




DewesoftX - ADVANCED RECORDER

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



 **7** YEAR WARRANTY

 DEWESoft



HOW IT ALL **BEGAN**

It was the year 2000 when we set about to create a completely different kind of software. We were engineers, and we needed to test our designs and our products. We tried all of the tools on the market, and they each fell short in some way. Some test equipment makers offered their own software that worked specifically with their instruments. They were adequate, but every user interface was different and hard to learn. There was very little customization possible, if any. On the other hand there were development tools like LabVIEW® which, while powerful, had a steep learning curve. We didn't have the time to stop and learn a whole programming environment: we needed to make measurements. Now. Not in six months.

So, one day we decided to develop our own DAQ software. We had several clear goals:

First, it had to be **EASY TO USE**, with the shortest possible learning curve. The human interface was key: it had to be the best in the world. The user should never have to struggle to find an essential function, or do any programming in order to make a measurement.

Second, we wanted **CUSTOMIZABLE SCREENS**, so that engineers and technicians could see their data however they liked, and again, without any programming.

Third, it needed to have powerful and yet easy to configure **TRIGGERING CAPABILITIES**, so that engineers and technicians could capture exactly the data that they were looking for. At the same time, the software needed to be able to simply "free run," like a tape recorder, for long term recording applications.

Fourth, it had to handle **HUGE DATASETS**, and yet allow them to be re-loaded after acquisition in seconds or even milliseconds. We had struggled with loading large datafiles, and

then laboriously scrolling through them to find what we were looking for. Our package had to allow easy and instant zooming in and out, without waiting.

Fifth, we all had webcams on our desks, and we wondered why we couldn't connect them to our DAQ systems and **RECORD VIDEO IN SYNC WITH THE DATA**. No one else was doing it, so why don't we? Seeing what the test looks like adds a lot of context to the data.

And sixth, we wanted an easy way to perform basic **MATH FUNCTIONS** on any channel. We always had to do this offline, and we were spending more time with the data after the test than during. Why couldn't our DAQ software perform these calculations in real time? We wanted to see the results on-line, and be home for dinner that night.

We had a lot of other ideas, too, but these six were at the core of everything. If we could achieve these, then we could build on that success and add more capabilities. We thought about all of the interfaces our customers used in different industries. Car companies were using the CAN BUS, for example. Aerospace companies used several different data buses. These were just dreams when we started back in 2000. Today they are realities. It was lots of work, but DewesoftX was born, and it almost immediately became one of the most successful DAQ software products in the world. DewesoftX has evolved and grown over the decades, synchronously acquiring data from every kind of analog and digital signal, data buses, GPS and IMU systems... it's a long list.

But the core capabilities that we planned more than 20 years ago are still at the heart of the DewesoftX experience. In this brochure we are going to walk you through them, so that you can see how DewesoftX can improve your DAQ experience.





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The setup and measurement process in the FRF module is really fascinating. Among the systems that I have seen, it is the absolutely most straight forward. Geometry and the measurement setup are available as files. It's a matter of minutes to have the final FRF's and the animation to get an impression of the vibrations. That's great!

IABG

”



“

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 to 50 to 60 different centers, along with NASA personnel as high as the manager of the entire Space Shuttle program.

NASA

”



“

We absolutely enjoy using the Dewesoft data acquisition equipment and its software. I think of it as the Porsche 911 of data acquisition (my dream car/our dream test equipment).

AGI International

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“

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

”

ONE: EASY SYSTEM SETUP

IF YOU CAN'T USE THE SOFTWARE, YOU CAN'T DO YOUR JOB

It all starts with setting up the hardware. DewesoftX software and hardware are so perfectly integrated that it's hard to tell where one ends and the other begins. DewesoftX makes it so easy.

SETUP MANAGEMENT

When you first launch DewesoftX, it goes automatically to the Setup files screen. Here is where every setup that you have created and saved can be found. Simply double-click one of them to load it, and everything will be restored. Want to start from scratch? The New Setup button will take you to the Channel Setup screen, where you can create a brand new setup.

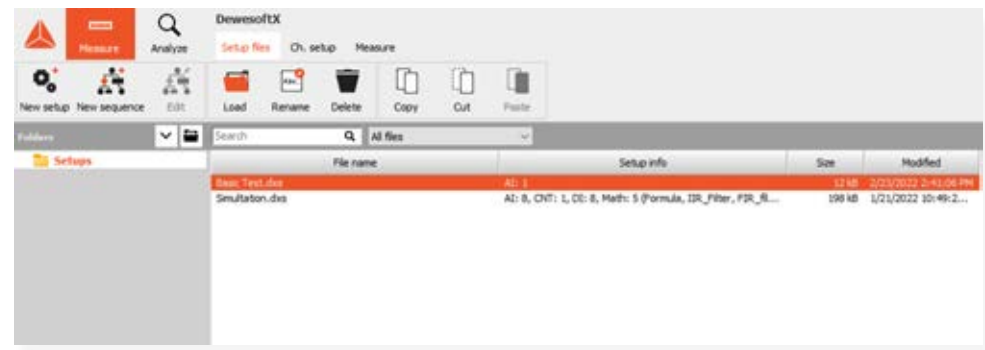
CHANNEL SETUP

Here is where all your channels are shown. Depending on what you ordered, your system will consist of a combination of analog and digital channels. Let's focus on analog inputs for the time being, since they are at the heart of nearly every Dewesoft system.

Want to record a channel? Toggle the Used/Unused button on the left side of the list. Enter your own channel names. It's that simple. Notice that there is a moving bar graph showing the "live" input of each channel. The range setting for each channel is also shown in the grid.

CONFIGURING CHANNELS

Click the Setup button for any channel and a graphical setup dialog pops up, where you can pick a new range, set your engineering units and scaling, and much more. This dialog adapts automatically to whichever input amplifier is selected. The settings for a strain gage amplifier are different from a thermocouple input, or an accelerometer input, of course. The screenshot at right shows a SIRIUS voltage amplifier dialog box. The signal lines and even the connector pin-outs are shown graphically.



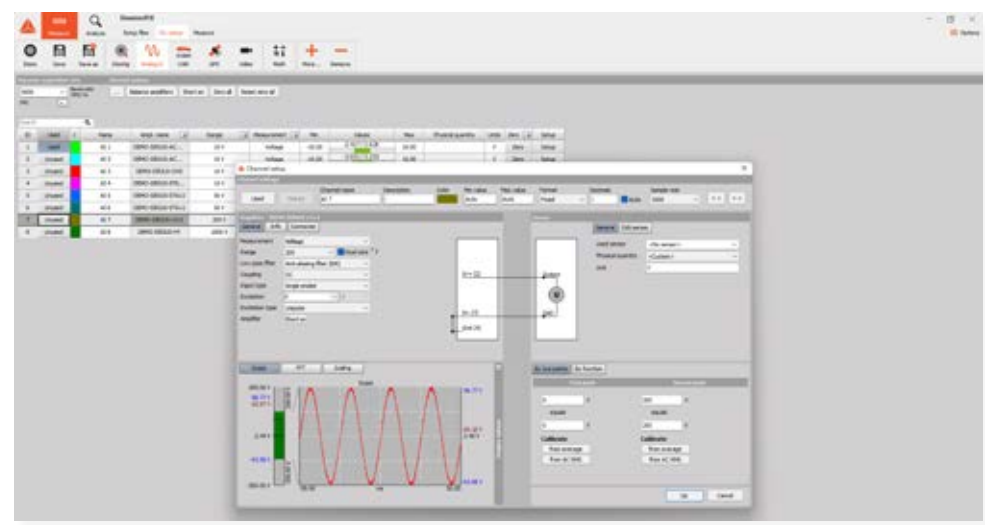
NOTES:
THE MENU BAR MAKES IT EASY TO LOAD, RENAME OR EVEN DELETE YOUR EXISTING SETUP FILES. YOU CAN ALSO COPY AND PASTE THEM TO MAKE DUPLICATES THAT YOU CAN NAME FREELY.

IF YOU HAVE MANY SETUP FILES, YOU CAN ORGANIZE THEM INTO DIFFERENT FOLDERS. A FOLDER FOR EACH USER, OR FOR DIFFERENT PROJECTS, OR TYPES OF TESTS. THE SETUP MANAGER MAKES IT EASY TO STAY ORGANIZED.



NOTES:
THE ICONS IN THE MENU BAR ORGANIZE YOUR INPUTS BY TYPE, SUCH AS ANALOG, DIGITAL, VIDEO, CAN BUS, AND MORE. THIS MENU BAR ADJUSTS AUTOMATICALLY ACCORDING TO THE ACTUAL INPUT TYPES AND INTERFACES CONNECTED TO YOUR SYSTEM.

THE CHANNEL SETUP GRID CONTAINS MANY OTHER CONVENIENT AND TIME-SAVING FEATURES, SUCH AS ZEROING SOME OR ALL CHANNELS, AND MORE.



NOTES:
ENGINEERS LOVE THE "LIVE" WAVEFORM DISPLAY HERE, BECAUSE IT REACTS IN REAL TIME, ACCORDING TO THE RANGE AND OTHER SETTINGS THAT YOU MAKE.

LINEAR SCALING IS ALSO EASY TO CONFIGURE, USING EITHER THE TWO-POINT METHOD, OR FUNCTIONAL (Y=MX + B) METHOD. DIRECT CALIBRATION TO THE LIVE SIGNAL IS ALSO AVAILABLE FOR BOTH DC (AVERAGE) AND AC (AC RMS) SIGNALS.

ONE: EASY SYSTEM SETUP

COUNTER INPUTS

Most Dewesoft systems have one or more counter inputs. You can use these inputs to measure directly from RPM and tacho sensors, incremental encoders, quadrature encoders, and more. You can also use them for up/down event counting operations, as well as timing measurements, pulswidth measurements, and more. Setting up these channels is easier than ever.

DIGITAL INPUTS

Dewesoft SuperCounters can be used as three discrete digital input lines if you prefer! There are also dedicated digital input (and output) hardware modules available for Dewesoft systems like IOLITE and KRYPTON. These are very simple to configure, because they have only two states: on and off. Digital inputs can also be used as triggers in the software, and used in the math engine for a wide variety of functions.

VIDEO CAMERAS

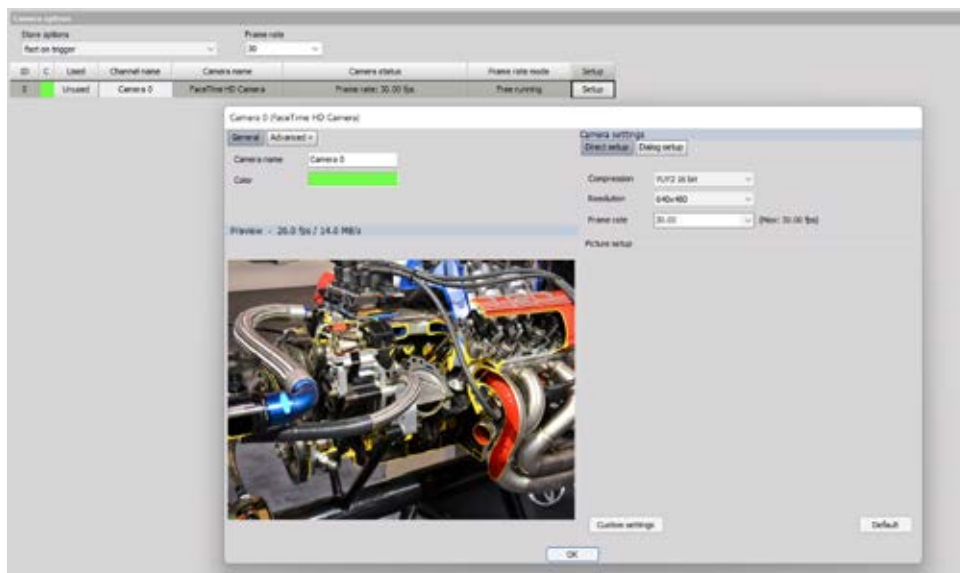
High speed synchronous cameras are available for every Dewesoft system. But for less demanding work you can even use most DirectX based webcams.

Webcams are software synced to within a few hundred milliseconds, whereas our synchronous cameras are hardware synced with microsecond alignment of picture and data. They capture video at very high speeds compared to common webcams.

Adding video as a layer of documentation to your tests adds important context. Sometimes there's nothing like seeing the test, in sync with the captured data, to help you understand what really happens.



ID	Used	C	Sample rate	Name	Description	Values	UNIT	Setup
1	Unused		3000	DI 1		0		Setup
2	Unused		3000	DI 2		0		Setup
3	Unused		3000	DI 3		1		Setup
4	Unused		3000	DI 4		1		Setup
5	Unused		3000	DI 5		0		Setup
6	Unused		3000	DI 6		0		Setup
7	Unused		3000	DI 7		0		Setup
8	Unused		3000	DI 8		1		Setup



NOTES:

DSX INCLUDES A SENSOR DATABASE THAT "REMEMBERS" YOUR SENSORS AND HOW THEY ARE CONFIGURED. IT'S ALSO TEDS COMPATIBLE, WHICH MEANS THAT IT CAN AUTOMATICALLY READ THE CHIP IN TEDS SENSORS AND CONFIGURE THEM AUTOMATICALLY.

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The rapidly developing field of Data Acquisition is a broad, highly-specialized industry where it's EASY to find yourself overwhelmed. DEWESoft understands this and makes connecting with their customers a priority. Whether its technical advice, application support, or end-user product feedback, the team at DEWESoft is accessible and easy to reach out to.

As a technician in the industry I can say that DEWESoftX has transformed the way our data is collected and presented to engineering. It really is the Swiss Army Knife of Data Acquisition software. You don't go backwards from here.

”

Odin Kors
(PACCAR Technical Center)

TWO: DESIGN YOUR OWN SCREENS

One of our first innovations was flexible screen design, and we keep making it better. You can drag and drop widgets like recorder graphs, scopes, digital and analog meters, FFT graphs onto the screen, size them and position them. Assign any channel(s) you want into them. Then create another screen. Then another, if you want. Everything is saved as part of the setup file.

THE MEASURE MODE

When your channels are configured, click Measure in the menu bar to show your screens. When you first come here, a default Recorder screen will have already been created for you. There's a large icon for this screen.

The left side of the screen shows the properties of the selected widget. Here's where you can configure how it looks and how it behaves. For example, maybe you want the data to show as RMS or AVE instead of the actual real-time waveform. You can also control the gridlines and other visual aspects of the widget. The right side of the screen shows the channel list. All channels that you set to be Used on the setup screen are shown here. Assigning them to be displayed in a widget is as easy as selecting the widget, and then clicking the channel in the list.

Channels are grouped by type, such as analog, digital, CAN BUS, etc. This keeps everything tidy, and makes it easier to find the channel that you need.



DISPLAY YOUR DATA ANY WAY YOU WANT, ANY TIME YOU WANT

NOTES:
WHEN YOU'RE NOT IN DESIGN MODE, YOU CAN CLICK INSIDE THE WIDGETS THEMSELVES TO ADJUST REAL-TIME PROPERTIES. FOR EXAMPLE, YOU CAN CLICK ON THE CENTER OF A RECORDER GRAPH CHANNEL'S NAME TO AUTO-SCALE IT ON THE AMPLITUDE AXIS. OR, YOU CAN CLICK THE HIGH OR LOW SCALE VALUES AND THEN TYPE IN WHATEVER YOU WANT.

ANY SCREENS THAT YOU HAVE CREATED FOR A PARTICULAR SETUP ARE SAVED WITH THAT SETUP.

YOU CAN CONNECT MULTIPLE DISPLAYS TO YOUR SYSTEM AND SHOW DIFFERENT SCREENS ON THESE MONITORS!

NOTES
ADDING A NEW WIDGET WILL AUTOMATICALLY PUT YOU INTO THE DESIGN MODE, SO THAT YOU CAN CONFIGURE THE NEW WIDGET FREELY.

YOU CAN ADD AND DESIGN SCREENS EVEN WHEN YOU ARE RECORDING DATA!

YOU CAN PUT A STAR NEXT TO YOUR FAVORITE WIDGETS, SO THAT ONLY THEY WILL APPEAR ON THE FAVORITES SCREEN. WE HAVE SHOWN ALL OF THEM HERE JUST SO THAT YOU CAN SEE WHAT'S AVAILABLE. THE LIST OF WIDGETS WILL GROW OVER TIME AS WE ADD THEM BY CUSTOMER REQUEST OR TO HANDLE NEW APPLICATIONS.

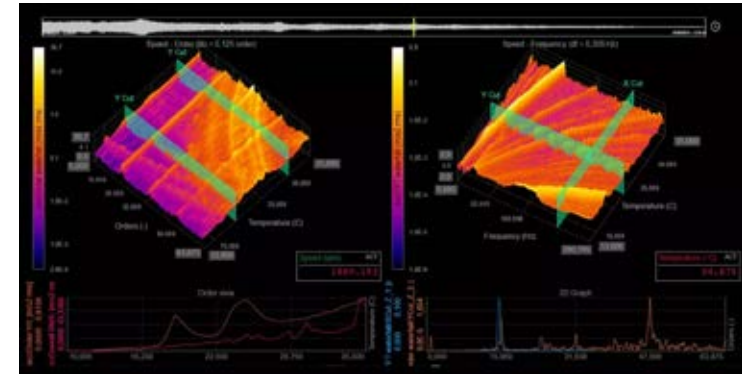
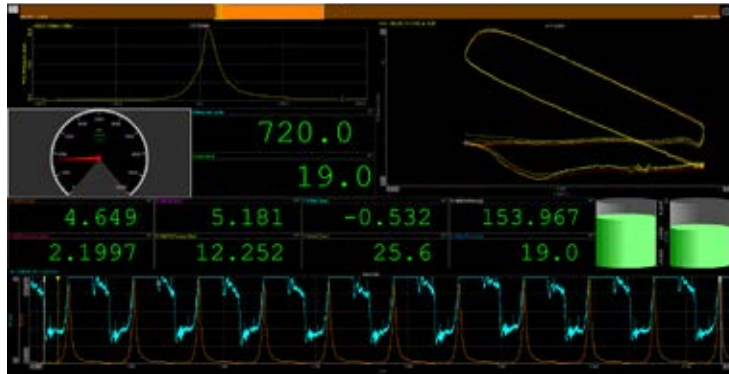
WIDGETS

Clicking the widgets icon pops up a list of them. You can display just your favorites, or all of them, at your option. Let's say that you want to add a new oscilloscope graph to the screen, just click it from the widget list, and it will appear on the screen. You'll automatically be in design mode, so you can move it around, size it, assign channel(s) into it, and configure its settings. Done? Unclick the Design button and you're ready to go.

TWO: DESIGN YOUR OWN SCREENS

CUSTOM SCREENS, EASIER THAN EVER TO CREATE AND MANAGE

Here's an example of a custom screen that took no more than 5 minutes to create. Select your widgets then point-and-click operations to size and move them into place, assign channels, and set their properties. The possibilities are unlimited. A few additional screens are shown below to demonstrate just a few of the possibilities.



NOTES:

SETUPS CAN CONTAIN MANY CUSTOM SCREENS, NOT JUST ONE. YOU CAN ADD AS MANY AS YOU NEED.

ANY COMBINATION OF WIDGETS CAN BE USED ON ANY SCREEN. EVEN THE STANDARD RECORDER SCREEN CAN BE COMPLETELY CUSTOMIZED.

IF YOU NEED MANY SCREENS, YOU CAN ASSIGN THEM AS "SUBSCREENS" SO THAT THEY DON'T FILL THE WHOLE ICON BAR, AND ARE ORGANIZED BETTER.

YOU CAN CREATE SCREENS THAT ARE DESIGNED TO BE PRINTED REPORTS, SO THEY ARE ARRANGED AGAINST A WHITE BACKGROUND AND IN PORTRAIT ORIENTATION FOR EASY PRINTING AFTER A TEST.

ABOVE-LEFT:

COMBUSTION ANALYSIS DISPLAY SCREEN SHOWING PRESSURE/VOLUME CURVE, CYLINDER PRESSURES, TORQUE, AND MORE.

ABOVE-RIGHT:

2D AND 3D GRAPHS SHOWING SPEED VERSUS FREQUENCY AND TEMPERATURE

THREE: FLEXIBLE, EASY TO USE TRIGGERING

You can record continuously when necessary. Just click STORE, and recording will begin. But many applications call for triggering, so we've made it easy to set up the system to record just what you want, in a very logical and graphical way.

STORAGE MODES

Unless you change it, DewesoftX will operate in the default storage mode, which is called "always fast." This means that it will operate just like a tape recorder: it will record at the selected dynamic sample rate.

If you want to trigger based on one or more signal levels, use the "fast on trigger" storage mode. When you do this, trigger setup controls appear automatically. With these controls you can define the conditions that will start the recording, as well as those that will stop it. When you select a channel to start or stop triggering, you can select whether to trigger from the actual signal, the average, or the RMS, and on either the positive or negative slope.

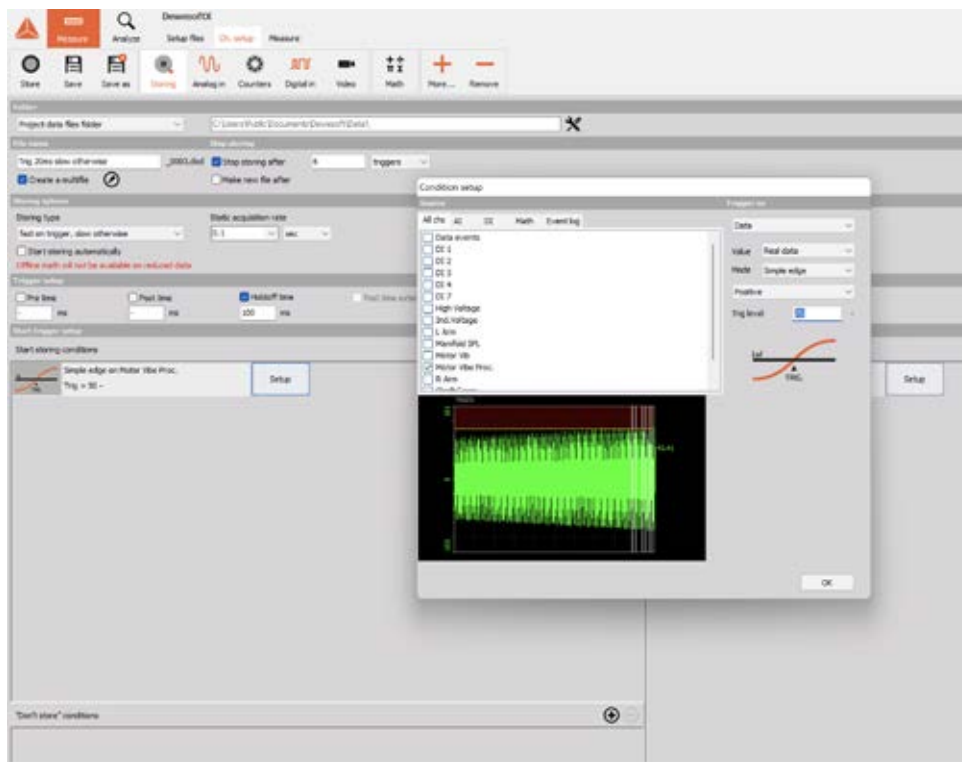
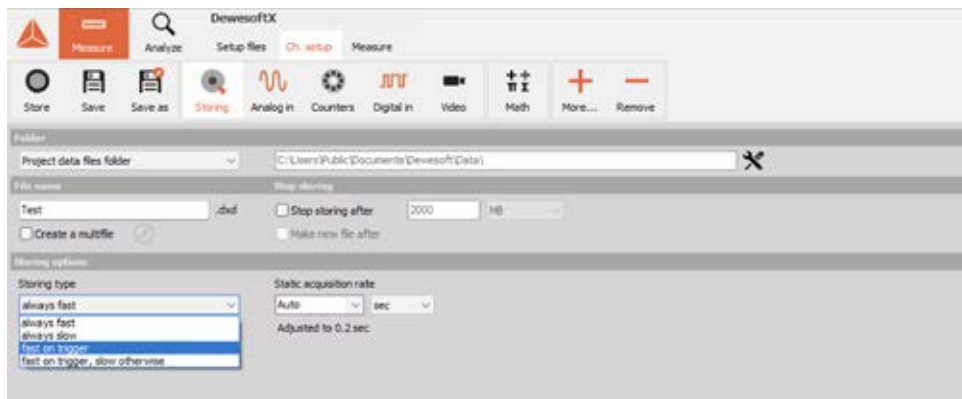
TRIGGER SETUP MADE EASY

You can also choose TIME as a start or stop trigger condition, because, for example, you may want to start recording based on a signal level, capture a certain number of seconds, minutes or hours, and then stop.

AND SO MUCH MORE...

Sometimes you want to "pad" the beginning and end of a triggered recording with some milliseconds, so you can simply type in the pre and post time that you want. There is also a hold-off time that prevents a re-trigger until a selectable number of milliseconds have elapsed since the previous trigger.

DewesoftX provides a rich suite of triggering capabilities that have been driven by requests from the engineers and technicians who use on our systems.



USE FLEXIBLE TRIGGERING TO CAPTURE WHAT YOU WANT.

NOTES

FOUR POWERFUL RECORDING MODES ARE AVAILABLE ON THE STORING SCREEN. "ALWAYS FAST" RUNS CONTINUOUSLY AT THE DYNAMIC SAMPLE RATE. "ALWAYS SLOW" RUNS CONTINUOUSLY AT A REDUCED RATE.

"FAST ON TRIGGER" CAPTURES TRIGGERED SECTIONS OF DATA AT THE DYNAMIC SAMPLE RATE.

"FAST ON TRIGGER, SLOW OTHERWISE" CAPTURES TRIGGERED DATA AT THE DYNAMIC SAMPLE RATE, AND REDUCED RATE DATA BETWEEN TRIGGERS.

NOTES

SELECTING EITHER OF THE TRIGGERED DATA MODES AUTOMATICALLY REVEALS THE TRIGGER SETUP CONTROLS.

NOTICE THAT WHEN YOU SET UP A TRIGGER START OR STOP CHANNEL, THAT YOU GET A PREVIEW OF THAT CHANNEL IN A GRAPH. THE REAL SIGNAL CAN BE SHOWN, OR THE RMS OR AVERAGE REPRESENTATION. THIS IS A HUGE AID WHEN SETTING UP TRIGGERING, BECAUSE YOU GET A "LIVE" PREVIEW, INCLUDING A VERTICAL WHITE LINE IN THE GRAPH WHEN THE TRIGGER CONDITIONS ARE MET.

IF YOU ADD MULTIPLE CHANNELS TO EITHER START (OR STOP) RECORDING, THEY WILL ACT AS AN "OR GATE," SO ANY OF THEM WILL START (OR STOP) RECORDING. THE OPTIONS ARE MANY, BUT THE SETUP IS GRAPHICAL AND EASY TO LEARN.

THREE: FLEXIBLE, EASY TO USE TRIGGERING

MULTIFILE TRIGGERING AND REPLAY

Our unique “multifile” mode means that you can capture multiple trigger events to a single file for easy review. On the screen at right we are looking at trigger #2 from a series - this is shown by the highlighted block of data in the reply reference bar near the top of the screen. Click the arrows to step through your triggers. Click and drag to zoom any recorder graph to see exactly what you want. Right click to unzoom back as many steps as you like. Once you know these few basic things, reviewing your data is smooth and effortless. It’s like riding a bike - you won’t even need to think about how you do it!

At this point you can export all of the data, or a selection of it, to a wide range of file formats. Or, make a printed report and send it to an office printer or a PDF file. Oh, and if you want to modify how the screen looks, you can do this freely, using the same procedures as before the data was captured!

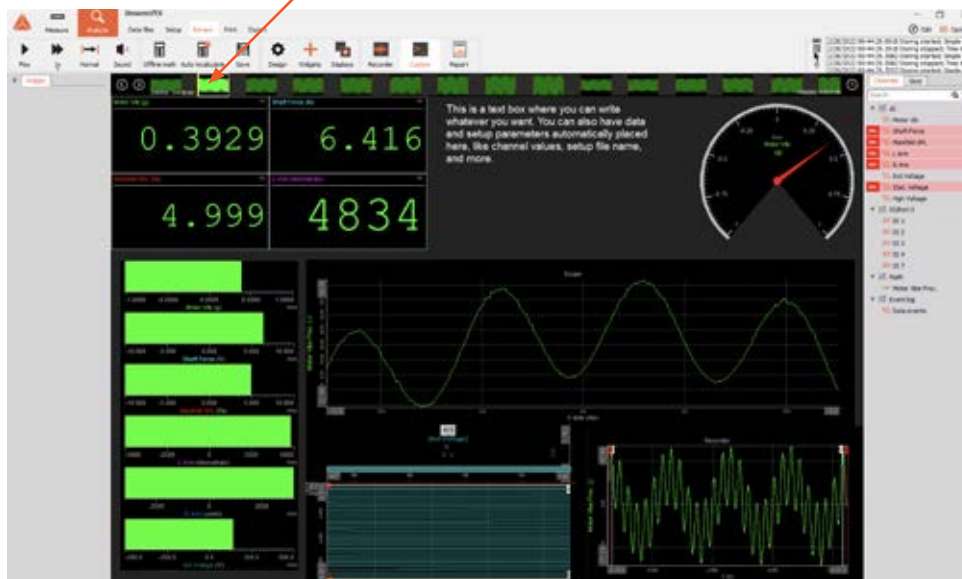
FAST ON TRIGGER, SLOW OTHERWISE

With this mode, fast triggered data is captured exactly as shown on the previous page. But what about the data that went by between the triggers? Using the “fast on trigger, slow otherwise” mode, the data between the triggers is stored by at a selectable reduced speed. And because the rate is slower, we also capture the RMS, peak to peak and average values of the data, providing a unique glimpse into the data that wasn’t captured at full speed. This saves disk space and reduces data review time.

The “always slow” mode captures continuously at a reduced speed, also acquiring the min/max/average and RMS.

The “always fast” mode is continuous, high speed recording at the selected dynamic sample rate.

THE REFERENCE BAR SHOWS THAT WE’RE LOOKING AT TRIGGER EVENT #2 ON THE SCREEN. USE THE ARROWS TO STEP FORWARD/BACKWARD.



“

Dewesoft has been the gold standard when it comes to data acquisition and control. Nothing else can compete with its user-friendly software and sophisticated hardware design. The incredible support from the Dewesoft team is a huge bonus!

”

Sergio Serrano
(Blue Origin)

FOUR: SAVE AND QUICKLY RELOAD HUGE DATASETS

Nothing would be more frustrating than recording a file that takes minutes or even hours to open. That never happens with DewesoftX. Normal size files open in the blink of an eye, and even the largest ones open in just a few seconds.

YOUR DATA FILES

In the Analyze mode, DewesoftX shows you all of the data files that you have captured. Clicking any one of them presents the essential information in the bottom half of the screen, including a comprehensive list of the channels that it contains, the storage mode and sample rate that were used, and so much more.

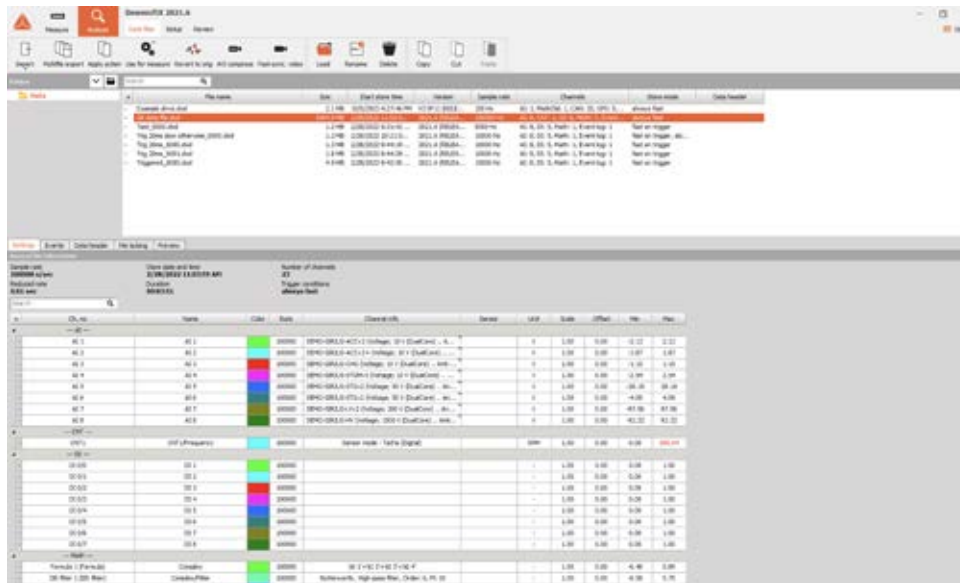
Ready to review the data? Just double-click the file name. And it will be reloaded in an instant. And all those screens you arranged just the way that you liked them? Yes, they are reloaded, too.

QUICK RELOAD

Even gigabyte sized files open up in less than one second, like this 10 GB file, for example. When you first open a file, the entire data set is shown in the recorder graphs. Want to zoom in? Simply click on the graph then drag to the right, and release. This positions the vertical cursors at the beginning and end of where you want to zoom in. Now simply click once between the cursors, and this area will instantly be zoomed between the cursors. Not enough? Click drag and zoom to do it again. And again. There is no limit. If you went too far, simply right-click between the cursors to step back once, or twice ... or as many times as you want.

The combination of quick data reload and nearly instantaneous zooming and unzooming are some of the most popular features of DewesoftX software. Scientists, engineers and technicians all around the world rely on this powerful combination of capabilities every day.

EVEN GIGABYTE DATAFILES RELOAD IN JUST SECONDS.



FOUR: SAVE AND QUICKLY RELOAD HUGE DATASETS

ARE YOU A DEVELOPER?

Dewesoft X is not only very user-friendly but also offers several interfaces for developers, who are able to extend the already large feature set of the software or automate certain tasks.

DewesoftX's plug-in technology allows you to extend the software in several ways:

Use the C++ script to simplify complicated formulas and create custom math modules

Use custom plugins to add support for third-party devices, protocols or implement special math processing routines inside Dewesoft with a custom GUI

Create custom visual controls and displays to visualize data the way you want

Create custom data export functions to export data into any file format

For automation, there's a built-in sequencer that allows you to control the flow of your tests and measurements, without any programming. You don't have to program to use DewesoftX, but if you want to, we have you covered!

FAST POST-PROCESSING

Remember those math channels that you set up before recording? Well, you can also do this during post-processing, in the Analyze mode. You can edit existing math functions and DewesoftX will recalculate the data for you. Or, create brand new math functions, and Dewesoft will crunch the numbers for you in seconds.

In the Analyze mode, the graphs get cursors that you can use to zoom in and out. The cursors also make measurements where they intersect with the data, and show you those values on the screen.

And notice the yellow cursor, always available at the top of the screen and in time-history graphs during replay. You can grab this cursor and move it through the data. All channels are synchronized to it, including video and GPS displays.

Create your own reports for printing, or export to PDF, at your option.

GETTING YOUR DATA OUT

DewesoftX provides easy data exporting to a wide variety of data formats, and the list keeps growing. Excel®, FlexPro® and MatLab® are popular choices, but there are many other formats. You can export all of the data, or just a selection.

Review and Analyze On Any Computer
Some computer-based DAQ systems require you to use the system itself to analyze the data, or they require you to buy expensive software licenses to run the software on another computer. We don't think that's fair. You can run DewesoftX without any license, on any computer. So you can sit in your nice office chair in front of a big monitor and use all of the features of Dewesoft's Analyze mode.



Name	Type	Units	Scale	Offset	Min	Max
40.0	Raw data					
40.1	Raw data					
40.2	Raw data					
40.3	Raw data					
40.4	Raw data					
40.5	Raw data					
40.6	Raw data					
40.7	Raw data					

FIVE: SYNCHRONIZE VIDEO WITH YOUR DATA

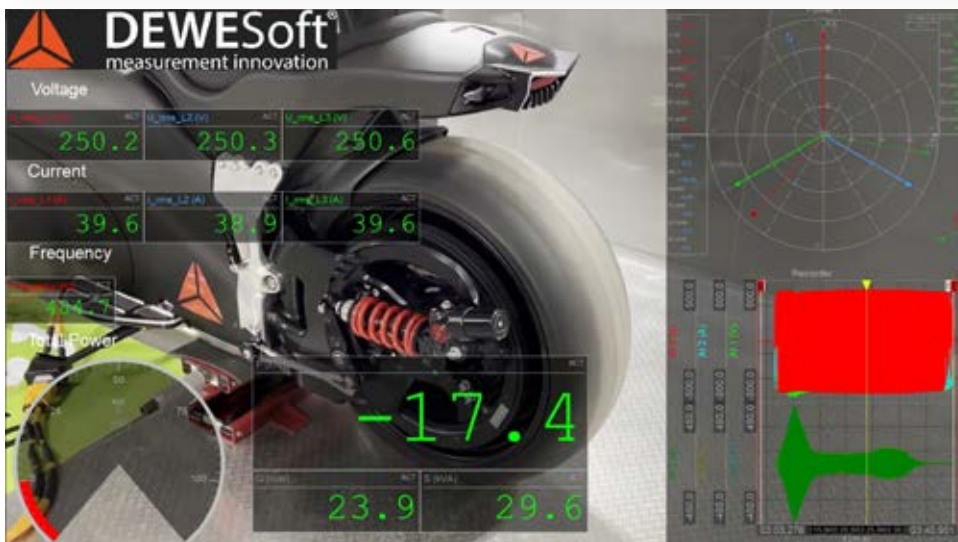
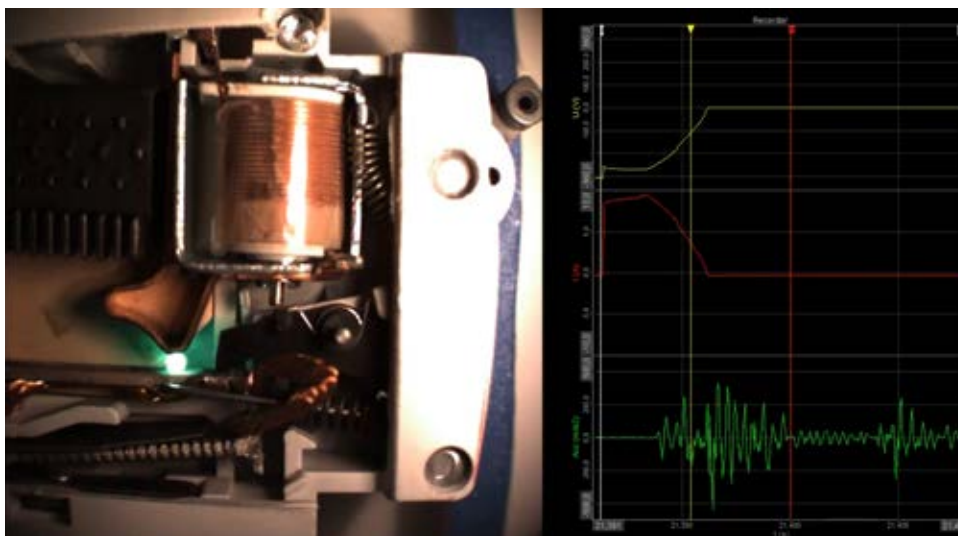
Human beings are visual creatures. This is why we take endless streams of numbers and plot them in a variety of graphs and meters. It's simply easier to see trends and spot variations when data is shown this way. For the same reason, adding a video stream to your data is a powerful tool.

FROM WEBCAMS TO SYNCHRONIZED CAMERAS

More than 20 years ago we took a webcam from one of our office computers and connected it to a Dewesoft DAQ system, and the world of data acquisition was changed forever. There is something about seeing what the test looked like that is incredibly powerful. It provides vital context that helps us to understand the lines and numbers on the screen.

You can still use a simple and inexpensive USB DirectX webcam with your Dewesoft system. The setup is fast and easy in the software. Webcams are not terribly fast, and they don't support hardware synchronization. But DewesoftX timestamps each frame when it comes into the computer, so that it replays in sync with the data. There is always a latency, but this can be offset in the software.

If you need faster speeds and perfect synchronization, just connect one or more of our DS series industrial cameras. DS-CAM cameras offer high-speed video with up to 333 frames per second (fps) at full HD resolution. Lowering the resolution, you can achieve up to 600 fps. Using one of our CAM-BOX interfaces, systems with 8 cameras, each running at 333 fps with full HD resolution, are possible.



VIDEO ADDS IMPORTANT CONTEXT TO YOUR CAPTURED DATA.

NOTE

DEWESOFTX SUPPORTS MULTIPLE TYPES OF VIDEO CAMERAS:

- DIRECTX CAMERAS
- DS-CAM SERIES SYNCHRONIZED CAMERAS
- HIGH SPEED CAMERAS FROM PHOTRON
- INFRA RED CAMERAS FROM OPTRIS
- DS IP CAMERAS



Optris brand thermographic video camera



Photron brand high-speed video camera



Dewesoft DS-CAM640c / DS-CAM110m

DRAG AND DROP MATH FUNCTIONS OPERATE IN BOTH REAL TIME AND DURING POST PROCESSING

Math functions are great, but you shouldn't have to be named Einstein in order to use them. DewesoftX makes it easier than ever before to create a wide range of powerful math functions and apply them to your data.

GRAPHICAL FORMULA EDITOR

You can build your formula by clicking the operators and functions shown below. Notice that there are multiple types of functions available in the tabbed section, from basic arithmetic to trig, arrays, signals and measuring functions, and more.

FILTER CREATOR

Several kinds of filters are included, including FIR and IIR. Just pick the type, select your channel(s), and make a few other choices, and it's created for you. It is important to note that your raw channel is not affected in any way - a new channel is made with the filter applied.

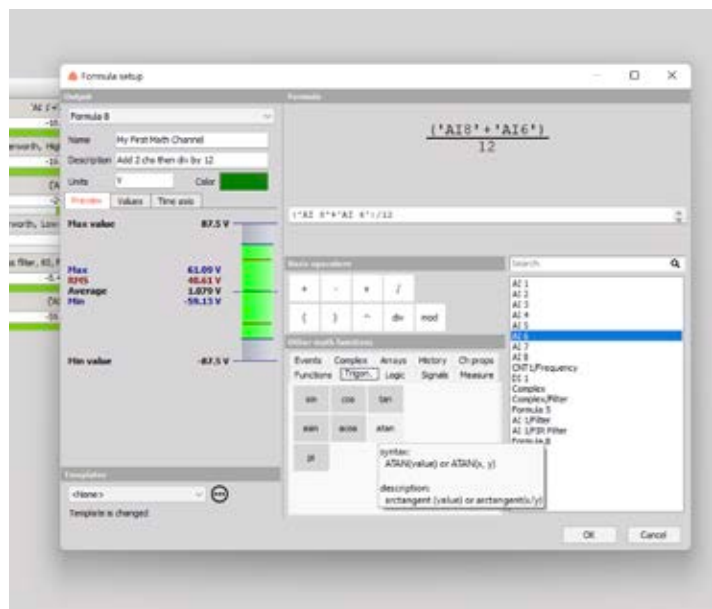
CAPTURING BASIC STATISTICS

DewesoftX can extract more meaning from your data, like the RMS, min, max, crest factor, and more. Just checkmark the ones you want for any or all of your input channels.

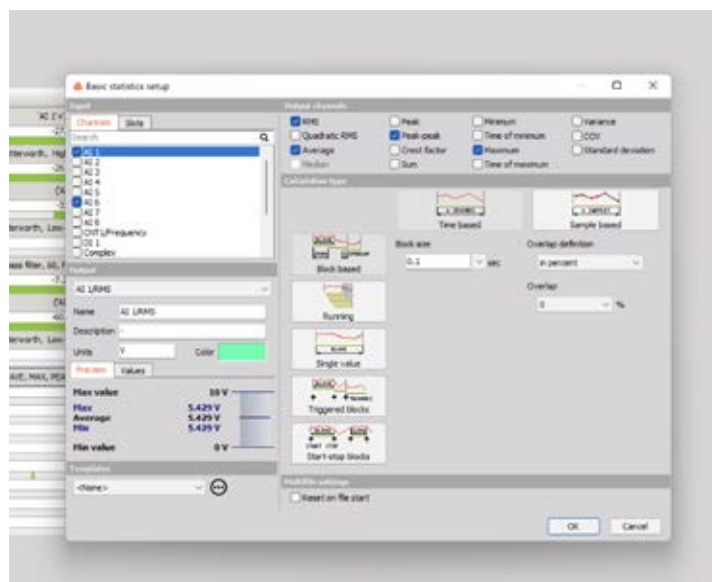
Clicking the Add Math button will reveal a whole suite of pre-defined math function. You can even define which ones will be shown on the main math screen by checking them as "favorites" here, so that you don't have to go looking for them next time.

These functions are grouped according to type, such as Formulas and Scripting, Filtering, Statistics, Reference Curves, Time Domain Analysis, Frequency Domain Analysis, Machinery Diagnostics, Strain/Stress... you get the idea.

You can even apply these functions after you record your data, in the Analyze mode!



THE GRAPHICAL FORMULA EDITOR, WITH POINT AND CLICK SCRIPTING. YOU CAN ALSO TYPE RIGHT INTO THE EDITOR BAR. ERROR CHECKING IS BUILT IN.

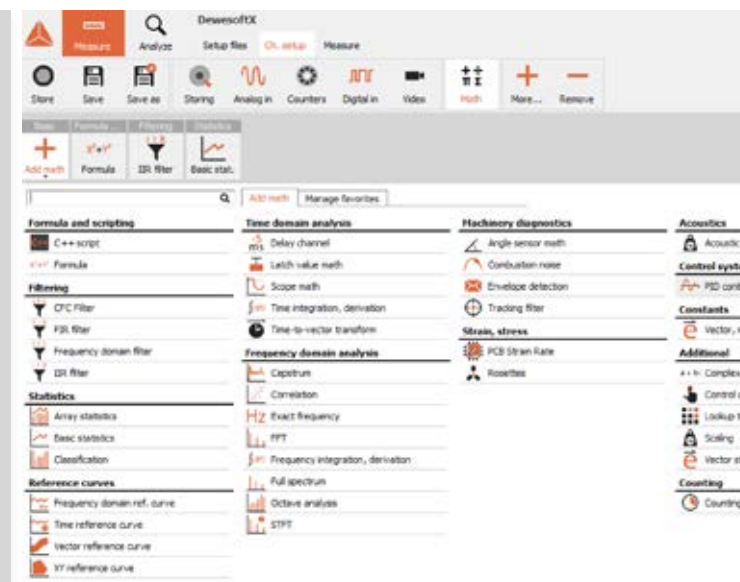


YOU CAN EXTRACT MORE INFORMATION FROM YOUR DATA USING THE BASIC STATISTICS MODULE. SELECT THE CHANNEL(S) THAT YOU WANT, THEN CHECK THE OUTPUTS YOU NEED.

SIX: MATH CHANNELS MADE EASY



THE FILTER SETUP SCREEN FOR IIR FILTERS. FIR, CFC AND FREQUENCY DOMAIN FILTERS ARE ALSO AVAILABLE. YOUR RAW DATA IS NOT AFFECTED - A NEW CHANNEL IS CREATED.



COME HERE TO SEE ALL OF THE MATH FUNCTIONS THAT ARE BUILT INTO DEWESOFTX. SELECT YOUR FAVORITES TO BE SHOWN TO THE RIGHT OF THE ADD MATH BUTTON.

DEWESoft NET

Connect multiple DewesoftX systems and build a large channel count, distributed and synchronized DAQ system.

WHY CONNECT DAQ SYSTEMS TOGETHER?

There are several reasons why this is sometimes essential:

- You need to record far more channels than a single system could handle
- You need to record at several locations at the same time, and yet the data must be synchronized
- You need to remotely control or monitor a test, but there is no way to physically connect to it, such as monitoring a vehicle on a test track when you are located in a nearby building.
- The overall data throughput that you require is too much for any one system

For these applications we offer Dewesoft NET, an optional module that can be added to your DewesoftX software. Dewesoft NET allows you to connect multiple local and remote systems together and operate them as if they were a single system, with all your data perfectly synchronized.

In a Dewesoft NET system, one computer is the “master” that connects to and controls one or more measuring units (MUs). TCP/IP protocol is used over wired or wireless Ethernet to connect the systems. If the MUs are close enough to each other, sync cables can be used to synchronize them. If the system cannot be connected directly, then a timing protocol or GPS can be used to synchronize them. Using this method, the MUs could be located anywhere in the world.

It's possible to connect computer “view clients” to the network. These computers don't control the test, but they can view selected channels in real-time.

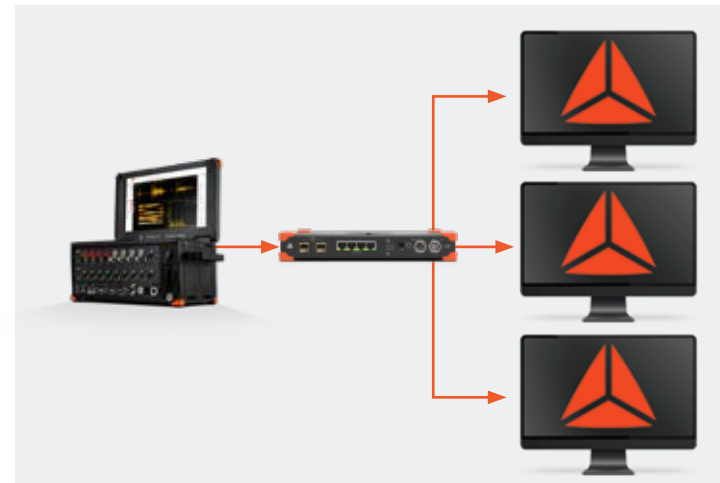
Dewesoft NET unlocks a wide range of DAQ applications that would otherwise be impossible to achieve any other way.

DISTRIBUTED DATA ACQUISITION WITH DEWESoft NET

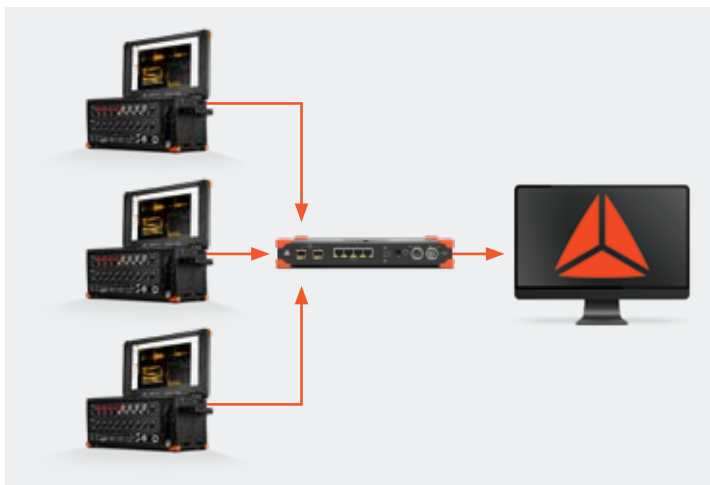
1:1 MODE - SINGLE MEASUREMENT UNIT AND SINGLE CLIENT



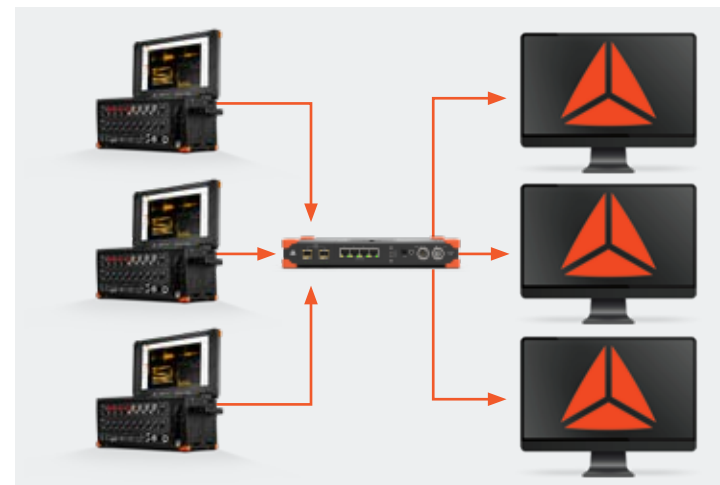
1:X MODE - SINGLE MEASUREMENT UNIT AND MULTIPLE CLIENTS



X:1 MODE - MULTIPLE MEASUREMENT UNITS AND SINGLE CLIENT



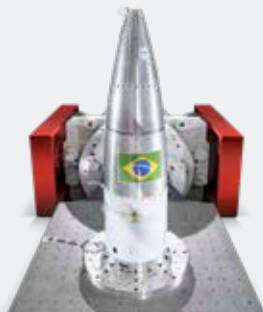
X:X MODE - MULTIPLE MEASUREMENT UNITS AND MULTIPLE CLIENTS



DEWESOFTX GOES EVEN FURTHER, ACROSS SO MANY APPLICATIONS

VIBRATION ANALYSIS APPLICATIONS

- FFT Analyzer
- Order Analysis
- Orbit Analysis
- Torsional and Rotational Vibration
- Octave Analysis
- Rotor Balancing
- Human Body Vibration



STRUCTURAL DYNAMICS APPLICATIONS

- FFT Analysis
- Modal Testing
- Sine Processing (COLA)
- Shock Response Spectrum (SRS)
- Fatigue Analysis
- Bridge Monitoring



VEHICLE TEST APPLICATIONS

- Interface support for CAN BUS, CAN FD, FlexRay...
- ADAS Tests
- Brake and Brake Noise Testing
- Combustion Analysis
- e-mobility Tests
- Harsh Environment Testing
- Road Load / Durability
- Vehicle Dynamics



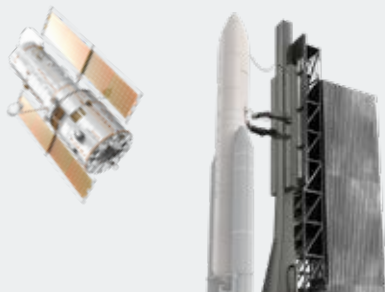
ACOUSTIC TEST APPLICATIONS

- Sound Level Meter
- Octave Band Analysis
- Sound Intensity
- Sound Power
- Sound Quality
- Reverberation Time (RT60)



AEROSPACE APPLICATIONS

- Interface support for ARINC-429, MIL-STD-1553, PCM telemetry, IRIG 106 Chapter 10, Ethernet packets, GPS/GNSS, iNet telemetry
- Flight Test
- PCM Telemetry



NVH APPLICATIONS

- Brake Noise Testing
- Sound Level Meter
- Octave Band Analysis
- Sound Intensity
- Sound Power
- Sound Quality
- FFT Analyzer
- Order Analysis
- Reverberation Time (RT60)



POWER AND ENERGY APPLICATIONS

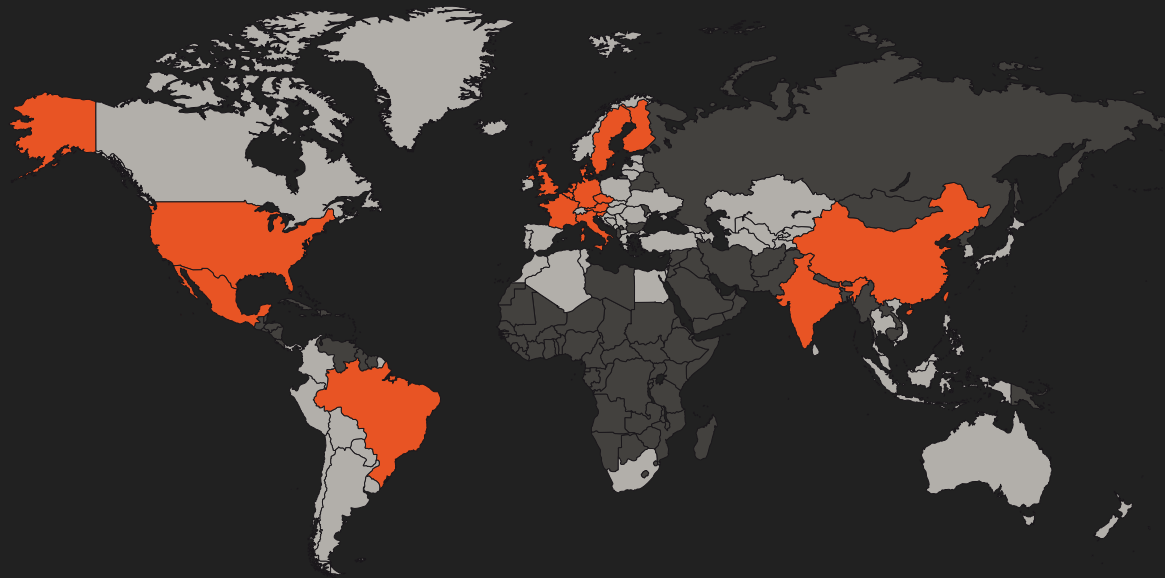
- Power Quality
- Power Quality Analysis
- e-mobility Testing



MONITORING APPLICATIONS

- Conditioning Monitoring
- Structural Health Monitoring
- Bridge Health Monitoring
- Wind Turbine Monitoring





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

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