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1 Installation

1.1 Download

 DEWESoft™ homepage
<http://www.dewesoft.com>

you can download DEWESoft™ plugins when you go to: **Downloads** - **Plugins**

1.2 Compatibility

The plugin is compatible with DEWESoft™ 7.0.5, 7.1 and DEWESoft™ X.

It has been tested on Windows 7 (32-bit and 64-bit).

1.3 Licensing

In DEWESoft an additional license for the plugin is needed, it can also be written into the Dewesoft device.

The plugin requires a valid DEWESoft™ license.

To test the plugin you can use a *30-days-Evaluation license*.

1.3.1 Requesting an Evaluation license

You can request an an *Evaluation license* from our homepage: <http://www.dewesoft.com/registration>

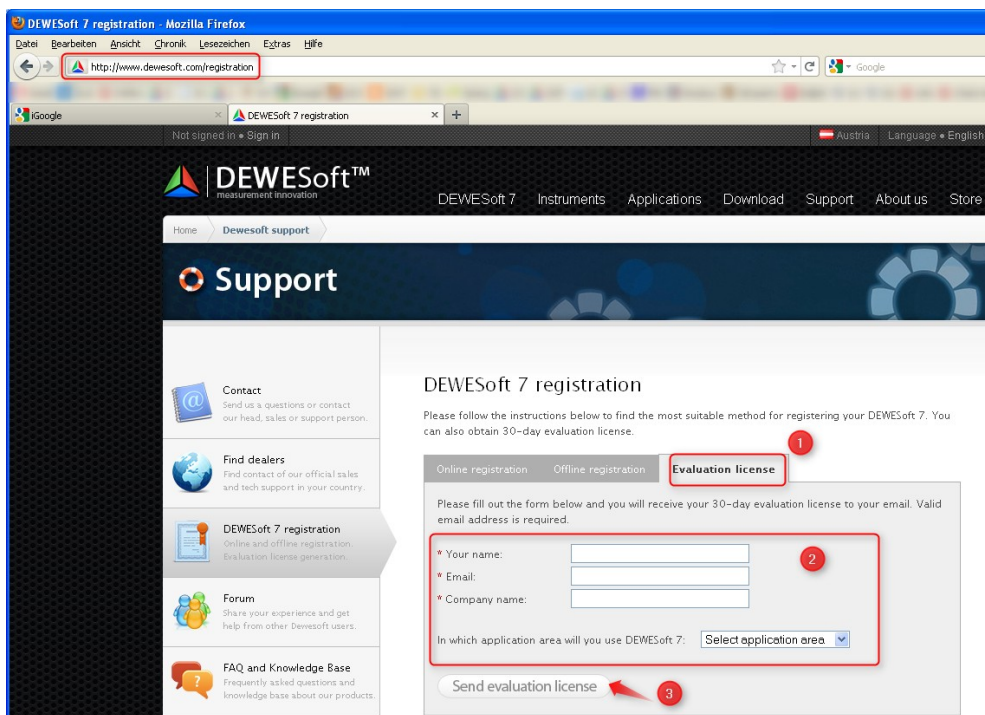


Illustration 1: Request Evaluation License

- (1) Click on Evaluation license
- (2) Fill out all the required fields
- (3) Click the **Send evaluation license** button

1.3.2 Activating the Evaluation license

When you have received your trial licence key, open DEWESoft™, go to **Settings - Hardware Setup...**, select the **Registration** tab sheet and enter the license code (if you already have other licenses, you may need to click the **Create** button).

Now enter the license code and click the **Register online** button.

Then your new license key will show up in the list and should have the *Status Valid*.

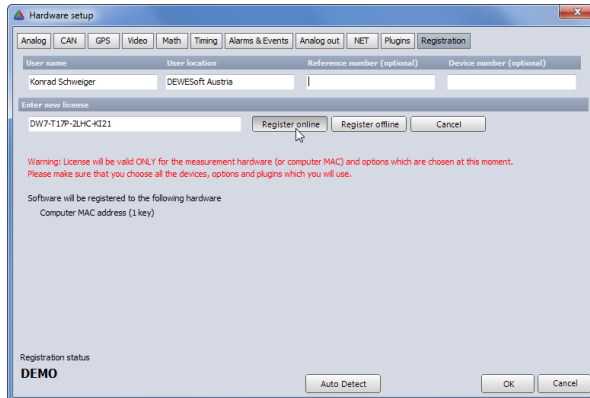


Illustration 2: Enter license key

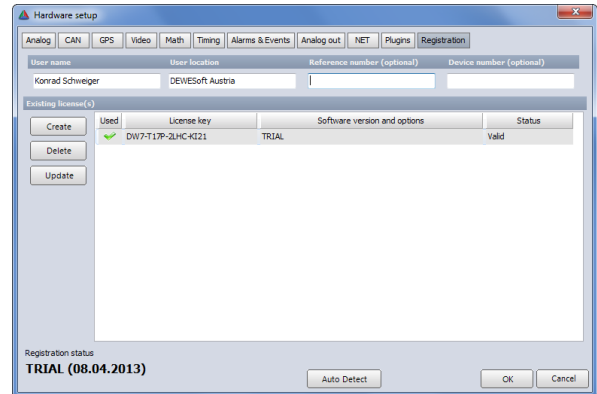


Illustration 3: Valid trial license

1.4 Plug-in Installation

Simply copy the file `EthernetRecv.dll` into the `Addons` folder of your DEWESoft™ installation. (e.g. `D:\DEWESoft7\Bin\V7_0\Addons\`) and then start DEWESoft™.

Start DEWESoft™, go to **Settings → Hardware Setup → Plugins** and set the plugin to **Used**.

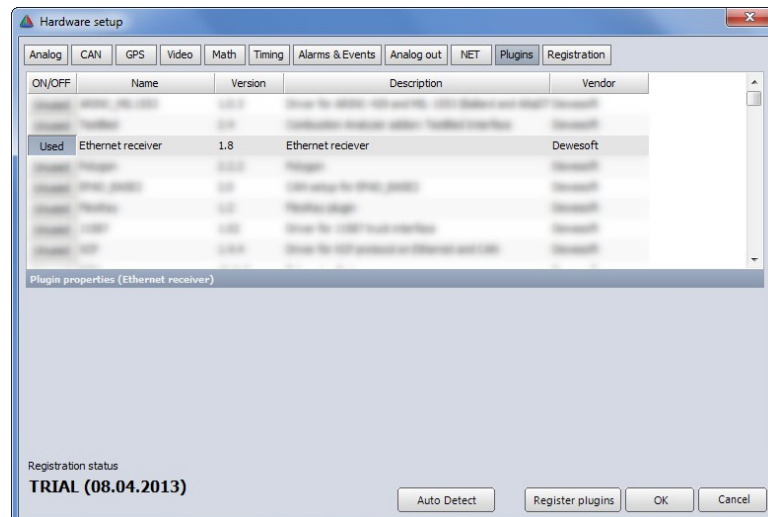


Illustration 4: Enable Plugin in Hardware Setup

HINT



When you are using Windows® 7, then you must click the **Register plugins** button (at the bottom of the Hardware setup dialogue) once and restart DEWESoft™ before the plugin shows up in the list of available plugins.

1.5 WinPcap Installation

Next to the plugin WinPcap also has to be installed. This enables the access to the network interface (driver + DLLs). Go to <http://www.winpcap.org/> and download the e.g. WinPcap_4_1_3.exe (about 1 Mbyte size).

Also both Windows 7 x86 and x64 versions are supported.



Illustration 5: The WinPcap software

2 Configuration

The structure is built like that: a “Stream” consists of “Filter chains”, which contain “Channels”.

2.1 Stream

If the plugin is enabled, you should be able to see a new icon “Ethernet receiver”. Click on it, then add a stream.

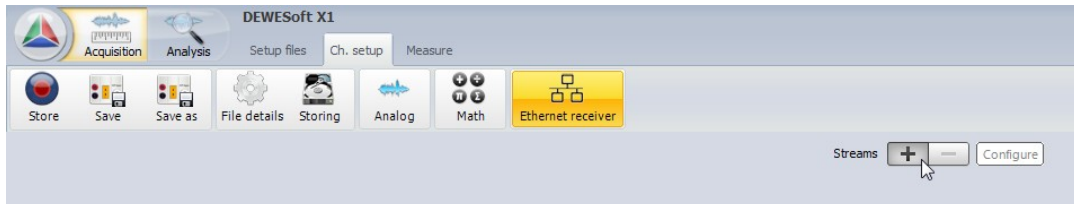


Illustration 6: Add a Stream

Select the correct interface, usually your network card. The packet size is 1520 by default, which is also the maximum length of the ethernet frame. If you have fast stream with shorter frames, you should reduce this value to boost the performance and to reduce data file size.

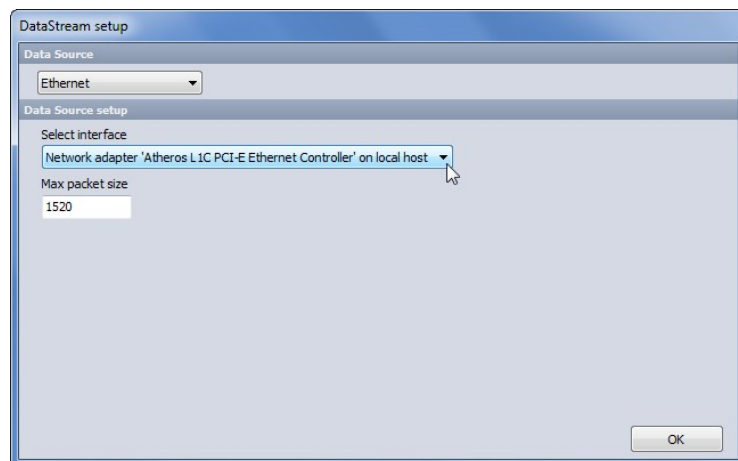


Illustration 7: Data stream setup

2.2 Filter chain

Next step is to add a filter chain. Each stream can have multiple filter chains.

Enter the setup.

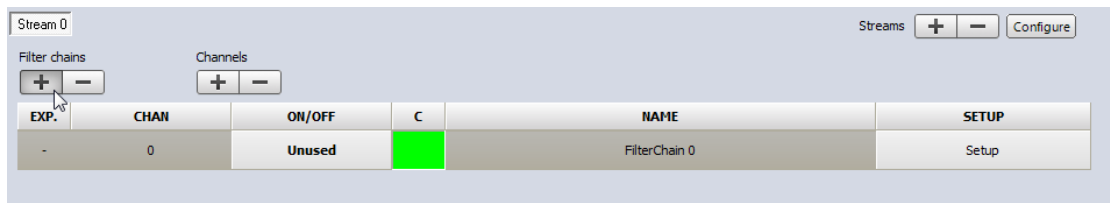


Illustration 8: Add a filter chain

By now, you should be able to see data packets coming in (frame preview on bottom).

The Filter chain is used to filter out ethernet frames (i.e. by MAC address, IP address, packet type,...)

You can include/exclude specific fields. You can also write multiple strings – separated by space character – in each field for example:

IP Address: 192.168.10.1 192.168.10.2

This will include both addresses. This also works with all other fields.

If you click in the fields, e.g. “Destination IP”, the according part in the protocol will be highlighted. Here for instance we search for all messages going to 192.168.1.255; switch the view to “DEC” to see the plain numbers.

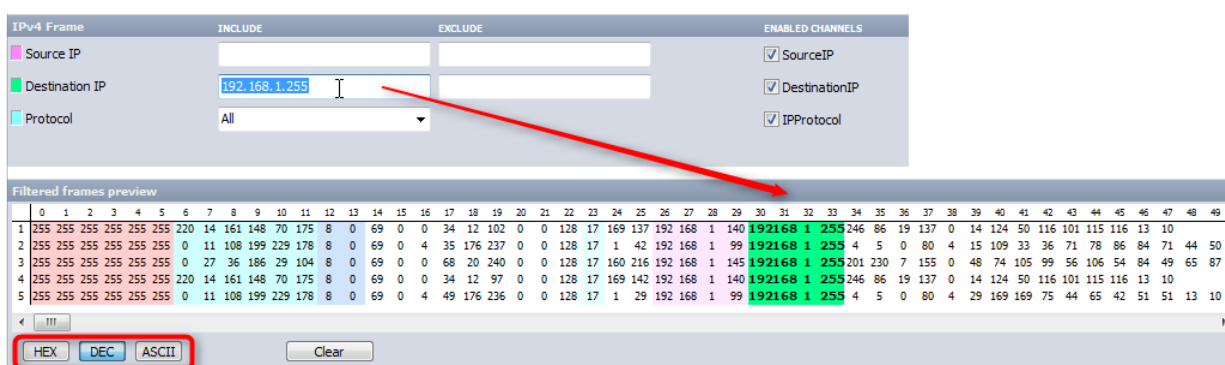


Illustration 9: Preview window

If you know the exact position of the string, you can search for specific bytes / characters with the **Data filter**.

Switch the preview to ASCII to see the plain text. You can clear the actual view if you are not sure if data is moving.

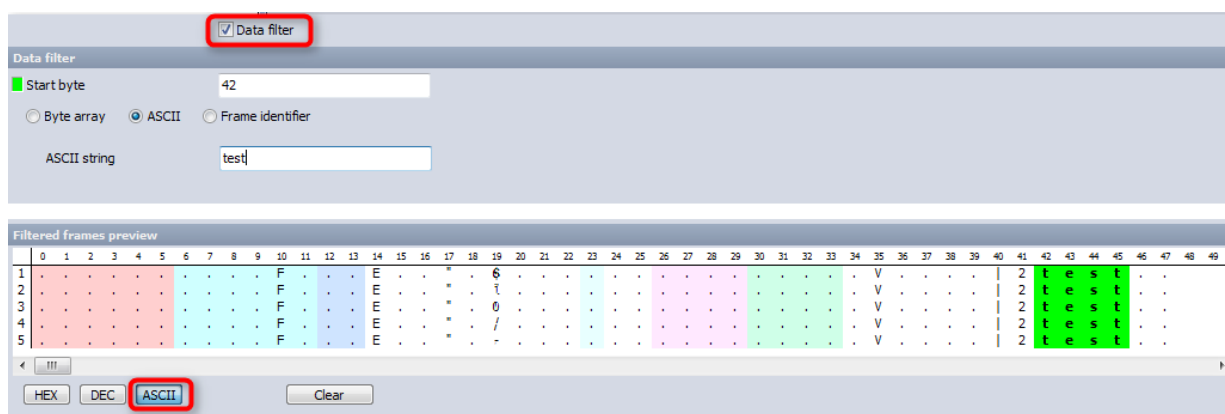


Illustration 10: The data filter

For our example we use the settings below. The protocol is UDP and we search for messages with a Destination Port of 5001. We see very short test messages coming in. Now we will decode our channel out of it.

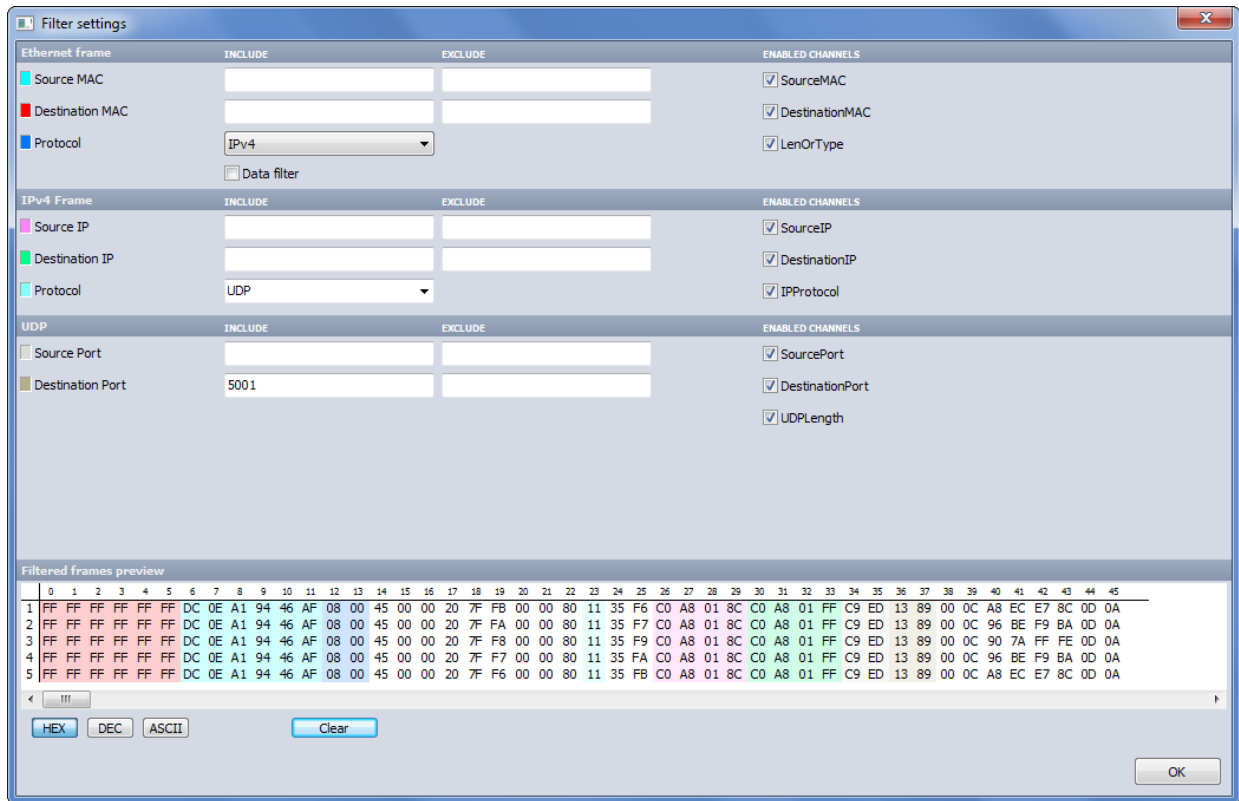


Illustration 11: Filter chain setup

2.2.1 Example preview of UDP packets

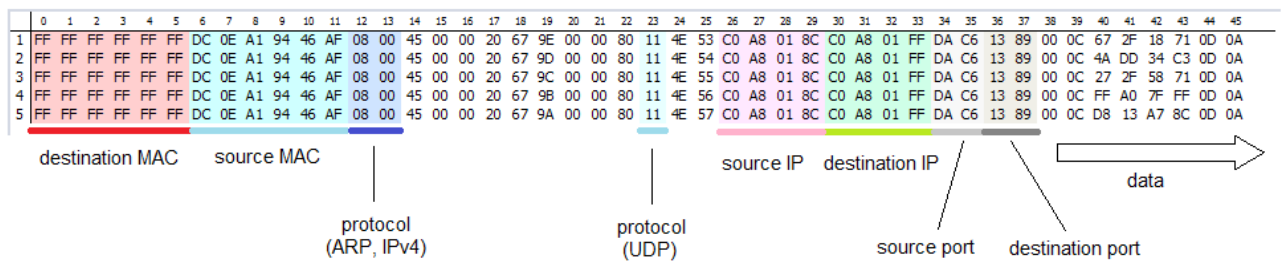


Illustration 12: Example UDP packets

Depending on the used protocol, the packets will change (e.g. with IPv6 the IP addresses would be longer).

2.3 Channel

The last step is to add a channel. A channel is always put below the selected FilterChain.

Enter the channel setup.

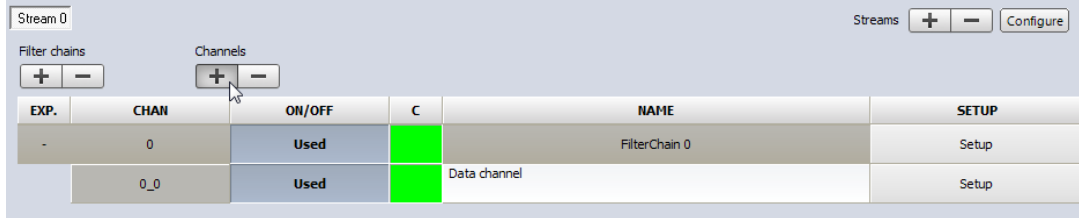


Illustration 13: The data filter

Like in the FilterChain the selected bytes are highlighted for easier navigation. Also you can add a Scaling Factor and an Offset here. Our channel starts at byte 42 and is 16 bits long.

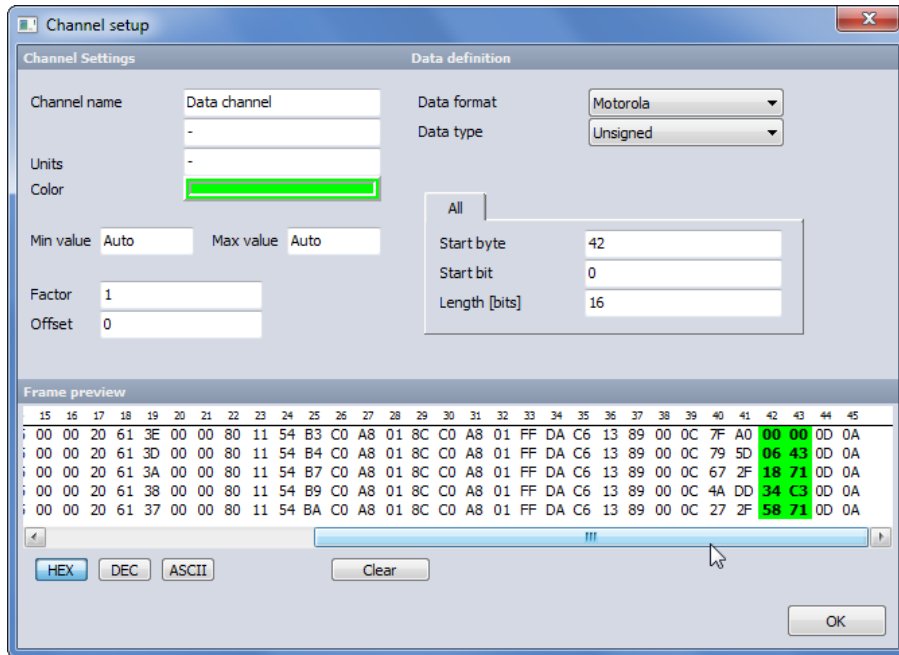


Illustration 14: Channel setup

3 Measurement

If the data channel is set to “Used”, we can now switch to the Measure mode.

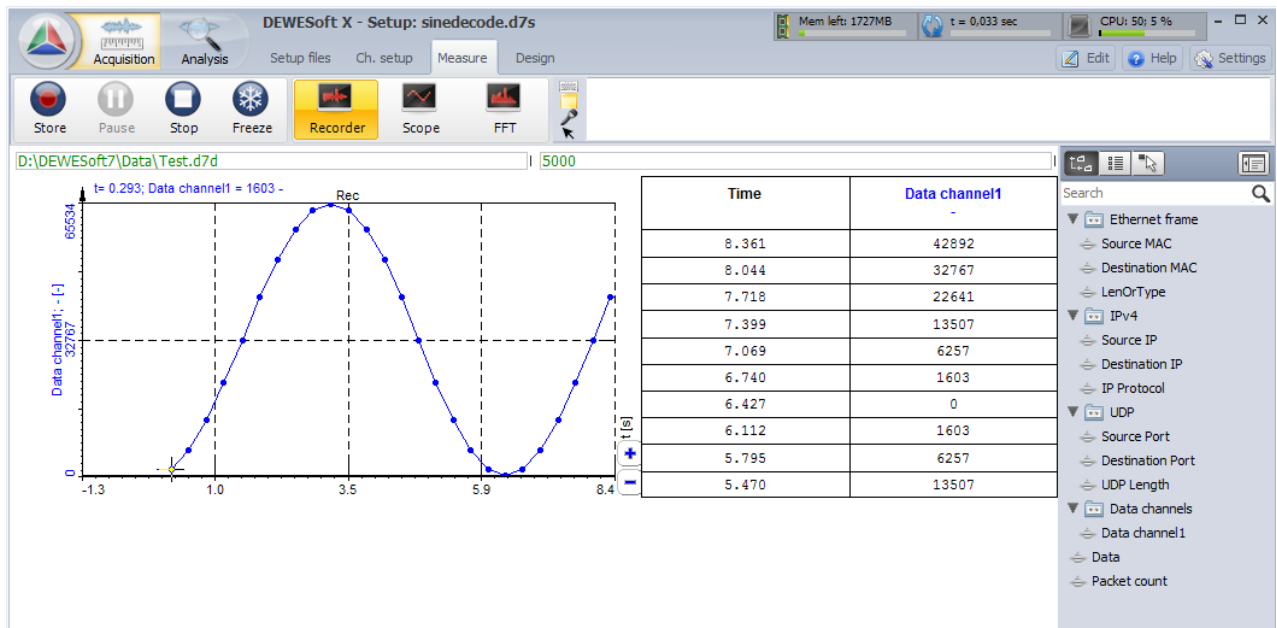


Illustration 15: Measurement of test signal

The test sine wave signal generated by the “COM Port Data Emulator” could also be a real sensor signal or some status information sent over LAN.

Per default also the “header” channels are stored to the datafile (look channel table on the right side).

4 FAQ

This section should help to find quick solutions for known problems.

4.1 wpcap.dll error

Problem: If adding an Ethernet data stream in the plugin, the following error message appears: “Could not load wpcap.dll. Check if wpcap is installed.”

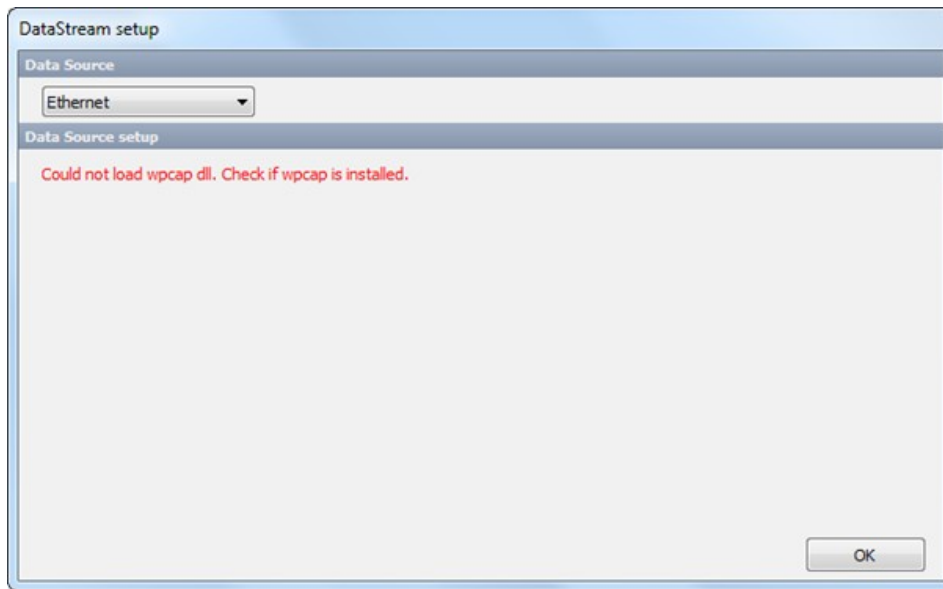


Illustration 16: wpcap.dll not found

Solution: WinPcap has to be installed first. <http://www.winpcap.org/> See also point 1.5 “WinPcap Installation”.

5 Version History

5.1 Plugin Version

Plugin-Version	Date [dd.mm.yyyy]	Notes
1.8	02.02.13	

5.2 Documentation Version

Revision number: 15

Last modified: Wed 20 Mar 2013, 10:29

Doc-Version	Date [dd.mm.yyyy]	Notes
1.0.0	20.03.13	initial revision for plugin version 1.8