option	✓
Automation						
DCOM interface	✓	✓	✓	✓	✓	✓
Plugin support	✓	✓	✓	✓	✓	✓
Sequencer	-	-	-	✓	✓	✓
Maintainance						
Free updates within version 7.x	✓	✓	✓	✓	✓	✓
Maintenance agreement	-	-	option (annually renewed)	option (annually renewed)	option (annually renewed)	5 years included

DEWETRON GmbH • Parkring 4 • A-8074 Graz-Grambach • Tel (0043) 316 3070 0 • Fax (0043) 316 3070 90 • sales@dewetron.com