



# High Speed Data Acquisition Solutions

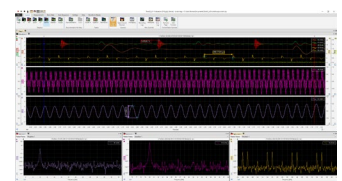
Get a Solution from One provider

From the Data Acquisition Instrument up to the Analysis Software

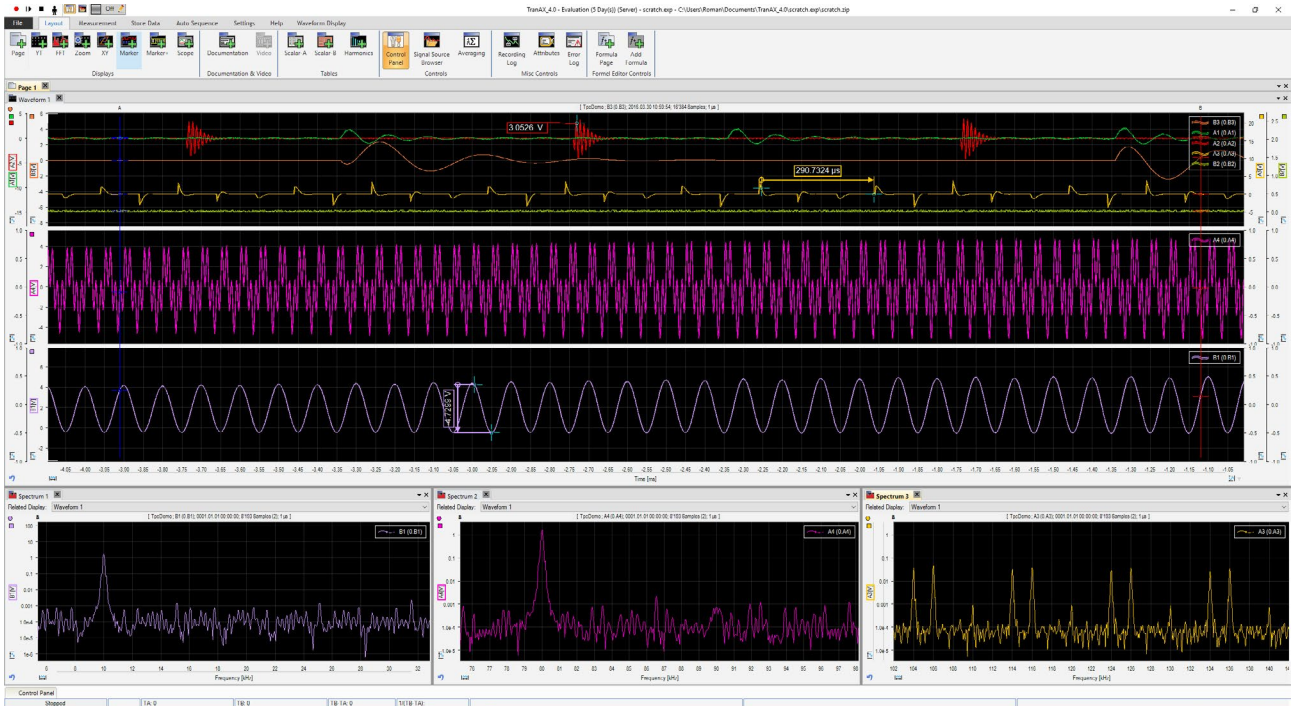
Elsys AG has a worldwide acceptance in high-precision and high-speed Data Acquisition Solution Systems. The in-house developed and produced systems are on duty in various applications in the energy, automotive, ballistic and rail industry since 1995.

Learn more about the benefits of Elsys Data Acquisition Solution in this paper. For more information feel free to contact Elsys directly or a local distributor:

[www.elsys-instruments.com/en/company/distributors.php](http://www.elsys-instruments.com/en/company/distributors.php)



# TranAX 4 Data Acquisition Software

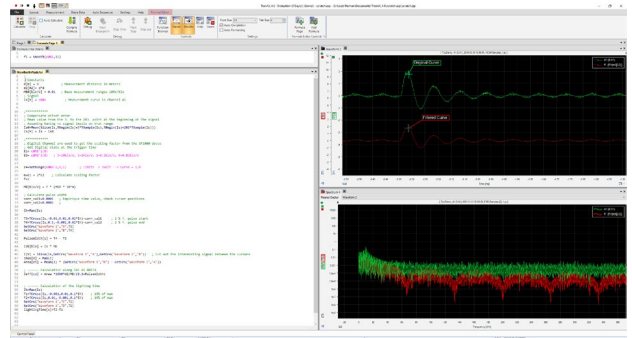


## Data Acquisition Solution

TranAX 4 is the Data Acquisition Software which transfers your data acquisition hardware into a **Data Acquisition Solution**. No need for heavy software package installation, only a few clicks are needed and the data acquisition software TranAX is installed and ready for measuring.

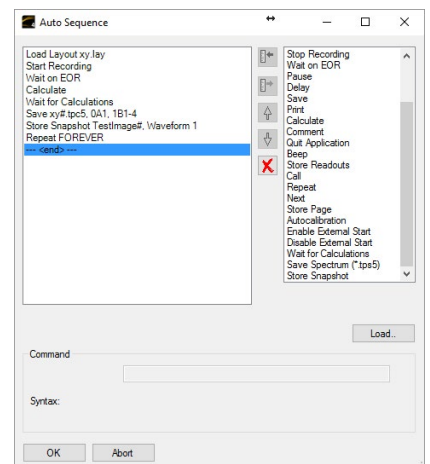
## Post-Processing

Do you need your measurement data at a later date for post analysis? No problem with TranAX. Use the same software for the measurement and the analysis. Complex analysis and post processing of the data can be done in the powerful Formula Editor which is fully included in TranAX. More than 60 documented predefined functions for application specific calculations are already integrated and ready for use. Calculated measurement curves can be visualized directly in the Waveform displays.



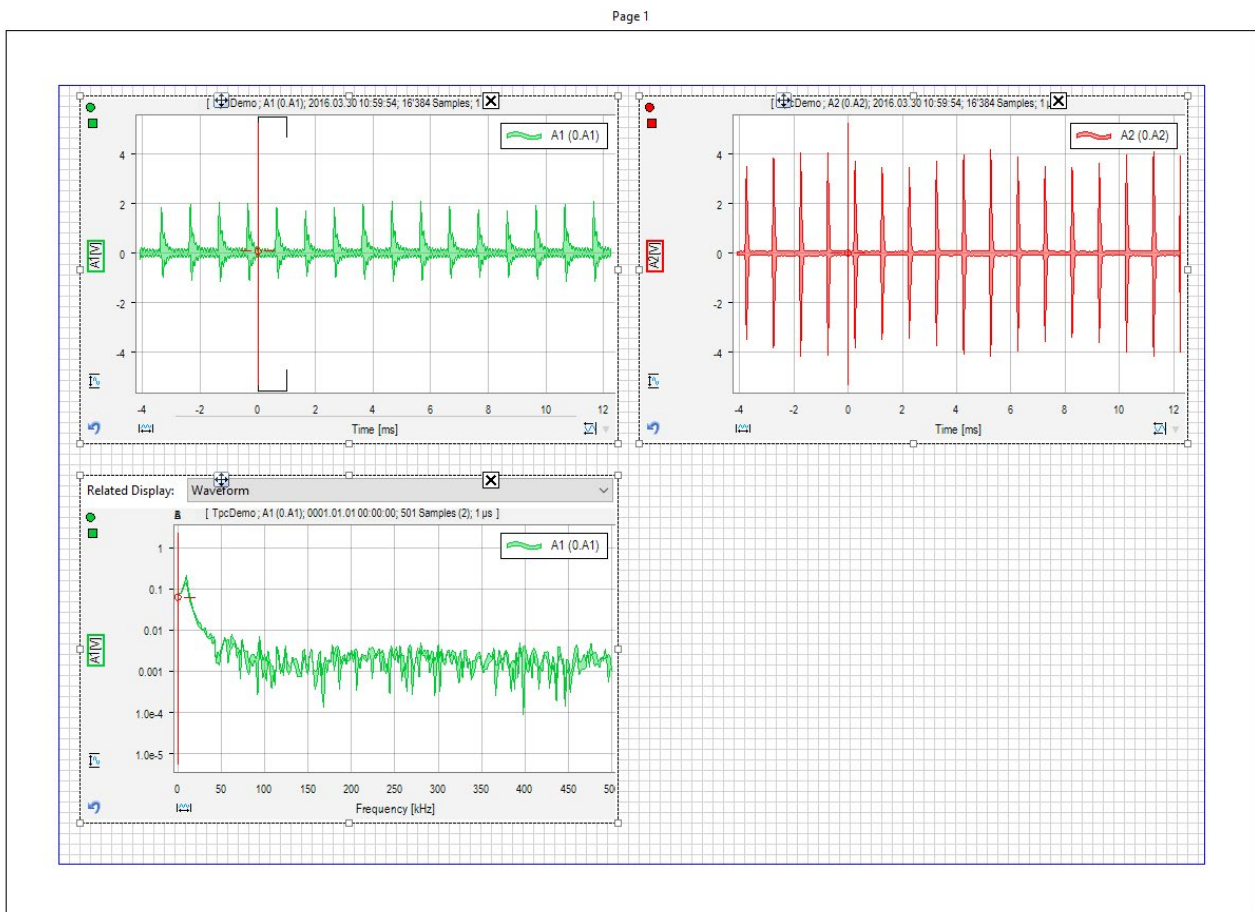
## Serial Acquisition and Processing

Auto sequences works like Macros, usable for performing automated serial measurements and analysis. Never again lose measurement due to auto-save and automated file name generation.



## Measurement Reports

Generating meaningful measurement reports can be time consuming. With the Documentation Page in TranAX 4 generating a report is done in just a few clicks. Use the known elements like the Waveform Display or Scalar Table and arrange them freely on a work sheet.

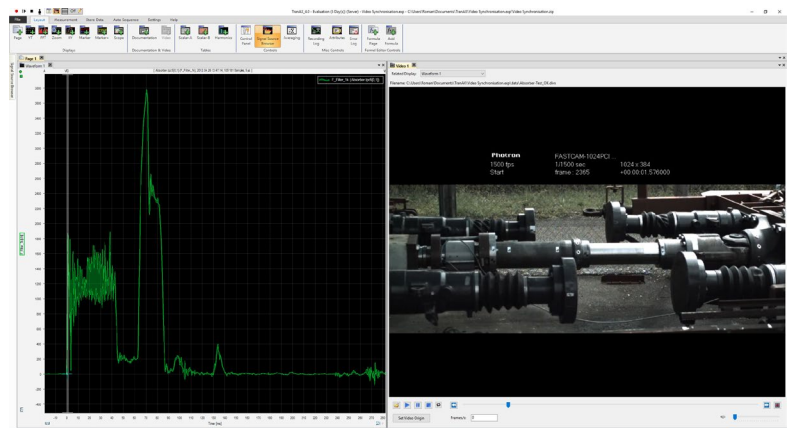


## Settings Storage

Store all your measurement hardware settings and visualization settings for having identical setups at each measurement task.

## Video Synchronization

Import your video recordings in TranAX and play them synchronous with the measurement curves. This adds much significance to your measurements. TranAX can import almost all popular video formats.



## Big-Data

Are you performing long measurements at high sampling rates? In this case large amounts of data are produced in a short time. For having a fluid visualization the measurement data are already compressed in the measurement card without losing any information. With this technology, the full measurement can be shown from one curve while zooming in a small detail on another curve without performance losses.

## TraNET FE Data Acquisition Devices



The TraNET FE Data Acquisition Devices are robust and compact measurement devices and can be used in a wide range of application fields. They are equipped with up to 4 high precision TPCE Data Acquisition cards and have therefore up to 16 input channels. The devices can operate over Ethernet directly connected to a personal computer as well as integrated in a larger business network. The embedded computer and hard disk inside of the device allows using the device irrespective of any computer.

### Analog to Digital Conversion

TPCE Data Acquisition Cards are equipped with 4 or 8 Analog to Digital Converters with sampling rates from 2 up to 240 MHz. Each channel has its own converter and no multiplexing is used. Hence the maximum sampling rate is always available and independent of the actual number of used channels.

At sampling rates up to a  $\frac{1}{4}$  of the maximum sampling rate the vertical resolution is 16 bit, at higher sampling rates the resolution is 14 bit. If the device does not run with his maximum sampling rate, an oversampling is performed in the background for noise reduction. With this technology very low noise acquisitions can be done at lower sampling rates without any external filters.



### BNC Input Connectors

Standard BNC connectors are very useful especially when the device is used outside of the lab. BNC cables and connectors are very robust and measurement probes with BNC connectors and cables are easily available everywhere.

The 1 M $\Omega$  input impedance allows to use standard 1:10 probes. Even without probes, input voltages up to 100 V can be applied directly. In addition, two channels can be used together as differential input.



## Precision

The precision of 0.03 % is reached by no other manufacturer with equivalent input specifications.

## ICP/IEPE

Each channel can be equipped with an ICP/IEPE power supply. Therefore, piezo sensors can be operated directly with the data acquisition card.

## Long-Time Remote Measurement

TraNET FE devices are ideal for long time remote monitoring and measurements. The measurement data are recorded on the internal hard drive even without any application running externally. If the device is connected to the Internet, remote control and monitoring is possible. An Internet connection can be established in different ways: connection through the company network, SIM Card Modem, WLAN, etc.

## Synchronization

Large or distributed measurement setups can be realized with several synchronization methods. Up to 16 TraNET devices can be synchronized over the SyncLink box, if a cable connection is available. In this configuration synchronized devices can be handled like one big device with up to 1024 channels.

TraNET devices with integrated GPS receiver can be synchronized to the absolute time (UTC time) if no direct cable connection is possible. This way, also measurement records from third-part suppliers can be synchronized to the TraNET devices.



## Software Interfaces

Several software interfaces are available for integrate the Elsys Solution in a customized environment or for enhance the functionality.

- With the LabVIEW Instrument Driver an easy integration of Elsys data acquisition hardware into LabVIEW is practicable.
- Direct access to the hardware for customized C++ or C# programs can be established with the TpcAccess driver.
- Remote control of the data acquisition Software TranAX can be done with the ActiveX driver. This is very useful for automated test stands and ERP integration.

## Elsys AG

Elsys AG  
Mellingerstrasse 12  
CH-5443 Niederrohrdorf  
Switzerland

Phone: +41 56 496 01 55  
Email: [info@elsys.ch](mailto:info@elsys.ch)  
[www.elsys-instruments.com](http://www.elsys-instruments.com)