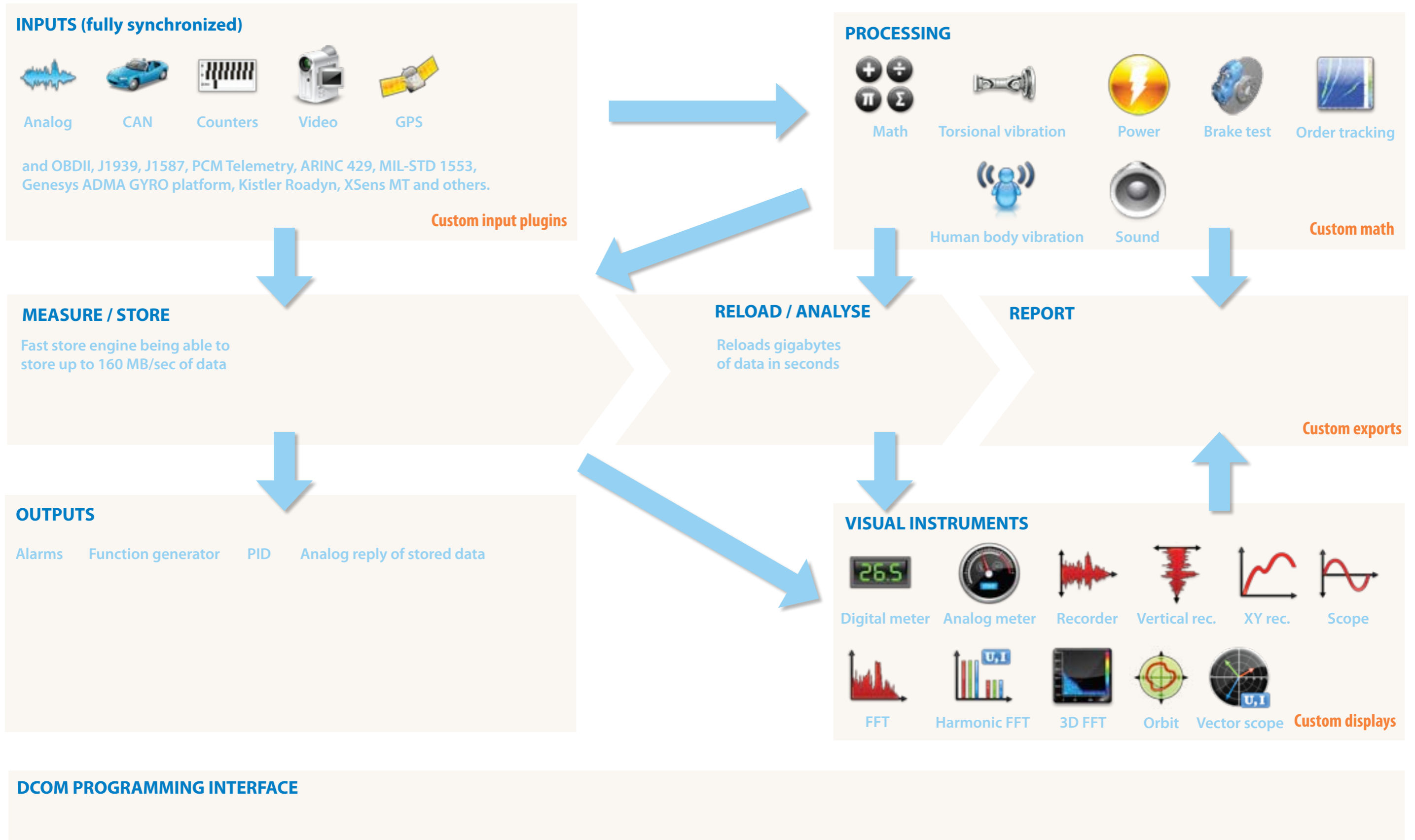


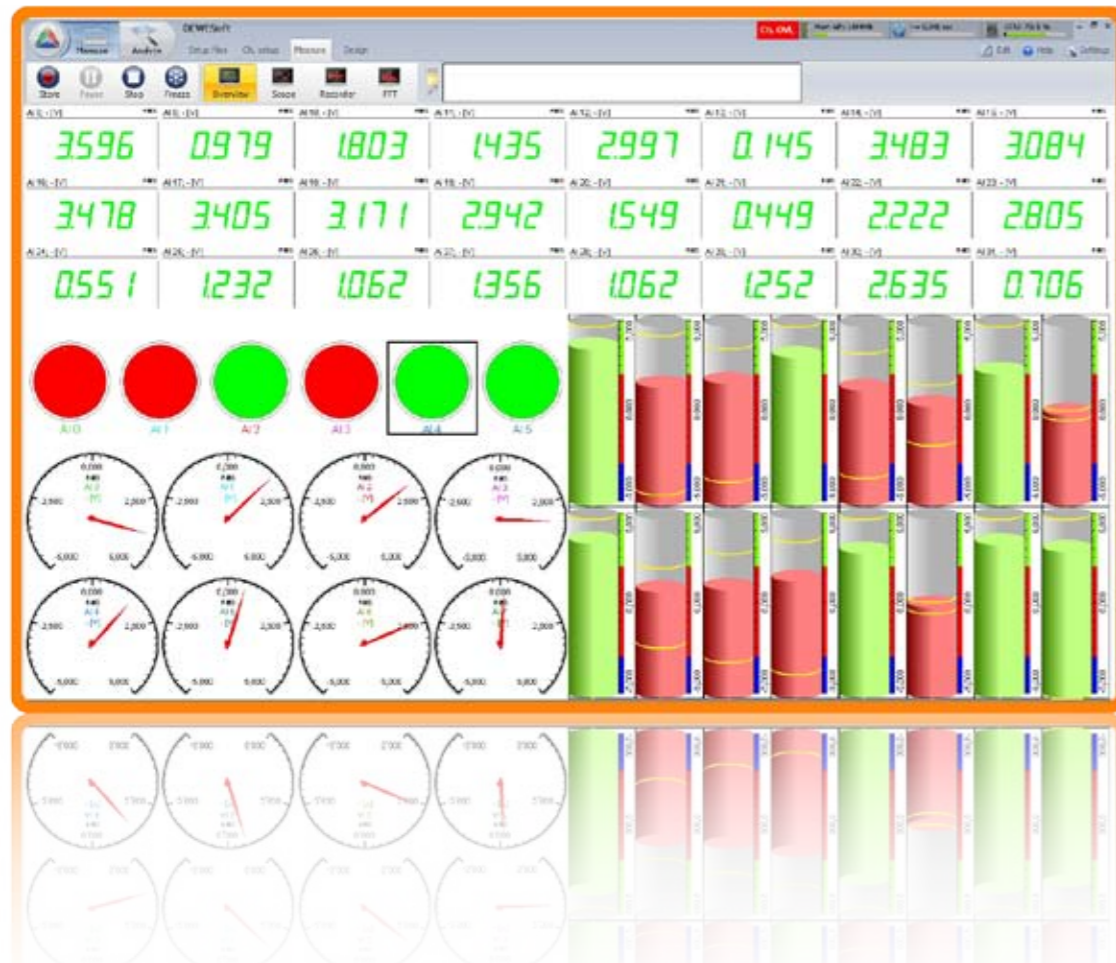
DEWESoft 7

OVERVIEW



STANDARD INSTRUMENTS

DIGITAL AND ANALOG METER



DIGITAL METER

The „classic“ view of test & measurement. It can be either a digital meter where data is represented as actual value, RMS or averaged. The time window for calculation is selectable.



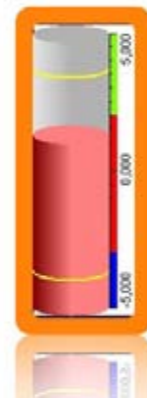
ANALOG METER

Another well known view of test & measurement. Data is represented as actual value, RMS or averaged also.



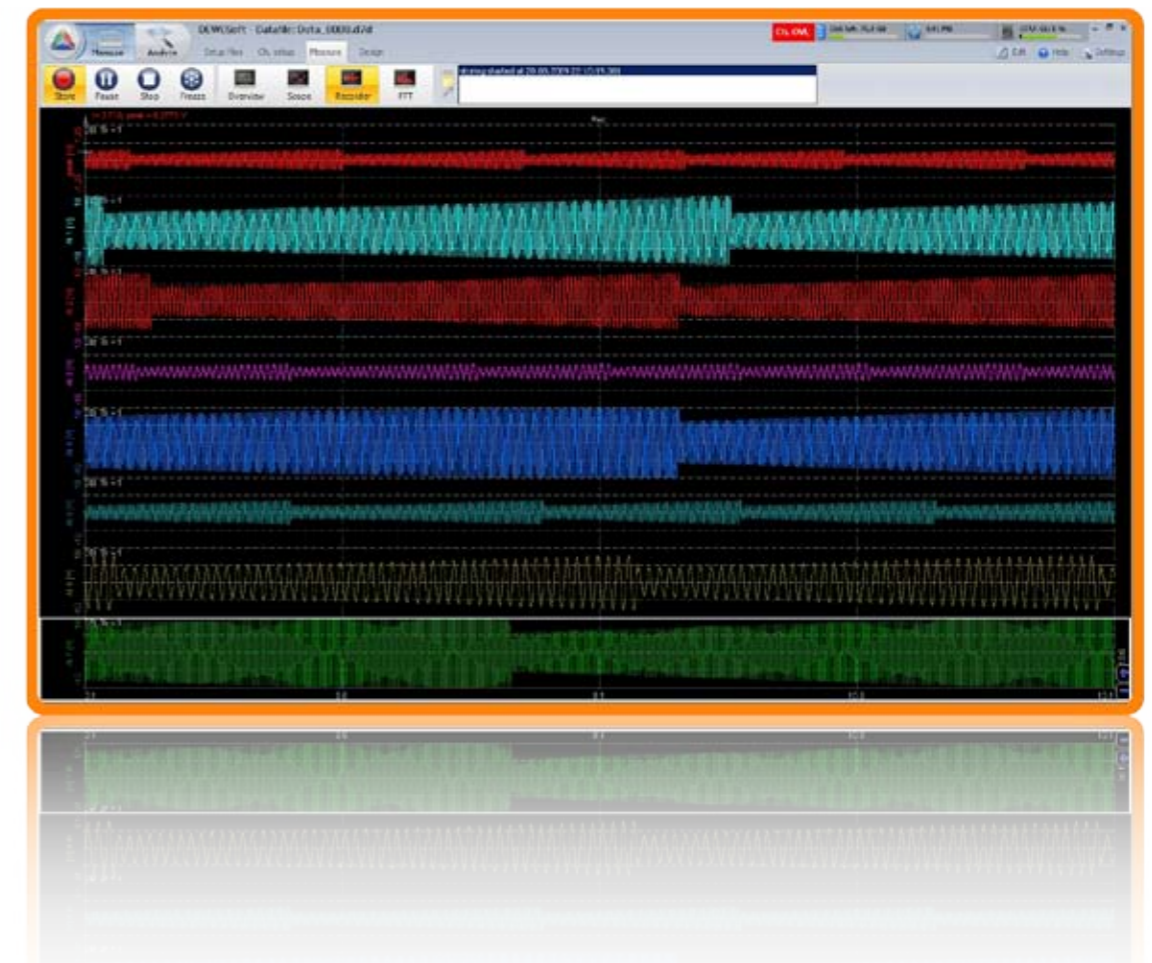
BAR GRAPH

This instrument allows a quick overview of the data - levels which change the color can be defined. A critical value is detected easily.



STANDARD INSTRUMENTS

RECORDER



RECORDER GRAPH

This graph window shows up to 32 channel per screen - the total number of channels can be 1.000 or even more. The data is streamed to the local hard disk at a rate of 160 MByte per second (i.e. 80 channel @ 1 MS/s).

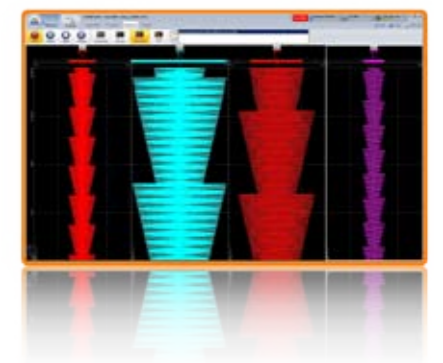
The recording time can be minutes, hours or even days and is limited by the hard disk capacity only.

Multiple time axes allow to visualize data in great detail but also give a overview of a hours at the same time.

VERTICAL RECORDER

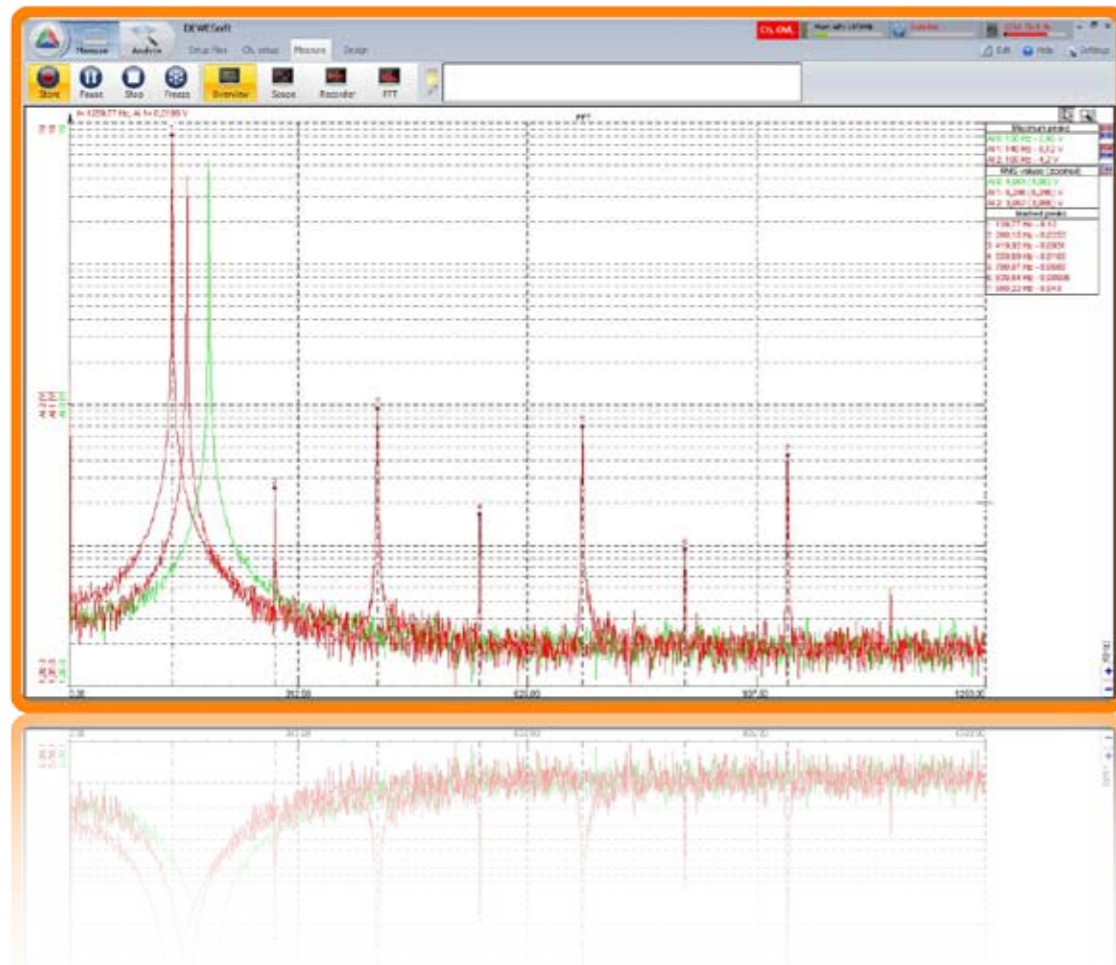
While continuously streaming data the screen can be switched to FREEZE mode - details of the last seconds can be viewed and analysed while storing in the background.

This mode allows similar functions as the RECORDER GRAPH, but in a vertical „paper recorder like style“. Additional information of the absolute min and max values of each channel is shown.



STANDARD INSTRUMENTS

FFT ANALYZER

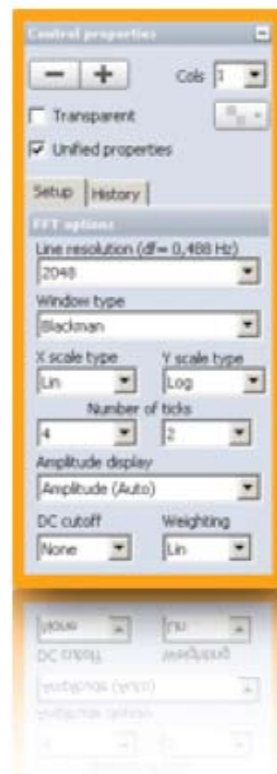


REAL TIME FFT

This view is used to display a real time FFT diagram, based and calculated from each channel which is captured, and even a mathematical channel can be used.

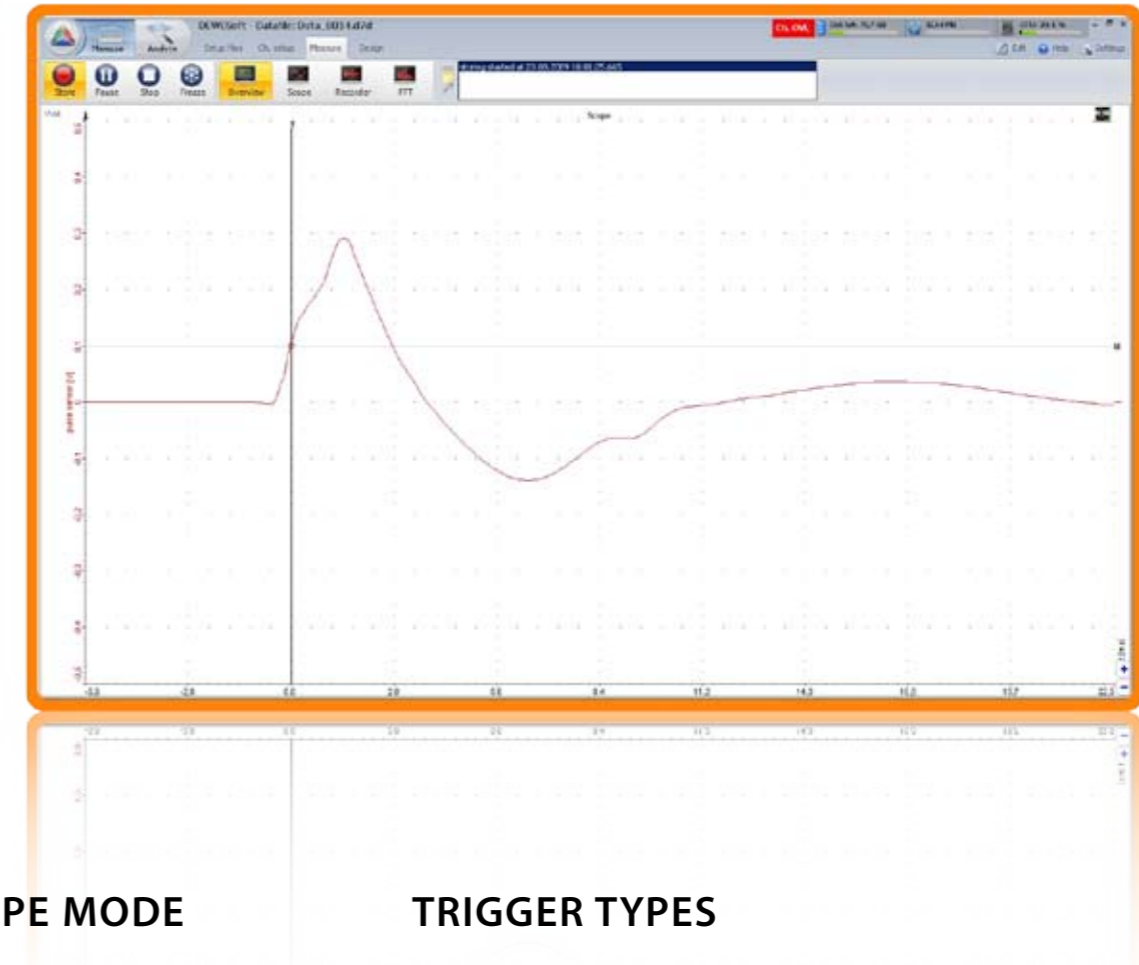
Select the wanted line resolution, the window type and lin or log scaling for both axes, then display modes like averaging, overlapping or weighted, and the data is shown while storing data.

All harmonic life peak values can be displayed in a separate table.



STANDARD INSTRUMENTS

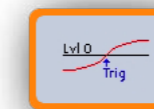
SCOPE MODE / TRIGGER



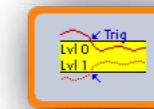
SCOPE MODE

Like a normal scope this window allows to set FREE RUN, NORM and SINGLE SHOT mode.

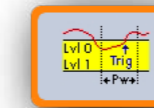
TRIGGER TYPES



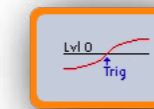
Simple edge
(either rising or falling slope)



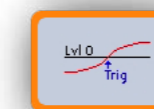
Window trigger
(two levels; entering or leaving logic)



Pulswidth trigger
(longer or shorter than duration logic)



Window and Pulswidth
(completely selectable as above)



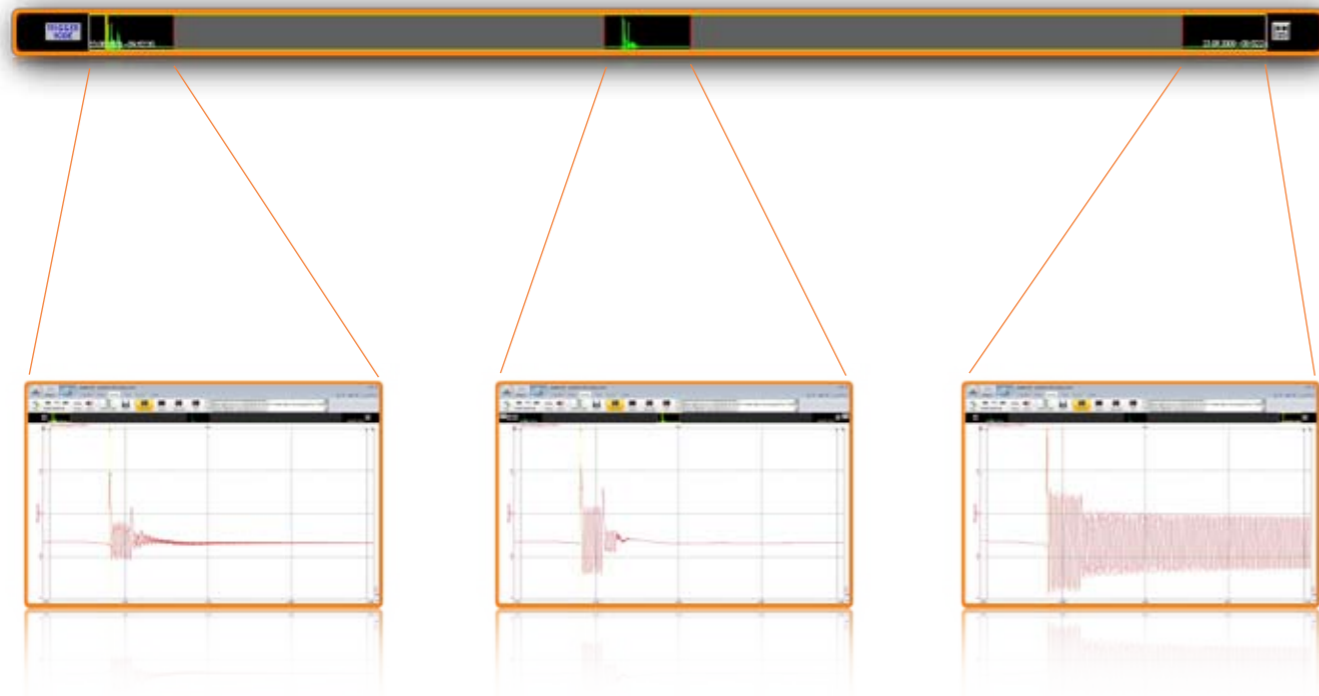
Slope Trigger
(rising or falling slope with steepness selection)

TRIGGER FUNCTION

You can always just press STORE and then STOP to control recording, but DEWESoft also includes a versatile TRIGGER section.

STANDARD INSTRUMENTS

MULTIPLE TRIGGER



MULTIPLE TRIGGER

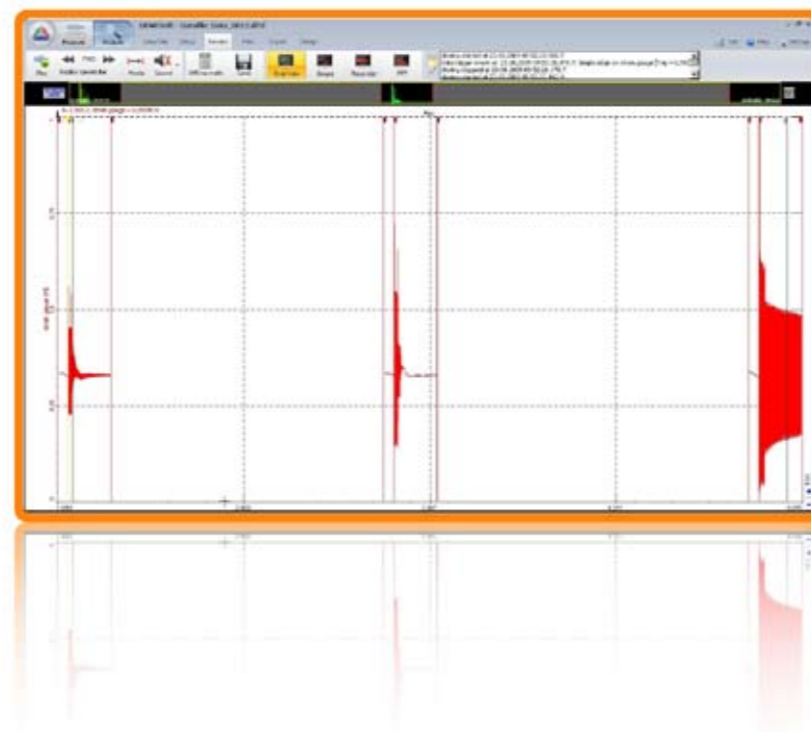
Dependent on the defined trigger conditions data is only stored, when one or more of the conditions are true.

By defining pre and post trigger times also data before and after the condition case is captured. Now you are able to analyze what happened immediately before the trigger condition became true.

Since no data is stored between trigger conditions the amount of stored data is minimized.

In the ANALYZE mode each trigger window can be shown separately.

Use two cursors to measure absolute values, time or frequency of a signal.



DEWESoft 7

FLEXIBLE INPUTS

DEWESoft broke new ground when we introduced the ability to connect video cameras to a data acquisition system years ago. Then we did it again by adding first CAN-BUS, then GPS sensor inputs. Over time we've added more input types, according to customer requests. The result? A powerful system capable of recording not only synchronous low and high-speed analog signals, but also asynchronous signals from slower technologies and outputs, like temperature signal conditioners and digitizers, data from a wide variety of devices on serial and Ethernet busses, plus VIDEO, GPS, CAN-BUS... and more! Also important is that the data can be hard synched to an external time source, such as IRIG, or even the UTC from GPS!

ANALOG INPUTS

DEWESoft offers interface to most popular AD cards on the market: our own measurement devices like Dewe43, Dewetron Orion, Spectrum, National Instruments and Data translation. The cards can be connected through PCI, PXI, USB or Firewire interface.

The speed of the AD cards varies from few kHz per channel to several MHz per channel. The sample rate for each channel can be individually reduced.

For slower data, additional analog channels can be used like DS NET, Dewetron EPAD and CPAD module and others.

The front-end amplifiers allow the direct connection of virtually any analog signal:

- voltage and current,
- voltage, current and digital output sensors,
- temperature,
- vibration,
- strain gages,
- frequency measurement,
- and others.

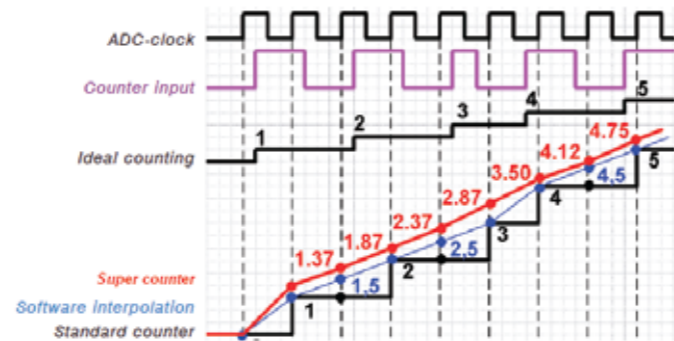
SENSOR DATABASE

DEWESoft offers a sensor database which can be filled manually or using TEDS interface for easy and correct scaling of analog channels. The measurement setup can be imported from Excel or any other software which is the most important for high channels count applications.

ID	Group	Channel type	Serial number	Unit type	Transfer mode	Reset date
1	Temp 20k	WH08_20k_1		Excess	Yes	0.0.2009
2	Isolation	TH0_20k_L1		Excess	Yes	0.0.2009
3	Isolation	TH0_20k_L2		Excess	Yes	0.0.2009
4	Isolation	TH0_20k_L3		Excess	Yes	0.0.2009
5	Isolation	TH0_20k_M		Excess	Yes	0.0.2009
6	Isolation	TH0_20k_L1		Excess	Yes	0.0.2009
7	Isolation	TH0_20k_L2		Excess	Yes	0.0.2009
8	Isolation	TH0_20k_L3		Excess	Yes	0.0.2009
9	Isolation	TH0_20k_M		Excess	Yes	0.0.2009
10	Amplifier	AmplIF11		Excess	Yes	0.0.2009
11	Amplifier	AmplIF12		Excess	Yes	0.0.2009
12	Amplifier	AmplIF13		Excess	Yes	0.0.2009
13	Amplifier	AmplIF14		Excess	Yes	0.0.2009
14	Temp 20k	WH08_20k_1		Excess	Yes	0.0.2009
15	Temp 20k	WH08_20k_1		Excess	Yes	0.0.2009
16	Temp 20k	WH08_20k_L1		Excess	Yes	0.0.2009
17	Temp 20k	WH08_20k_L2		Excess	Yes	0.0.2009
18	Temp 20k	WH08_20k_L3		Excess	Yes	0.0.2009
19	Temp 20k	WH08_20k_M		Excess	Yes	0.0.2009
20	Temp 20k	WH08_20k_M		Excess	Yes	0.0.2009

COUNTER INTERFACE

The counter interface allows basic counting, encoder, frequency, period, pulse width, duty cycle. There are several types of counters: our so called super- counters allow very precise timing and counting measurement. The counting is done also between the counts and DEWESoft calculates the counter values interpolated to each acquired sample. It sounds complicated, but it is a splendid feature which increases the resolution of counting to allow advanced applications like combustion analysis, torsional vibration and order tracking. Other hardware like National Instruments or Data Translation allows only basic counting.



VIDEO INPUT

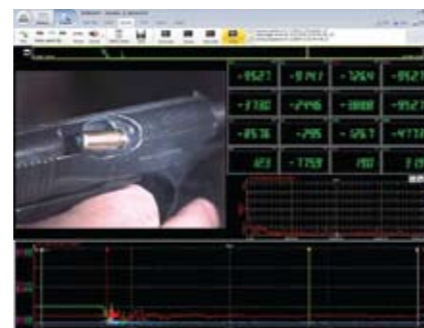
Simple webcams

Webcams connect to any computer via USB or Firewire, and provide an inexpensive and convenient way to add a video reference to any data recording. Virtually every webcam in the world uses Windows DirectX compatible drivers, which DEWESoft can use easily.



Synchronized DEWE-CAM Video

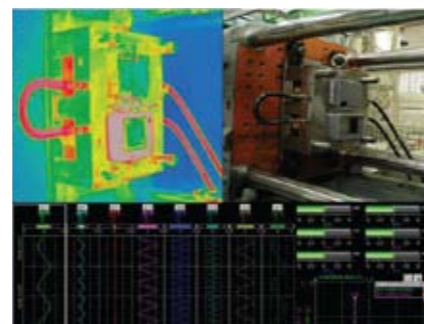
For applications requiring video which is truly synchronized to the dynamic sample rate, we offer the DEWE-CAM-01 as our top camera. A high quality image with automatic gain and iris, and even shutter speed (selectable) are controlled directly by the A/D card.use easily.



Photron high speed video

DEWESoft offers support for high speed video cameras from Photron, adding the interface for combining high speed analog and high speed video world in one. The Photron camera can acquire video data with more than 100000 frames per second.

MIXED CAMERAS are supported... You can combine a thermocam with USB webcam or analog or DEWE-CAM. You can also combine a webcam or analog cam with the DEWE-CAM.



Thermocams Can See Temperature

DEWESoft is also compatible with several high-end thermocameras from NEC and Mikron. These cameras output a color coded thermal image digitally via firewire ... but it's an interactive image! You can hover the mouse anywhere and see the temperature, and even draw a box with the mouse and the min, max, and average temperature values will be shown on the window.use easily.

VEHICLE INTERFACES

CAN bus

One of the most important vehicle buses today is CAN bus. DEWESoft supports our own CAN devices, Vector, Softing and National instruments on PCI, PCMCIA or USB interfaces.

Today CAN bus is present in cars, trucks, boats, tanks, tractors, harvesters and basically anything which has a modern engine built in.

It is very robust two wire interface and is therefore also used as the interface for many different sensors, especially in automotive industry, like gyro platform, speed sensors, torque wheel, pressure, flow transducers and others.

DEWESoft can decode any kind of data from the CAN bus in read only or acknowledge mode. It supports importing of standard DBC libraries for easy setup. A modern car has several hundreds or even thousands of channels on the bus, but it is very easy to work with those in DEWESoft.

OBDII on CAN

OBDII is standardized vehicle interface which must be implemented in each vehicle sold in US, as the California environmental law requires a standard interface for measurement of basic parameters for exhaust measurements.

The parameters like vehicle speed, engine RPM, throttle position, some temperatures can be read out of any vehicle which has the OBDII interface. On DEWESoft side all that is needed is CAN card and a special cable to connect to OBDII.

J1939

J1939 is a standardized truck interface working on the CAN bus. Virtually all the trucks complies with that standard and all that is needed in DEWESoft is a CAN card - DEWESoft does all the rest.

J1587

An older standard truck interface working on RS485 is J1587. DEWESoft supports J1587 interface from Vector.

GPS INTERFACE

GPS technology is used in three main application areas: to find the position on earth, to determine the velocity of an object and to get precise absolute time information. DEWESoft uses all three areas. For basic positioning DEWESoft supports NMEA GPS interface. As soon as you have a GPS receiver which sends the data according to NMEA specification, it will work in DEWESoft.

For getting precise velocity information, this is not enough. For this purpose we support the our own devices, Ashtech, Topcon, Novatel or Javad. These devices are sending position and velocity information with 20 to 100 Hz update rate, which is enough to do testing of vehicles dynamic.

The GPS visual control draws the track and has the ability to import maps which are shown behind the track. GPS Data can be exported to Google earth for three dimensional representations.

AEROSPACE INTERFACES

PCM telemetry

The aircrafts and space vehicles like Space shuttle is acquiring on-board data, converting them to digital, sending data to the ground stations via pulse code modulated telemetry links. DEWESoft is offering a support for Ulyssix Tarsus telemetry cards to decode, visualize and store the telemetry data. The data is equipped with IRIG clock time stamp and therefore can be matched to the analog FM channels, video channels and other data sources. For more info, see the PCM telemetry solution report.



Arinc 429, MIL-STD-1553

Interface for Ballard devices can now handle multiple ARINC 429 and MIL-STD-1553 data-buses. You can capture filter, display and record data-bus traffic and more. It offers extensive possibilities to convert binary data to user recognizable format. Quickly build transmit schedules and create transmit on click messages. Plugin features intuitive and easy to use interface. There are also extra features like auto scanning and complete data-bus traffic recording and replay without hardware.

TIMING DEVICES

When synchronizing several devices or when the absolute time stamp is needed, DEWESoft provides the interfaces to acquire the data with external exact clock source. There are two sources possible at the moment: IRIG and GPS.

IRIG is the standard in aerospace industry providing absolute time in the form of amplitude modulated sine wave or digital signal. The accuracy of the time stamps depends mainly on the signal source, but is usually below 1 ms.

GPS provides beside position and velocity also exact time information. We are using this technology with a special Dewetron GPS clock hardware to decode the absolute precise time and drive the AD card with an absolute accuracy below 20 ns. With this technology it is possible to capture data with instruments placed on any part of the globe and synchronize the data exactly to each other.

With DEWESoft NET these instruments can act like a single one. This technology is a base for all distributed applications.

PLUGINS

Dewesoft offers a so called plugin technology, where add ons can be programmed by us or by customer to implement additional acquisition devices or custom mathematics. Many important data acquisition interfaces are already supported.

Genesys ADMA gyro platform

The Adma device is a high speed/high performance gyro platform used in automotive industry to measure absolute position, velocities, accelerations, angles (yaw, pitch, roll) and angular velocities. The interface allows full control, initialization and setup of the platform. The data is perfectly synchronized to all other data source due to the GPS absolute time stamps, so we can use DEWESoft NET and two platforms to measure relative distance between two vehicles in real time.



Kistler Roadyn torque wheels

The wheels are used to measure forces, torque, speed and other parameters on the vehicles. The main application is development of vehicles (collecting road load data).

Kistler offers several digital interfaces, DEWESoft supports CAN and Ethernet interface. In case with Ethernet, the wheels are set and programmed from Dewesoft, so there is no need to have any additional software package.



XSens MT

The XSens is a gyro sensor which has three acceleration sensors, three rate of turn and three magnetometers offering the position, angle and velocity output. It offers much less precision and long term stability than Genesys, so it is intended for basic usage for limited time.



DEWESoft 7

DATA PROCESSING

Data processing capabilities are one of the key points of Dewesoft. Over the past years we have covered lots of applications areas with expert modules that the user is only a click away from the total solution. With version 7 we have expanded these that all the processing power is available also on already stored data. So you can simply record raw data and apply the math afterwards.

MATH FORMULAS

DEWESoft offers all major arithmetic, logic, algebra and measure functions which can be combined with any measured or calculated channel to create sophisticated formulas.

FILTERS

DEWESoft has many different types of filters. Classical electrical filters like Chebyshev, Butterworth and Bessel can be made using IIR filter module. These filters allow also single and double differentiation and integration.

FIR filters are even smarter. When signals are filtered, filter introduces a phase shift, so the output is delayed compared with input. DEWESoft FIR filter filters data without any phase shift or delay, so it is perfect for analysis of signals which doesn't allow having phase shifting or delaying.

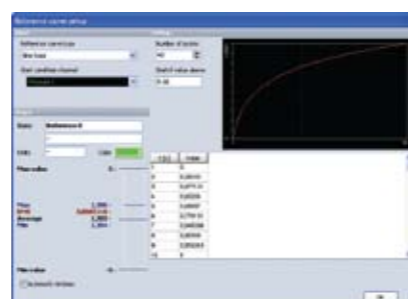
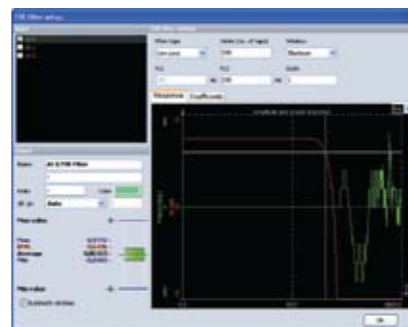
FFT filter performs an FFT calculation and cuts a certain range of signal to create sharpest possible filtering.

STATISTICAL CALCULATION

Statistic like average, RMS, QRMS, Minimum, Maximum, Crest, Peak, Peak-Peak, Variance and standard deviation can be calculated in specific time intervals, as a single value or based on events.

REFERENCE CURVE

For comparing the data with predicted curve or with previously measured data DEWESoft offers modules to create time, FFT or x-y based reference curves and use that as a limit criteria.



EXACT FREQUENCY

This quite smart module can calculate frequency from a sine wave with precision of 1 mHz even if the input sampling rate is not very high.



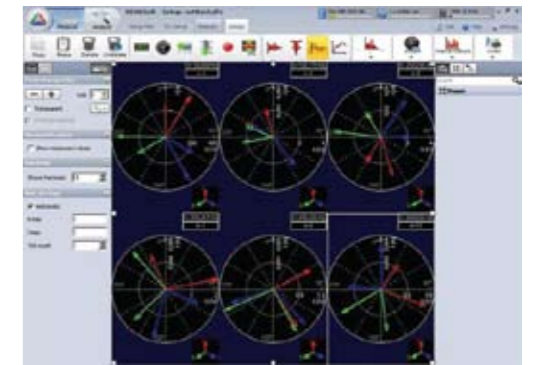
POWER ANALYSIS

Power module is very extensive module which can calculate power and power quality parameters from measurement of voltage and current.

It has software PLL which measures the base frequency down to 1 mHz resolution. The line frequency can be 50, 60, 400, 800 and also variable. In fact, DEWESoft power module is, as we hear from our customers, the only PC based software which can measure correctly variable frequency sources, like frequency inverters.

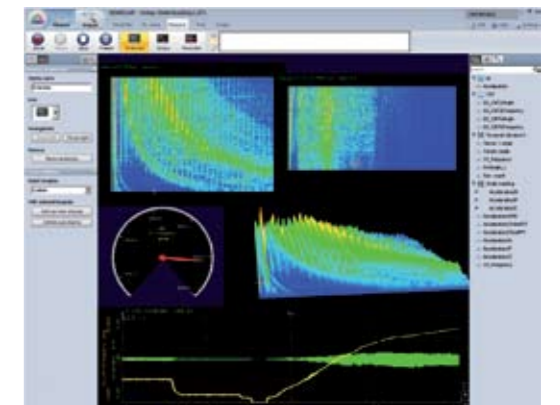
DEWESoft calculates single or three phase power with or without current channels. It calculates active, reactive and total power. It also calculates base and higher harmonics of voltage, current, power, and impedances. The background harmonics can be easily subtracted to allow differential measurement to normal operating conditions.

The power module calculates also line unbalance, periods and flicker values according to the power quality standard.



ORDER TRACKING

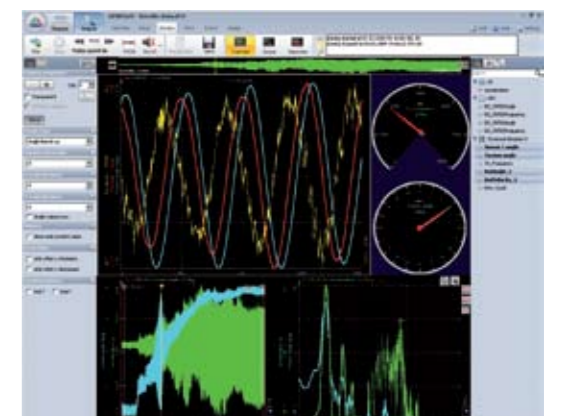
Order tracking is a procedure to transform data, mostly from vibration, to the angle domain based on the frequency of rotation. DEWESoft order tracking takes time domain data and transforms the data based on frequency of rotation and extract any number of harmonics (amplitude and phase angles) which can be displayed in Bode, Nyquist, 3D FFT, real time x-y and orbit plot. For more info, visit Order tracking solution report.



TORSIONAL VIBRATION

This module calculates the torsion angle and angular vibration measured from two encoders mounted on each side or the shafts. The difference between the rotations of each side is the torsion twist of the measured shaft. Torsional vibration can be an input for order tracking to give clear idea about dynamic behavior of shaft.

Several torsional vibration modules can be combined to measure the complicated transmissions. For more info, visit Torsional vibration solution report.

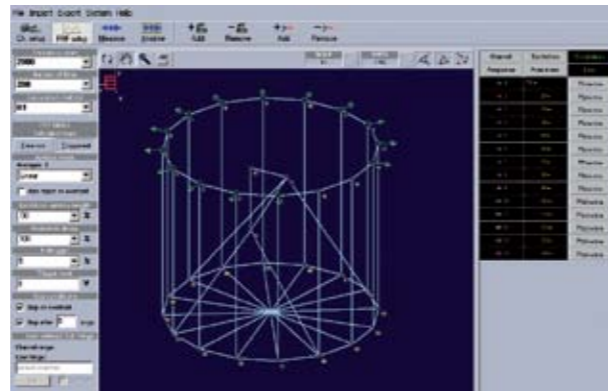


FREQUENCY RESPONSE FUNCTION

FRF module is extension software to DEWESoft, which allows to measure transfer functions of mechanical structures with hammer or shaker excitation. The software allows creating or importing geometry of the structure for quick visualization of measurement points.

The chosen natural frequencies can be observed as animation of the structures. Measured data can be exported as UNV files, which is easily imported by the most important analysis packages.

It is also used to define transfer functions of electrical circuits like amplifiers or filters. For more info, visit FRF solution report.



SOUND ANALYSIS

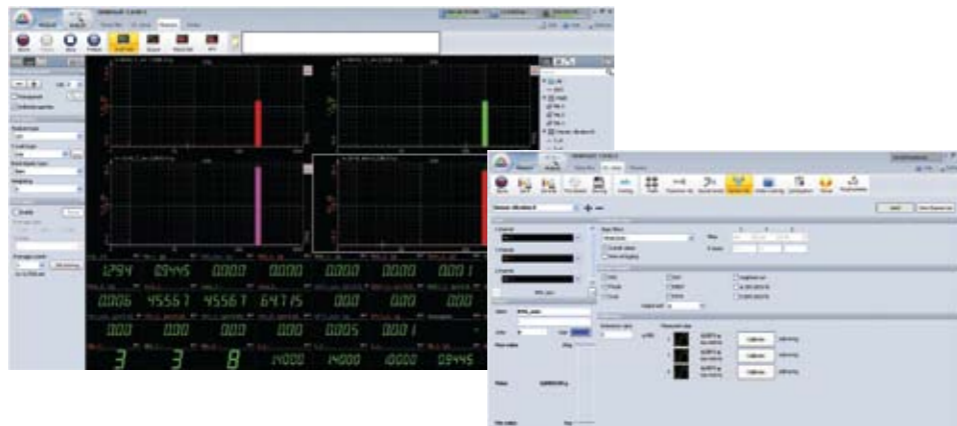
Sound level math section allows calculating typical parameters for sound level measurements from a single microphone. It allows DEWESoft to be used as the typical sound level meter with A, B, C or D weighting. With appropriate hardware (24 bit ADC) it can easily fulfill all the requirements for Class I sound level meter.



HUMAN VIBRATIONS

Human vibration is a measurement of effect of vibrations to human body. Especially on work places exposed to vibrations there is a big chance of permanent damage to some parts of human body.

The human vibration module provides measurements to be able to judge the risk of such damage. It is compliant with ISO 2631-1, ISO 8041 and ISO 2631-5.



COMBUSTION ANALYSIS

The today vehicle engines can't be developed without the measurements of combustion parameters. The engine speed, pressure inside the cylinder as well as other parameters like needle lift, intake pressures and others are the base for calculating combustion parameters like maximum pressure, position of maximum pressure, pressure derivative, heat release, cylinder temperature, knocking and others.

The RPM data can be acquired from virtually any sensor in the car or a special externally mounted encoder, therefore the same system can be used on the test bed or in the vehicle during normal driving.



FIELD BALANCING

DEWESoft provides an easy to use and straightforward tool for single and dual plane balancing. For more info, visit Field balancing solution report.



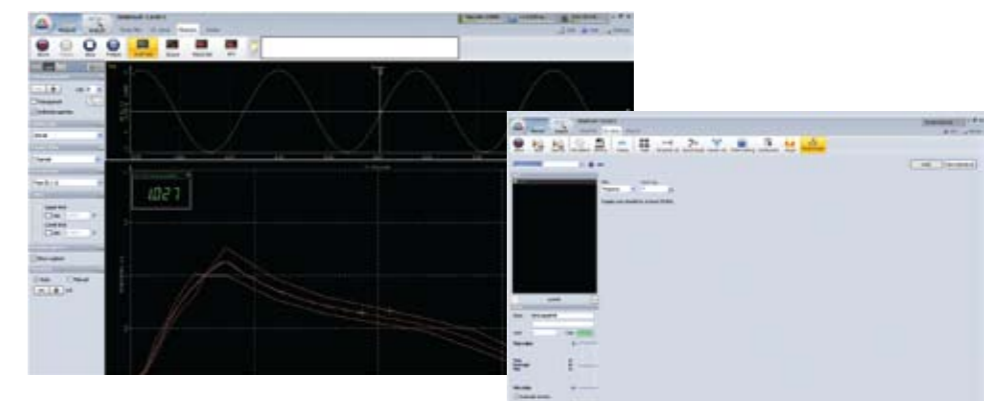
VEHICLE DYNAMIC MODULE

A toolbox for calculating major data from brake, acceleration, coastdown testing. For more info, visit Vehicle dynamic solution report.



PSOPHOMETER

Psophometer is a DEWESoft plugin for measuring noise in telephone circuits. Psophometric weighting filters are compliant with CCITT 1951, CCITT P53.



DEWESoft 7

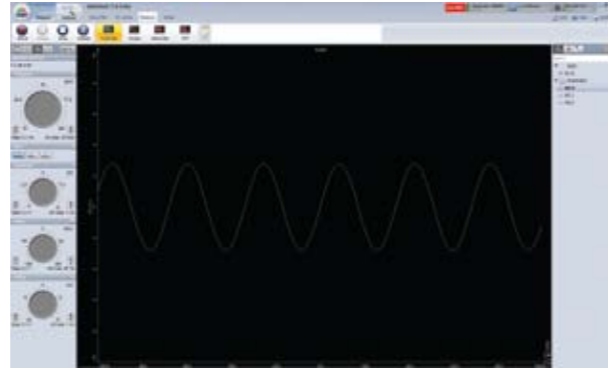
OUTPUTS

FUNCTION GENERATOR

DEWESoft offers multichannel function generator for generating following signals: sine, square, triangle, saw, white or pink noise and arbitrary signal loaded from the file.

The frequency, amplitude, phase angle and offset can be changed on the fly without a single glitch on a signal. When a function generator drives a shaker, it is very important that it does not induce any spikes.

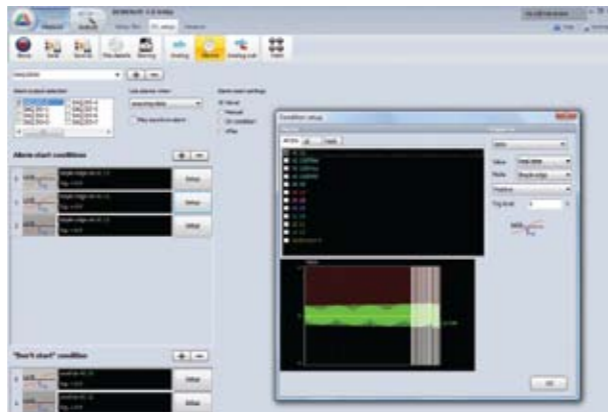
The frequency can be changed in 0.1 mHz steps, so it can be adjusted precisely to your needs.



ALARM OUTPUT

All the measured and calculated channels can be used as the trigger conditions for digital output. The trigger criteria can be virtually anything: simple edge, filtered edge, window, pulsewidth, slope...

The event can be set to visual component on display, a sound can be played or we can use AD card to output alarm to external digital line.



CAN OUTPUT

Statistic like average, RMS, QRMS, Minimum, Maximum, Crest, Peak, Peak-Peak, Variance and standard deviation can be calculated in specific time intervals, as a single value or based on events.

DEWESoft 7

STORING

Through the entire history of DEWESoft the performance in storing was one of the most important issues. The PC technology has advanced through the years and we are using all possible resources to get more from the system: multicore technology, RAID systems, dual PCI bus technology and others helped to improve our performance.

With today's advanced computer technology we achieve more than 160 MB/second sustained stream rates. Even with such high rates, DEWESoft prepares the data to be reloaded in a matter of seconds.

STREAMING

With a very specific data file structure we can write the channel setup, display setup, all the events, fast analog data and slow asynchronous data from different sources in a single file.

For long term measurement DEWESoft offers to switch the file automatically when certain file size is reached or after specified time (for example 24 hours). The file switches in that way that no data is lost in between.

TRIGGERED STORING

Quite often the system needs to watch the data for several days or weeks, looking only for very specific events. It is not nice to store all the data to the hard drive and then search for that event. Therefore DEWESoft offers very extensive triggering – we can use start and stop triggers and use pre and post time for triggering. The trigger conditions can be:

- Simple edge (either rising or falling slope)
- Filtered edge (edge plus rearm level; either slope)
- Window trigger (two levels; entering or leaving logic)
- Pulsewidth trigger (longer or shorter than duration logic)
- Window and Pulsewidth (completely selectable as above)
- Slope Trigger (either rising or falling slope with steepness selection)

We can also use math formula to create combined trigger conditions. There is also an option to store fast data on triggers, but store reduced data (min, max, average and RMS values) for the time when triggers are not active. This gives a rough idea of measurement values when triggering was not active.

DATABASE STORAGE

For applications which requires long term storage and off line post processing, DEWESoft offers a database storage where the data is packed and sent to remote database server. The slow speed data is stored all the time and in case of events a full speed data is acquired and stored. Database storage is mainly used for distributed applications.

DEWESoft 7

ANALYSE AND PUBLISH

DEWESoft is mainly data acquisition and storage software, but it also offers nice analysis features including post processing.

The file preview of DEWESoft is completely free of charge, so DEWESoft can be downloaded and used for file preview without any cost. A special download package for DEWESoft viewer is available in download section.

First very nice feature is that most of the data files, even if they have several gigabytes in size, are loaded in a matter of seconds. A special data structure allows fast reloads and zooming. We can choose a specific portion in recorder and zoom in to show a very limited time event.

EXPORT DATA

Since DEWESoft is mainly data acquisition software, exporting to post processing packages is virtually unlimited. We can use different export file types, use scripting for direct reporting and export raw, reduced or angle based data.

Dewesoft offers templates with Flexpro, MS Excel and Famos. The templates mean that the reports are prepared once and executed when DEWESoft finishes the export of data. In this way we can automate report generation and simplify the measurement process.

Supported data formats are:

- Microsoft Excel®* (Standard spreadsheet software in most companies)
- Flexpro® (Powerful, easy-to-use data analysis software)
- Text (tab delimited text file which can be used with any post processing package)
- ASCII (delimited text format)
- MATLAB®(well known math/DSP software from Mathworks)
- Diadem® (Powerful data analysis software package)
- UNV (used for dynamic signal processing packages like MScope, Cada-X, iDeas and others)
- FAMOS (signal analysis software from Additive)
- NSOFT (to be used with NSoft and Somat post processing packages from company NCode)
- Sony® (a data file format compatible with Sony tape recorders)
- RPC III (defined by MTS and mainly used for road load data collection and replay)
- Comtrade® (a file format used especially in power&energy markets)
- WAV (a well known wave file format which can be used in audio packages)
- Google Earth® KML (display GPS travelled path in Google earth)
- BWF (multichannel wave file format)
- ATI (a native iDeas file format for dynamic signal analysis)
- SDF (defined by HP and used by LMS and Prosig packages)
- WFT (file format defined by Nicolet)
- CSV (file format for exporting CAN messages; can be used also for CAN replay in Dewesoft)
- TDM (technical data management format: a new file format of Diadem)
- TDF (file format defined and used by LMS packages)

REPORTS

When you are reviewing data in the analyze mode, you can make hard copies as easily as clicking the Print button in the top toolbar. Any display can be directly printed to PDF or printer. Even if we have black background as default, DEWESoft will invert the colors to be printed friendly.

The channel setup can be also printed for documentation purposes.



REPLAY

To get an impression how the measurement was done, especially when we have video streams in the measured file, DEWESoft offers file replay capabilities. We can choose a specific portion in the file and replay the data with the same speed as it was stored or with higher/lower speeds. When we have for example high speed video, it is very nice to show the data at much lower speeds as it was acquired.

Dewesoft does not only show the data, but it can also play the data through sound card. Any channel can be chosen to be output through speakers.

Dewesoft also offers to replay the channels through analog output card. We can output up to 16 channels using analog output cards.

EXPORT TO AVI

Since DEWESoft has very nice replay capabilities, the replay can be stored as AVI file which can be used in presentations or some other purpose.

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DISTRIBUTED ACQUISITION

With DeweNET your measurement system can be controlled remotely with ease of use you couldn't imagine before. DeweNET also serves as the center of Distributed Data Acquisition systems where you have multiple systems located either together or scattered across an entire continent. IRIG and GPS time will take care that data will stay synchronized, no matter how long the acquisition runs.

Dewe NET offers three basic modes of operation (1:1 mode, x:1 mode, 1:x mode). With these three modes almost any application can be covered. From single channel expansions over remote control to distributed measurements over hundreds of kilometers - everything is possible.

1:1 MODE

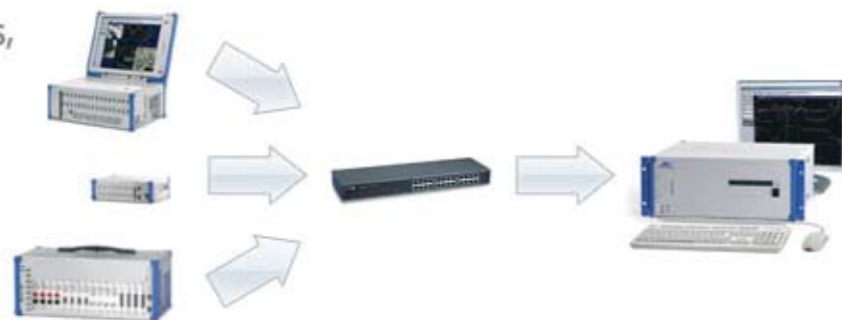
Single Measurement Unit, Single Client



1:1 mode works with single measurement system and single client. In this mode there are two types of operation: full remote control and data view only. In full remote control the client computer acts like a master of the measurement system. When control clients changes to the setup screen, the measurement system also changes to setup screen.

X:1 MODE

Multiple Measurement Units, Single Client

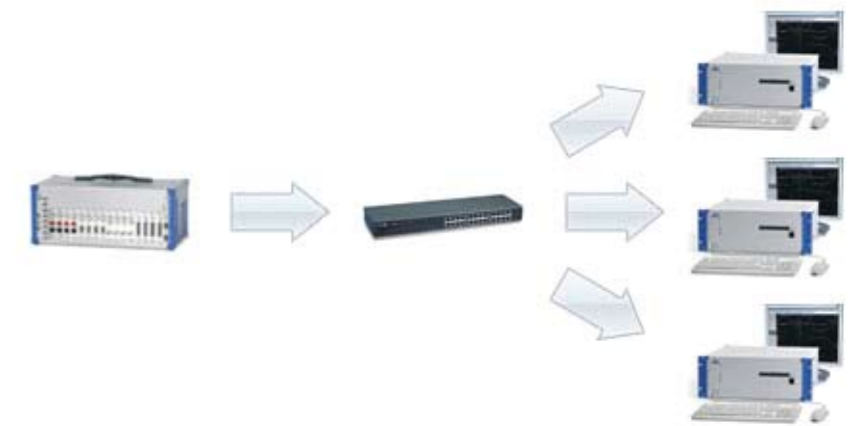


Multiple measurement systems and single client are used in case of distributed measurements or too high acquisition rates to be managed by a single measurement unit. The measurement systems have to be clocked synchronized either with hardware clock (one unit is the clock master, the others are slaves) or with the external clock source which is either IRIG or GPS.

All measurement systems have to run with same acquisition rate. In this case only one connection option is possible – the client is always the master. It starts and stops the measurement on all units in the measurement network. At any time the client has access to view mode - but only to one measurement system (one-to-one connection like in single measurement system & single client configuration). Additional view devices are possible, but they can access only a single measurement system.

1:X MODE

Single Measurement Unit, Multiple Clients



The third network configuration is to have a single measurement system controlled by one 'master' client and additional 'view' clients. The master client is able to change the measurement system setup, storing strategy, start and stop measurements, and many more. The view clients are only allowed to take a few channels from measurement unit (up to the bandwidth limitation) and view and store the data on their local hard disk.