IAV Merida Signals

Visualization of measurements –Manual

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Contents

1 Description of software

1.1 Introduction to Merida Signals

IAV Merida Signals is a tool designed for viewing measurement files collected from vehicles. These files are usually created using devices called data loggers. As the name of the tool suggests, IAV Merida Signals uses MDF (Measurement Data Format) as its main format, in which specific data obtained from measurements can also be exported.

1.2 Application areas

A distinctive feature of IAV Merida Signals is that it enables the variety of file formats, e.g. various raw data formats from data loggers, to be read without converting them into a special format, such as MDF, before displaying. Support of raw data formats requires that the appropriate data description formats (e.g. data base CAN (dbc)) are also supported in order to obtain information in the form of signals from the messages (e.g. Controller Area Network (CAN)) recorded by data logger. This additional information can be processed by IAV Merida Signals after having been measured.

2 Installation

This section describes system requirements for using IAV Merida Signals, how to install and activate the software.

2.1 System requirements

The Windows operating system is required to use IAV Merida Signals. Depending on the type and size of the measurements to be viewed, a large amount of memory may be required. This requirement comes from the necessity for the computer to load and store all the measurement units in its RAM.

2.2 Software installation

IAV Merida Signals is delivered as an executable installer.

To install the software, follow the steps below:

1. Click on IAV Merida Signals to download the tool.
2. Move to the download button and download **MeridaSignals-Setup.zip**.
3. Run the installer.
4. Follow the instructions on the screen.

   Afterwards, IAV Merida Signals can be launched using an icon on the desktop or in the Start menu.

NOTE
Before downloading Merida Signals, please ensure that the policies or restrictions of your company permit the installation of the latest version.

2.3 Activation

When started for the first time, IAV Merida Signals must be initially activated.

In order to activate the software, you need to register a user to IAV Merida.

NOTE

- Each user is allowed to install the software on up to two computers.
- The licence is usually granted for 180 days.
- Every time the software is started, the license will be automatically renewed, assuming an internet connection is available.

To activate Merida Signals, follow the steps below:

1. Double-click **Merida Signals** on your desktop to launch.
2. If you don't have an IAV Merida account, please press the Register button (see Figure 1) and a new browser window opens.

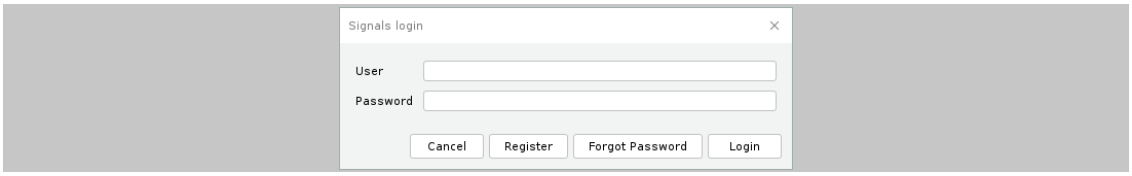


Figure 1: The Login window

3. Fill the form with your data and click on **Register** (see Figure 2).
4. After that you will receive an email to confirm the activation of your account.
5. When the registration process is finished you can close the browser and proceed to enter your username and password to the login window (see Figure 1)

After successful login, a license is automatically requested and saved to your local computer, and the Main window of IAV Merida Signals opens (see Section 3. Structure of the Main window to get familiarized with the key elements of IAV Merida Signals).

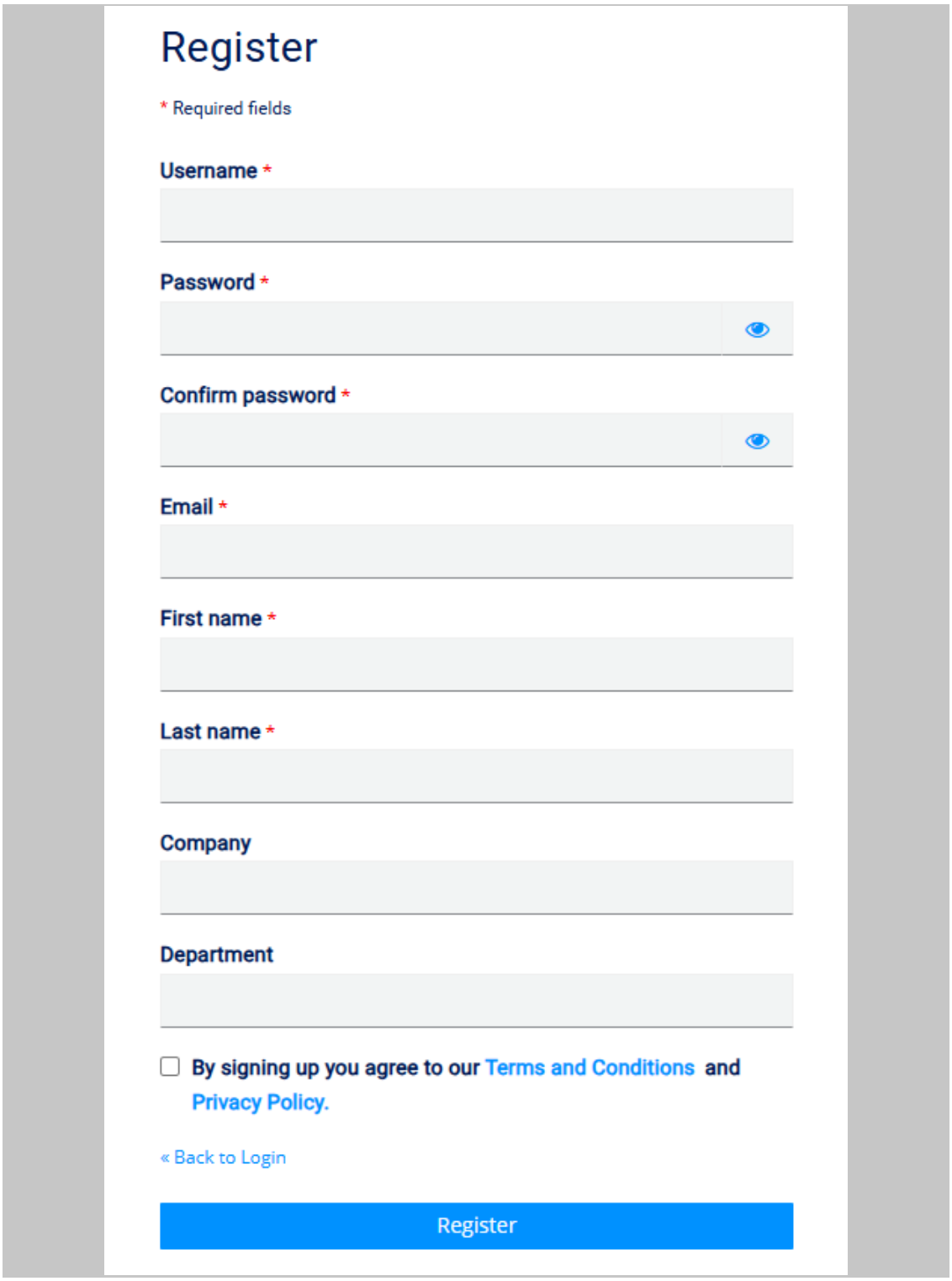


Figure 2: The register form

3 Structure of the Main window

The Main window is divided into three areas: the **Signal list**, the **Signal groups** and the **Plot panel**.

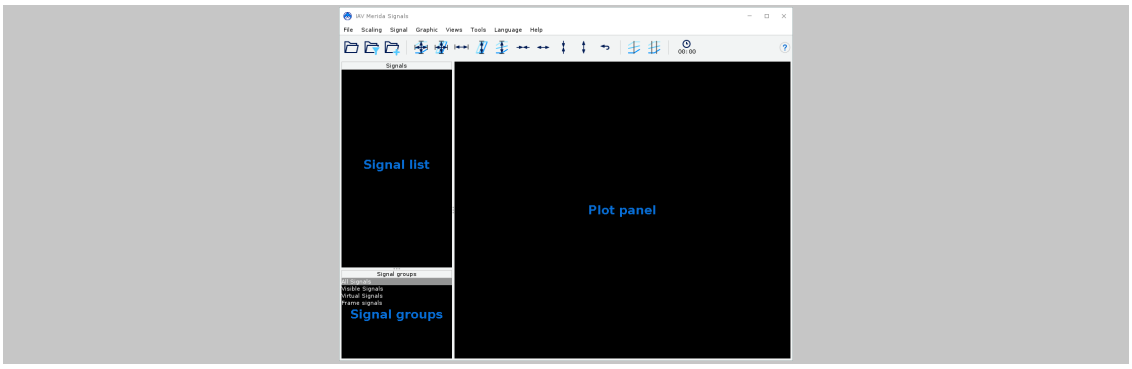


Figure 3: The Main window

At the top of the Main window, you can find the **Menu** and the **Toolbar**. They contain a set of options like File, Scaling, Signal, etc. to help you find information and/or execute different functions when operating with your measurement files.

3.1 Settings

In the File menu you can find the settings. In the dialog you can edit general settings regarding file types and visualization properties.

3.1.1 File formats

MDF4

MDF4 files are handled per default with lazy loading. This means, signals are only read from file when needed. If you deactivate this setting the whole data from the file is read to memory as soon as the file is opened.

CSV

CSV files have following options:

- Timestamp resolution: E.g. "1" for seconds and "0.001" for micro seconds
- Column separator: The symbol which separates the columns in the file (usually ";" or ",")

3.1.2 Colour scheme

Using the Colour scheme options (see Figure 4), colours for signals, background, grid and text can be set. The following is possible:

- Opening a colour scheme

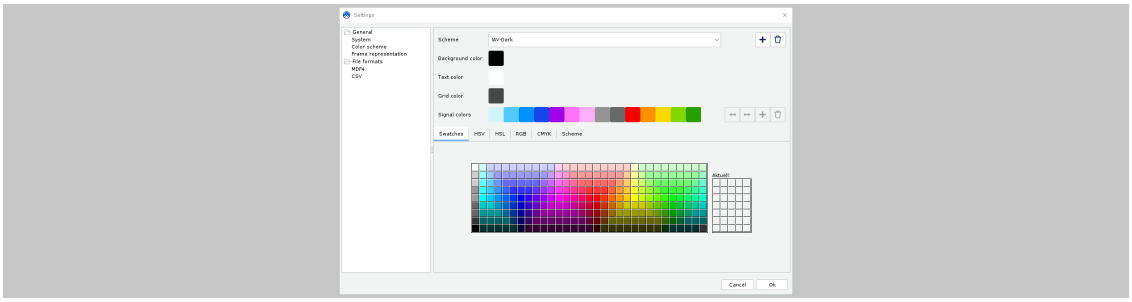


Figure 4: The Settings window > Colour scheme

- Setting a colour scheme
- Creating a colour scheme
- Setting the colour of signal, background, grid and text
- Adding, deleting and setting the sequence of the signal colours
- Editing a colour scheme
- Deleting a colour scheme

Opening a colour scheme

To open a colour scheme, follow the steps below:

1. Press **Settings** in the File menu.
2. Press **Colour scheme** in the left-hand sidebar of the Settings window (see Figure 4).
   As a result, a space with various ‘Colour scheme’ instruments is opened.

Setting a colour scheme

In IAV Merida Signals it possible to set one of the standard IAV schemes. However, you can also create your own and set it.
To set up a colour scheme, follow the steps below:

1. Open a colour scheme in the Settings window (see Opening a colour scheme).
2. Click on the **Scheme** field.
3. Select the desired colour scheme from the drop-down list.
4. Click **OK** to confirm.

NOTE
The scheme activated at the moment when you leave IAV Merida Signals is by default applied when the application starts next time.

Creating a colour scheme

To create a colour scheme, follow the steps below:

1. Open colour scheme in the Settings window (see Opening a colour scheme).
2. Press **Add** icon + at the top right corner of the window.
3. Enter the name of your colour scheme in the **Scheme** field.
4. Click on **Enter** key to save the name.

   CAUTION
   Only after naming and saving, any setting and editing of your scheme is possible.

5. Select the colours for signals, background, grid and text of your colour scheme (see Setting the colour of signal, background, grid and text).
6. Click **OK** to save the scheme.

   After confirming, your colour scheme will be applied to the representation of signals and elements of the Graph on the Plot panel.

Setting the colour of signal, background, grid and text

To set the colour of signal, background, grid or text, follow the steps below:

1. Click on the colour square to the right of the necessary object.

   Once this square is activated, the brush symbol will appear inside of it.
2. Select a colour using **Swatches** or adjust the parameters of the colour in colour models **HSV**, **HSL**, **RGB**, **CMYK**.

Adding, deleting and setting the sequence of the signal colours

Only for signal colours there is a possibility to choose multiple colours, ordering, adding or deleting as many new colours as necessary in accordance with the number of signals. These options you can find to the right of the title 'Signal colour' (see Figure 5).

To add signal colours, follow the steps below:

Figure 5: Options for changing signal colours

1. Press **Add** icon + (see Figure 5).

   After it is pressed, a white square with the brush symbol will appear, where you can set the signal colour.

To set the sequence of signal colours, follow the steps below:

1. Press on the colour square that you want to move.
2. Press **Left arrow** icon ◂◂ or **Right arrow** icon ▸▸ to change the position of the activated signal colour in the line.

To delete signal colours, follow the steps below:

1. Press on the colour square that you want to delete.
2. Press **Delete** icon 🗑.

Editing a colour scheme

To edit a colour scheme, follow the steps below:

1. Click on the **Scheme** field.
2. Choose the colour scheme you want to edit.
3. Make changes.
4. Click **OK** to save the changes.

> **CAUTION**
> Editing a colour scheme is only possible for the schemes created by your own.

Deleting a colour scheme

To delete a colour scheme, follow the steps below:

1. Select a colour scheme that you want to delete in the Scheme field.

2. Press **Delete icon** at the top right corner of the window.

CAUTION
Deleting a colour scheme is only possible for the schemes created by your own.

3.1.3 Frame representation

The frame representation settings control how frames are displayed in text form. These text representations are used in the cursor window and the trace frame.

The following is possible:

- Activate or deactivate the truncation of frame data. The following options only apply if this option is active.
- Set a maximum number of displayed elements for arrays in SOME/IP frames.
- Set a maximum number of bytes in the raw (hexadecimal) representation of byte arrays, e.g. in ethernet frames.

4 Operating with measurement files

This section describes the functions that are sufficient to open measurement files correctly.

4.1 Basic terms

This sub-section is devoted to the description of the main terms used throughout the manual. Before you start working with files get familiarized with the basic notions.

Measurement file

File containing measurement data (e.g., MDF). Measurement files fall into two categories: signal-based and message-based ones.

Signal-based measurement

A typical format of signal-based files is MDF. In this format, only signals (temporal progressions of values), not CAN message or similar raw data from the communication protocols in a vehicle, can be stored. These formats are easy to handle and read. However, data loggers usually record messages from which signals must first be extracted. During the process of converting messages into signals, some information, such as signals that are not taken into account or additional information from the communication protocol (e.g. Controller Area Network (CAN) error), can be lost.

Message-based measurement

Message-based data formats store received data frames. If the measurements represent signals over time, some additional information –descriptions (e.g. in the form of database CAN (dbc) files) –is needed. Typical message-based formats are Vector ASCII (ASC) and Vector BLF (BLF). Most raw data formats also fall into this category.

Data description

Data description formats are such file format that do not contain data in the actual sense but only format descriptions. For example, DBC format contains the descriptions of those CAN message, bit position and form that a certain signal value had when transmitted. Such data is needed to display a signal representation for message-based measurements. When opening a message-based file, IAV Merida Signals automatically asks for a data description.

Platform

A platform is treated as a set of several data description files together with the assignments to physical channels of the data loggers.

4.2 Open and view signal-based measurements

Operating signal-based measurements is relatively simple and it allows the following:

- Opening a measurement file

- Opening a measurement file with a signal list
- Importing and exporting a signal list
- Adding a measurement file

Opening a measurement file

To open a measurement file, you can use two ways: through Merida Signals interface and through Windows Explorer.

To open a measurement file using **Merida Signals interface**, follow the steps below:

1. Press **Open** in the File menu.

   - **Alternatively**, you can open a measurement file by pressing the far-left folder icon in the Toolbar.

2. Select the desired measurement file.

3. Click **OK** to confirm.

   After confirming, all available signals in the file will be listed on the Signal list area of the Main window.

To open a measurement file using **Windows Explorer**, follow the steps below:

1. Find the desired measurement file in File Explorer on your computer.

2. Double-click a file and press **Open**.

   - **Alternatively**, you can open a measurement file by using **Send to** (right-click a file and select Merida Signals) in the Explorer context menu or dragging and dropping a file to the Plot panel.

NOTE
This method of opening applies to most file formats. However, some formats can only be opened from within Merida Signals.

Opening a measurement file with a signal list

If a measurement is extremely large, not all signal values can be loaded into computer memory. In such a case, only certain signals from the file can be read. For this purpose, several functions exist.

To open a measurement file with a signal list, follow the steps below:

1. Press **Open file with signal list** in the File menu.

   - **Alternatively**, you can press the folder icon in the Toolbar or use **Send to** (right-click a file and select IAV Merida Signals 2 - Signalauswahl) in the Explorer context menu.

2. Select the desired measurement file.

3. Click **OK** to confirm.

   After that all signals present in the file are displayed in the Signal selection window (see Figure 6). Here you can select signals that should be shown, by ticking a box.

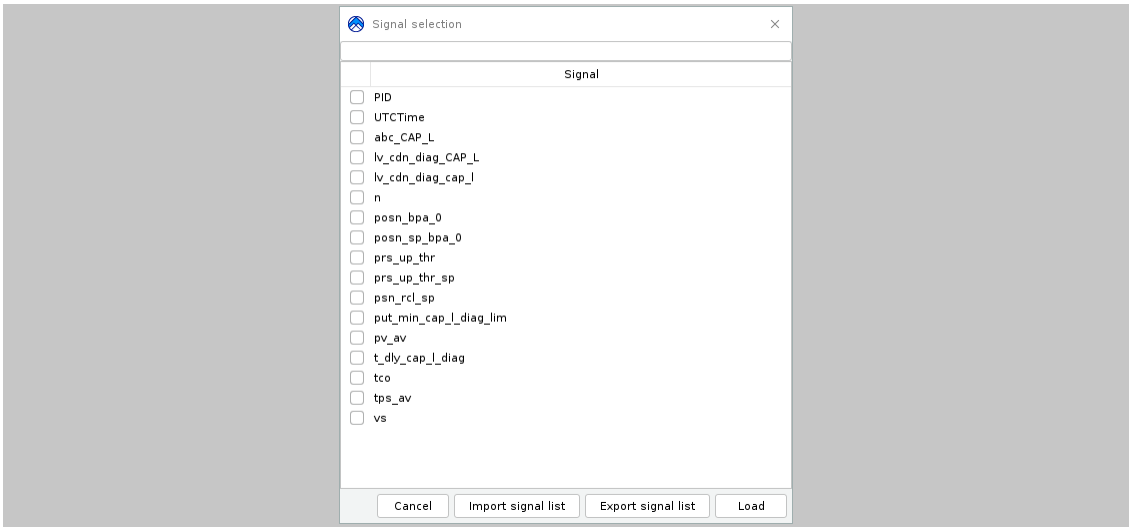


Figure 6: The Signal selection window

4. Select signals from the signals list and press **Load**.

   After loading, the corresponding signals are read from the file and will be listed in the Signal list area of the Main window.

Importing and exporting a signal list

In the Signal selection window (see Figure 6), it is also possible to import and export a signal list. These two functions allow storing the selection of signals in order to reuse the same selection later.

To **import a signal list**, follow the steps below:

1. Press **Import signal list**.

2. Select the appropriate file from your computer and click it.

   After the signals are imported, they are displayed in the signal list as ticked ones.

To **export a signal list**, follow the steps below:

1. Select the desired signals by ticking boxes next to them.
2. Press **Export signal list**.
3. Save the file.

CAUTION
If no signal is selected, the exported file will be empty.

NOTE
A list of signals can also be exported using the 'Export signals as a list' option found in the Signal menu. For more information see Exporting signals as a list.

Adding a measurement file

When one measurement is already opened, you can add the signals from another second measurement file.

To add a measurement file, follow the steps below:

1. Press **Open and add** in the File menu.
   - **Alternatively**, you can press the third folder icon on the left-hand side in the Toolbar.
2. Select and open the desired file from your computer.
   After the second file has been added, the names of the signals from the added file are suffixed with a dot followed by the file name. So that they can be reliably distinguished from the signals in the previously opened file.

NOTE
Using these options of adding a measurement file presupposes that you have to select signals while opening.

4.3 Open and view message-based measurements

Operating with message-based measurements is slightly different from working with signal-based measurements. In order to open message-based measurements, data descriptions (e.g., DBC-files) are needed. All data descriptions together with their assignment to physical channels are referred to as platform.

With the help of Merida Signals, the following is possible:

- Opening a message-based file
- Displaying messages with signals

Opening a message-based file

To open a message-based file, follow the steps below:

1. Open a measurement file (see Opening a measurement file).
2. Select an appropriate platform in the Platform dialog window.

   When a measurement file containing messages is opened, the Platform dialog window opens automatically (see Figure 7).

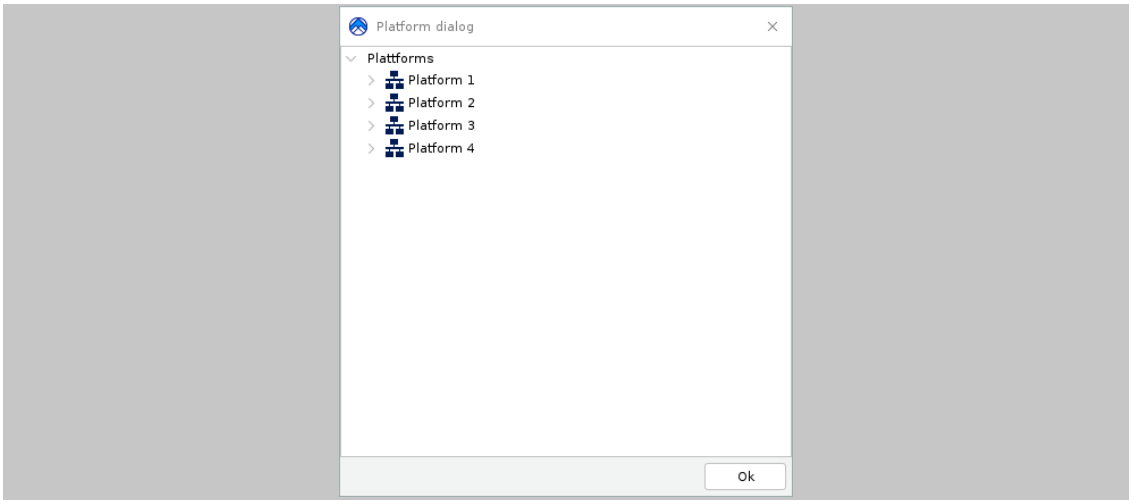


Figure 7: The Platform dialog window

CAUTION
Make sure that a platform is set up (e.g. data descriptions are added) and an appropriate platform is selected (see Configuring a platform to learn how to set up platforms).

NOTE
The Platform dialog box can be skipped with the **Skip** button (see Figure 7). In this case, only the signals which can be read in the signal form directly from the file will be loaded. In many cases, however, nothing is read afterwards.

3. Click **OK** to confirm.

   After confirming, all the signals present in the file are displayed in the Signal list area of the Main window.

Displaying messages with signals

To display messages with signals, follow the below steps:

1. Go to the **File menu**.
2. Deactivate **Load signals only**.
3. Open a measurement file (see Opening a measurement file).

CAUTION
The display of messages in this case will require much more memory, which can lead to impossibility to open some extensive measurements.

NOTE
Alternatively, a series of consecutive messages can be viewed in the Trace window (see 5.4 Trace window).

4.3.1 Operating with platforms

You can set up a platform through the Platform dialog window. This window can be accessed either automatically upon opening a measurement file with messages or manually by pressing the **P** key on your keyboard.

In the Platform dialog window, the following is possible:

- Creating a new platform
- Configuring a platform
- Decoding file with AUTOSAR
- Modifying signal and channel names
- Editing a channel
- Renaming a platform
- Exporting and importing platform settings
- Deleting a platform, channel

Creating a new platform

To create a new platform, follow the steps below:

1. Right-click on the top line ‘Platform’.
2. Select **New platform**.

3. Enter a platform name in the opened window and press **Save**.

   After saving, a new platform will appear in the platform list.

Configuring a platform

To configure a platform, follow the steps below:

1. Right-click on the 'Platform' node.
2. Select New decoder from the option list.
3. Select an appropriate decoder for your measurement file.

   The following formats are supported:

   - DBC
   - LDF
   - FIBEX
   - MOST Catalog
   - AUTOSAR Catalog

   Once a decoder has been selected, a corresponding window (see Figure 8) will open where data descriptions and related channels must be added.

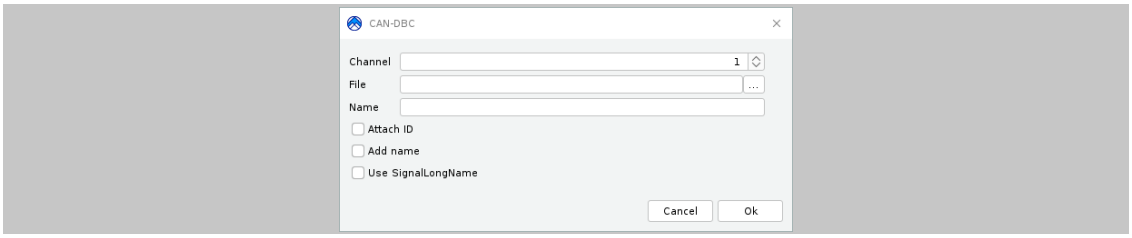


Figure 8: Decoding CAN-DBC

4. Fill out the data (data descriptions, channels, etc.) in accordance with the requirements of the chosen decoder.

> **NOTE**
> When decoding a CAN measurement file with a DBC file format, several options below the Name field can be used for the signal names.

The following is possible:

- **Add name** –to add message name to the signal names.
- **Attach ID** –to add message ID to the signal names.

- **UseSignalLongName** –to avoid the limitations on the length of the signal names for DBC files supporting that option.

5. Click **OK** to confirm.

   After confirming, a channel will be displayed under the platform name. In such a way, a platform can be assigned any number of data descriptions.

> **CAUTION**
> To decode a file with AUTOSAR, the file with data descriptions is yet to be decoded (see Decoding file with AUTOSAR).

Decoding file with AUTOSAR

To decode a file with AUTOSAR, follow the steps below:

1. Right-click on the 'Platform' node.
2. Select **New decoder** from the option list.
3. Select **AUTOSAR** in the New decoder.
4. Add a data description file in ARXML format in the opened window.
5. Click **OK** to confirm.

   After confirming, the file appears in the Platform dialog window with a network symbol (see Figure 9).

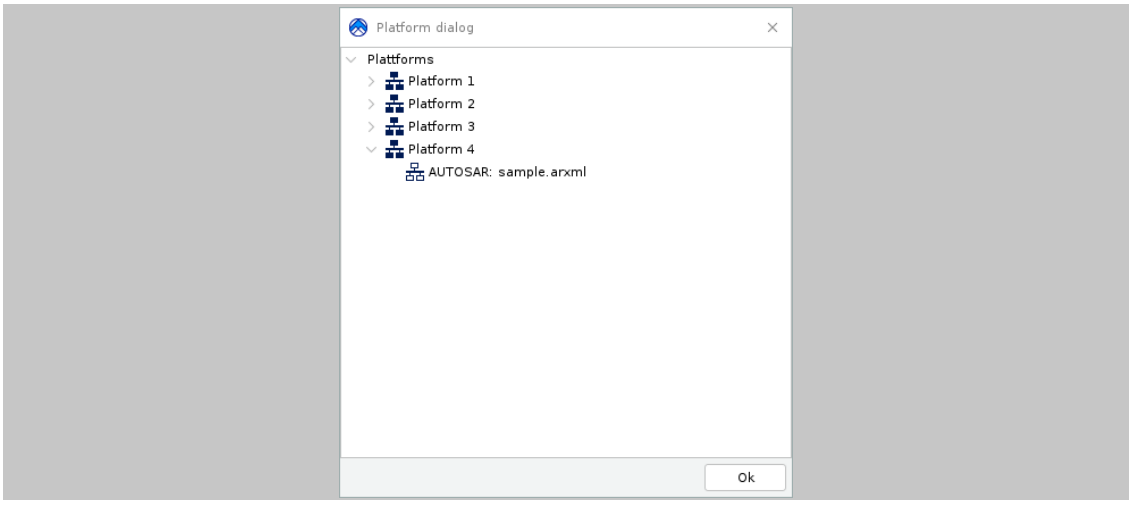


Figure 9: Decoding file with AUTOSAR

6. Right-click on the **AUTOSAR file** and select the decoder.
7. Continue settings in accordance with the requirements of the chosen bus system.

CAUTION

- With **Ethernet decoder** you have to choose a cluster, number of channels and the channel number for each VLAN (separated by commas) if 'Multi channel' is chosen.
- Physical channel is used on the recording device.

Modifying signal and channel names

In order to distinguish which signals come from which bus (e.g. CAN), you can edit the name of the channel, which is reflected in the names of all signals (see Figure 8).

To modify signal and channel names, follow the steps below:

1. Right-click on the configured channel in the Platform dialog window and select **Edit**.
2. Enter a name in the **Name** field.
3. Click **OK** to confirm.

   After confirming, the name is displayed both behind the channel number in the platform configuration and in front of the signal name, being separated by a dot.

NOTE
Signal and channel names can also be modified when decoding a measurement file (see Configuring a platform).

Editing a channel

To edit a channel, follow the steps below:

1. Right-click on the channel.
2. Select **Edit**.
3. Edit the desired data.
4. Confirm with **OK** to save the changes.

Renaming a platform

To rename a platform, follow the steps below:

1. Right-click on the ‘Platform’ node.
2. Select **Rename**.
3. Enter a new platform name in the opened window.
4. Click **OK** to save the changes.

   After saving, a new name for a platform is displayed.

Exporting and importing platform settings

When operating with message-based measurements, it is essential to set up a platform that allows you to access the measurement file (see Configuring a platform). Once this setup is complete, Merida Signals provides the possibility to export the platform's settings in an XML file. This XML file can be used later, for instance, to conveniently share the platform settings or retrieve measurements in case the platform is accidentally deleted.

To **export** platform settings, follow the steps below:

1. Open the Platform dialog window by pressing **P** key.
2. Right-click on the Platform node and select **XML-export**.
3. Enter a file name.
4. Click **Save** to complete the saving.

To **import** platform settings, follow the steps below:

1. Open the Platform dialog window by pressing **P** key.
2. Right-click on the top line ‘Platform’.
3. Select **XML-import**.
4. Open an XML file with configured platform settings.

   After an XML file is opened, a platform will appear at the end of the platform list.

CAUTION
When importing your XML file, there may be a request to include a data description file. This can happen if the exported platform is not fully configured or if a data description file related to the exported platform has been removed. In such cases, it is advisable to store all the files (the XML file with configured platform settings and the corresponding data description files) in the same folder to maintain the same file path.

Deleting a platform, channel

To delete a platform or channel, follow the steps below:

1. Right-click on the **Platform node** or **Channel**, depending on which one you want to delete.
2. Press **Delete**.
3. Press **Yes** in the opened window to confirm the deletion.

4.4 Comment on the file and other metadata

For a measurement file, you can view and edit its metadata that includes the file comment and other relevant information. This data may include details about file's creation date, organization, project affiliation, etc.

With file information, the following is possible:

- Viewing and editing a file' s metadata

Viewing and editing a file' s metadata

To view or edit a file' s metadata, follow the steps below:

1. Open the **Signal** menu.
2. Press **Display comment**.

   After the option is pressed, the Comment window is displayed (see Figure 10).

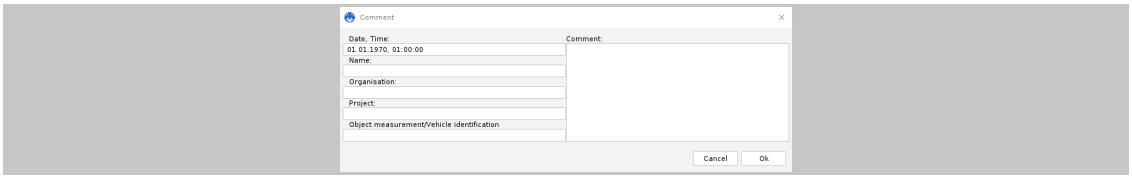


Figure 10: The Comment window

3. View and/or edit information.

   CAUTION
   You cannot remove the date of a file creation, and any attempt to do so will result in an error message.

4. Confirm with **OK** to save the changes or to close the window.

4.5 Warnings about errors

If a measurement file contains non-crucial errors (e.g. incorrect signals display), they can be ignored by IAV Merida Signals file readers when opening a file. However, they are recorded in a log.

The logging function allows the following:

- Viewing the warnings list
- Clearing the warnings list

Viewing the warnings list

To view the warning list, follow the steps below:

1. Open the **File** menu.
2. Select **Warnings**.
   After Warnings is selected, the Warnings window with all recorded errors will be displayed.

Clearing the warnings list

To clear the warnings list, follow the steps below:

1. Open the **File** menu.
2. Select **Warnings**.
3. Press **Clear**.
   After it is done, all logged errors will be removed.

5 Operating with signals

IAV Merida Signals provides various options for operating with signals. In this section, you can learn how to use them.

5.1 Representing signals

When a measurement file is open, you can use various functions to set up the representation of signals.

To represent signals, the following actions can be performed:

- Displaying signals on the Plot panel
- Removing signals from the Plot panel
- Removing signals with a constant value from the Plot panel
- Searching for signals
- Changing the view of the signal list
- Adding and removing additional information on signals
- Showing and hiding additional information on signals

Displaying signals on the Plot panel

After the requested signals are retrieved, they can be displayed on the Plot panel.

To display signals on the Plot panel, follow the steps below:

1. Go to the **Signal list** area.
2. Select signals that should be shown.

   NOTE
   Like in other programs, multiple signals can be selected using the **Ctrl** (individually) or the **Shift** (for a series of consecutive signals) buttons. To select all the signals, first click on any signal in the Signal list area and then press **Ctrl+A**.

3. Drag and drop them from the signal list into the Plot panel.

   Alternatively, the signals can be displayed on the Plot panel by following the steps below:

   1. Right-click on the **Signals list** area.
   2. Press **Display signals**.

Removing signals from the Plot panel

To remove signals from the Plot panel, follow the steps below:

1. Select signals in the Signal list area.
2. Right-click in the **Signal list** area.
3. Press **Hide**.

   Alternatively, you can remove signals from the Plot panel by following the steps below:

   1. Go to the **Signal list** area.
   2. Select signals that should be removed.
   3. Press **Hide** in the Signal list area or **Remove** in the Signal menu or use **Delete** key.

Removing signals with a constant value from the Plot panel

To remove signals with constant value, follow the steps below:

1. Go to the **Signal list** area.
2. Do one of the following:

   - Press **Delete constant** in the Signal menu to remove all signals with a constant value.
   - Press **Delete constant in window** in the Signal menu to remove all signals with a constant value in the displayed area.

Searching for signals

When there are too many signals in a measurement, you can use the search function. IAV Merida Signals provides two options with the search –basic and with regular expressions.

To search for signals, follow the steps below:

1. Go to the **Signal** menu.
2. Do one of the following:

   - Press **Search** or **F1** keyboard shortcut to use basic search.
   - Press **Search with RegEx** or **F11** keyboard shortcut to use search with regular expressions.

   After the search method is chosen, the Signals search window opens (see Figure 11).

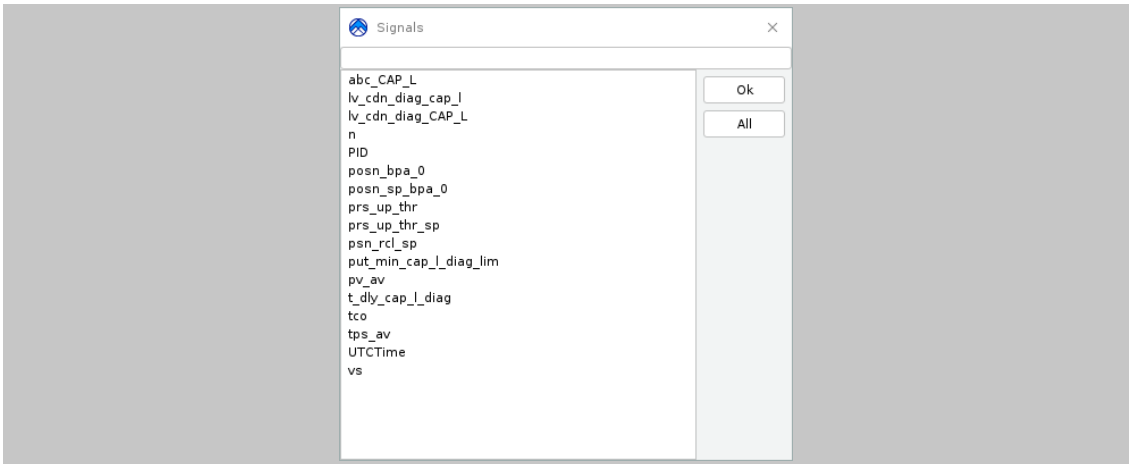


Figure 11: The Signals search window

3. Enter a keyword (name or unit of the signal to be searched for).

> **NOTE**
> The operators ^ and **$** in regular expressions are used to indicate whether the search text starts or ends, respectively, the expression (e.g., the request '^start.*end$' initiates a search of signals the names of which start with '**start**' and end with '**end**'). Make sure that before asterisk symbol ***** a dot is added. Therefore, signals can be searched with the help of operators used to specify beginnings and endings of signal names. If these operators are not used, the expression can match signals that contain the specified text at any position.

4. Click **Enter** key to confirm.

   After confirming, the signal list is updated so that only the signals included into the search are displayed.

> **NOTE**
> To add all signals in the search results to the Plot panel, click **All**. To add the individual signals to the Plot panel, follow the steps below:
>
> 1. Hold down **Shift** key.
> 2. Select signals.
> 3. Click **OK** to confirm.

Adding and removing additional information on signals

An additional information about signal parameters (e.g. channel ID, message ID, VLAN, etc.) can be added or removed in the signal names. The type of this information depends on the measurement file and format of data description.

To add and remove additional parameters in the signal names, follow the steps below:

1. Go to the **Signal** menu.
2. Hover the mouse cursor over **Select extended info**.
3. Click on the desired parameters in the opened list to add/remove them.

Showing and hiding additional information on signals

To show or hide all additional parameters in the signal names, use **CRTL+I** keyboard shortcut or follow the steps below:

1. Go to the **Signal** menu.
2. Press **Toggle extended info**.

NOTE
The **Toggle extended info** function is activated by default.

5.2 Projects

Projects can be used to store information which is not part of the measurement itself. This includes the definition of virtual signals (see Virtual signals) as well as frame signals (see Frame signals). Projects are opened and saved separately from measurements. This means, if a project is already open when a new measurement is loaded, the virtual signals and frame signals are updated with the data from the new measurement. If a measurement is already open when a project is loaded, the virtual signals and frame signals from the project are applied to the measurement. I a project ist opened shile no measurement is open, all signals remain empty.

The following actions can be performed with projects:

- Creating a project
- Opening a project
- Saving changes to a project

Creating a project

To create a project with your virtual signals, follow the steps below:

1. Create something you want to reuse (e.g. virtual signals (see Creating a new virtual signal)).

2. Press **Save Project as** in the File menu.
3. Select the storage of your project and provide your file with a name.
4. Click **Save** to confirm.

Opening a project

To open a project with your virtual signals, follow the steps below:

1. Press **Open Project** in the File menu.
2. Select the file with your project.
3. Click **OK** to confirm.

CAUTION
In the case when you open a project without having started a relevant measurement file you might be alarmed with a warning message (e.g. that a virtual signal cannot be rendered). Close the warning message, open a measurement file (see Opening a measurement file) and continue with your project.

Saving changes to a project

To overwrite a project after introducing some changes, follow the steps below:

1. Make the desired changes (see e.g. Editing a virtual signal).
2. Press **Save Project** in the File menu.
3. Click **OK** to confirm.

5.3 Signal groups

In the left part of the Main window, besides signal list, there is the area with signal groups. The following signal groups exist by default:

- **All Signals** –all signals related to the measurement are displayed
- **Visible Signals** –all signals added to the Plot panel (see Displaying signals on the Plot panel)
- **Virtual Signals** –all signals artificially generated by user, using mathematical models are displayed (see Virtual signals)
- **Frame Signals** –signals containing raw frame data and defined by frame filters (see Frame signals)

The following actions can be performed:

- Switching between signal groups
- Adding, removing or editing custom signal groups

Switching between signal groups

To switch the group of signals, press **M** key or follow the steps below:

1. Go to the **Signal groups** area of the Main window.

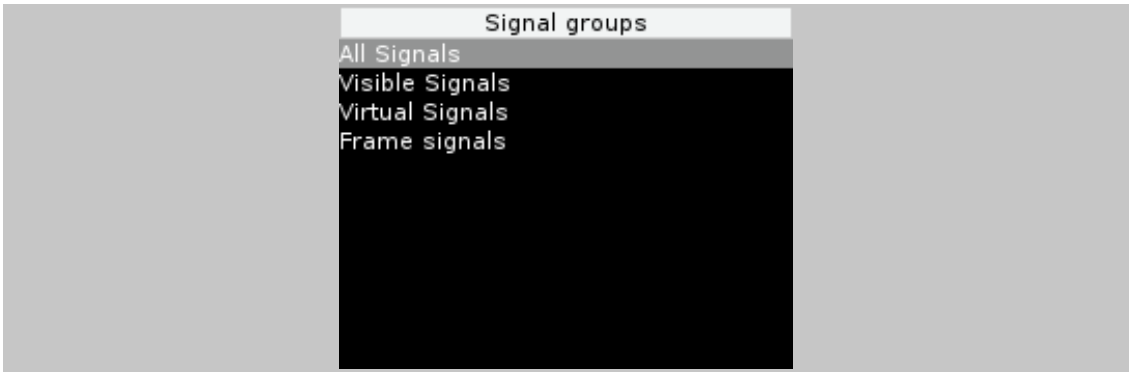


Figure 12: The Signal groups area

2. Select the desired group by clicking on it.

   Alternatively, you can switch between the signal groups using the **Switch list** option in the Signal menu.

NOTE

You can change the size of the 'Signal groups' area by clicking on the title bar and dragging it to the desired position upwards and downwards.

5.3.1 Custom signal groups

Signal groups are sets of signals which can be used to organize signals for convenience. Signal groups are stored and loaded together with the project, thus they can be reused in other measurements.

The following actions can be performed:

- Creating a new signal group
- Editing a signal group
- Deleting a signal group

Creating a new signal group

To create a new signal group, follow the steps below:

1. Go to the **Signal groups** area.
2. Right-click on the area and then select **New signal group**.
3. In the window that opens (see Figure 13), provide the name of the group.
4. Add the corresponding signals by selecting them in the left signal list and pressing the right arrow key.
5. Remove signals by selecting them in the right signal list and pressing the left arrow key.
6. Click **OK** to confirm.

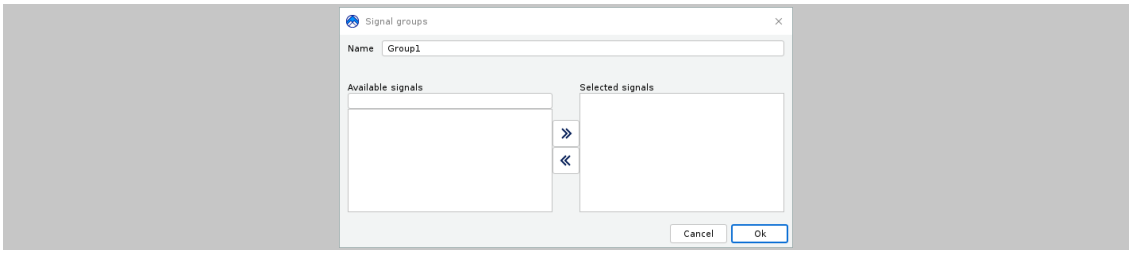


Figure 13: The signal groups window

To edit a signal group, follow the steps below:

1. Go to the **Signal groups** area.
2. Select a signal group you want to edit.
3. Right-click on it and then select **Edit**.
4. In the window that opens (see Figure 13), make the desired changes.
5. Click **OK** to confirm.

CAUTION
To keep your signal groups for further usage, save them as a project. When you load the project in a later session, these virtual signals will be restored.
If you make changes to a project, the changes are not going to be automatically saved. You have to save them manually (see Saving changes to a project)

Deleting a signal group

To delete a signal group, follow the steps below:

1. Go to the **Signal groups** area.

2. Select a signal group you want to delete.
3. Right-click on the signal group and then select **Delete**.
4. Click **Yes** to confirm.

5.3.2 Virtual signals

Virtual signals refer to artificially generated signals that replace or mimic the original signals coming from measuring devices (data loggers) in a vehicle. Virtual signals are simulated by means of changing the original signals with the help of mathematical expressions.

IAV Merida Signals treats a combination of settings that specify virtual signals as 'project'. A project can be applied to different measurements.

The following actions can be performed:

- Creating a new virtual signal
- Editing a virtual signal
- Deleting a virtual signal

Creating a new virtual signal

To create a new virtual signal, follow the steps below:

1. Go to the **Signal groups** area.
2. Right-click on the area and then select **New virtual signal**.
3. In the window that opens, provide the name, unit and expression for your virtual signal. When you start typing in the **Expression** field, the list of signals available in your measurement file is displayed for you to choose from.
4. Click **OK** to confirm.

Figure 14: The Virtual Signals window

NOTE

- The **Info** icon , when clicked, provides the list of possible functions that you can apply to signals and their descriptions.
- You can either enter the function you want to apply manually or drag it to the **Expression** field from the list displayed when the **Info** icon is clicked on.
- The **Expression** field can contain complex expressions using several functions and operators simultaneously.
- In the descriptions of some functions additional parameters are mentioned. These can be configured by adding comma-separated expressions in the form "parametername -> value" to the argument list of the function (e.g. filter(1, 10, 2, signal, type -> 'butterworth,hp'))

Editing a virtual signal

To edit a virtual signal, follow the steps below:

1. Go to the **Signal groups** area and select **Virtual Signals**.
2. Select a signal you want to edit.
3. Right-click on a signal and then select **Edit**.
4. In the window that opens (see Figure 14), make the desired changes.
5. Click **OK** to confirm.

CAUTION

To keep your virtual signals for further usage, save them as a project. When you load the project in a later session, these virtual signals will be restored.
If you make changes to a project, the changes are not going to be automatically saved. You have to save them manually (see Saving changes to a project)

Deleting a virtual signal

To delete a virtual signal, follow the steps below:

1. Go to the **Signal groups** area and select **Virtual Signals**.
2. Select a signal you want to delete.
3. Right-click on a signal and then select **Delete**.
4. Click **OK** to confirm.

5.3.3 Frame signals

Frame signals refer to raw frame data read from measurement files. Not all measurement files contain frame based data.

Frame signals are defined by frame filters for corresponding types of frames (e.g. CAN frames).

The following actions can be performed:

- Creating a new CAN signal
- Creating a new ethernet signal
- Creating a new SOME/IP signal
- Editing a frame signal
- Deleting a frame signal
- Updating the frame signals

CAUTION
The frame signals are rendered, when a project is loaded, a measurement is loaded or the signals are updated (see 5.3.3).
They are **not** updated immediately after they are created or edited.

Creating a new CAN signal

To create a new CAN signal, follow the steps below:

1. Go to the **Signal groups** area.
2. Right-click on the area and then select **New CAN signal**.
3. In the window that opens, provide the name and filter criteria vor the CAN signal.
4. Click **OK** to confirm.

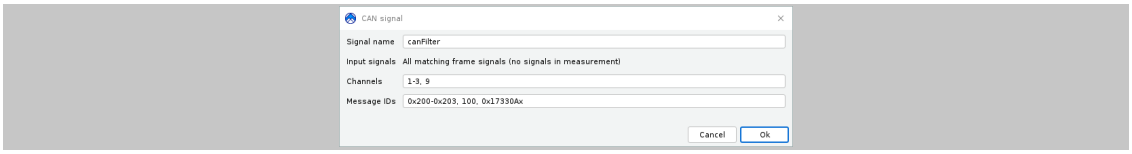


Figure 15: The CAN signals window

The following filter critera can be used for CAN signals:

1. One or more input signals can be selected in a list. If no signal is selected, the filter will be applied to all available CAN signals. Otherwise only the selected signals will be used.

2. The frames can be filtered by channel numbers. If the channels field is left empty, all channels are considered. Otherwise a comma-separated list of channels and channel areas is expected (see Figure 15).

3. The frames can be filtered by IDs. If the message IDs field is left empty, all frames from the selected channels considered are considered. Otherwise a comma-separated list of IDs or ID areas is expected (see Figure 15). IDs can be given in decimal or hexadecimal form. Extended IDs are suffixed with an x.

Creating a new ethernet signal

To create a new ethernet signal, follow the steps below:

1. Go to the **Signal groups** area.
2. Right-click on the area and then select **New ethernet signal**.
3. In the window that opens, provide the name and filter criteria vor the ethernet signal.
4. Click **OK** to confirm.

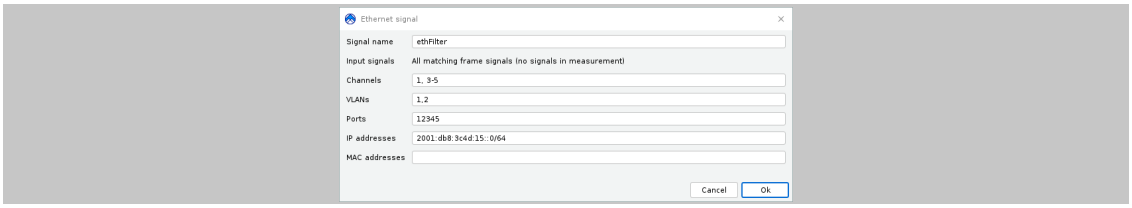


Figure 16: The ethernet signals window

The following filter critera can be used for ethernet signals:

1. One or more input signals can be selected in a list. If no signal is selected, the filter will be applied to all available CAN signals. Otherwise only the selected signals will be used.
2. The frames can be filtered by channel numbers. If the channels fiels is left empty, all channels are considered. Otherwise a comma-separated list of channels and channel areas is expected (see Figure 17).
3. The frames can be filtered by VLANs. If the channels field is left empty, all channels are considered. Otherwise a comma-separated list of channels and channel areas is expected (see Figure 17).
4. The frames can be filtered by TCP/UDP ports. If the ports field is left empty, all ports are considered. Otherwise a comma-separated list of ports and port areas is expected (see Figure 17). All ports and addresses are considered for source AND destination.
5. The frames can be filtered by IP (v4/v6) addresses or subnets. If the IP addresses field is left empty, all addresses are considered (see the following examples).
   (a) 192.168.0.1 (simple IPv4 address)

(b) 192.168.0.0/16 (subnet 192.168.x.x (first 16 bit))

(c) 192.168.0.1/255.255.0.255 (subnet 192.168.x.x but only addresses with 1 in the last part)

(d) 2001:db8::0 (simple IPv6 address, the :: stands for as many zeros as needed for a complete address and can only be used once)

(e) 2001:db8::0/32 (subnet starting with 2001:db8 (first 32 bit))

(f) 2001:db8::1/ffff:ffff::ffff (subnet starting with 2001:db8 but only addresses with 1 in the last part)

6. The frames can be filtered by MAC addresses. If the MAC addresses field is left empty, all addresses are considered. Otherwise a comma-separated list of MAC addresses is expected.

Creating a new SOME/IP signal

SOME/IP signals are frame signals containing SOME/IP data. They are further divided into Service Discovery (SD) signals, Service signals and Individual signals. SD signals contain information about offered services and corresponding service subscriptions. Service signals contain the payload data for one specific service. If they are created using the corresponding ARXML descriptions, the payload data is also interpreted into a human readable (JSON) form. The content of the SOME/IP signals is shown in the cursor window and the trace window.

If an ARXML description exists, it is also possible to extract individual signals from the corresponding service. This case is described in 5.3.4.

To create a new SOME/IP signal, follow the steps below:

1. Go to the **Signal groups** area.
2. Right-click on the area and then select **New SOME/IP signal** and the type of SOME/IP signal you want to create.
3. In the window that opens, provide the name and filter criteria vor the SOME/IP signal. Depending on the type of signal some parameters from figure 17 might not occur.
4. Click **OK** to confirm.

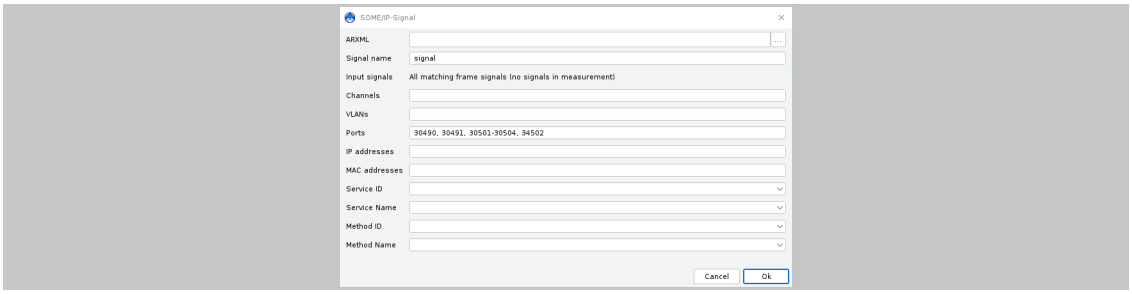


Figure 17: The SOME/IP signals window

For SOME/IP signals all filters from the ethernet signals can be applied. The filters must be chosen so that only SOME/IP frames pass. The default value for the port filter contains the ports usually used for SOME/IP communication. Other ports can be added for custom services. In addition the following filters and parameters can be set, depending on the type of SOME/IP signal:

1. The ARXML file (only for service signals with ARXML) is needed for the interpretatin of data and the service and method names. Multiple files can be selected if the service description is derived over multiple ARXML files.
2. The service ID of the service (only for service signals).
3. The service name of the service (only for service signals with ARXML). ID and name are equivalent, thus, only one of both has to be selected.
4. The method ID of the service (only for service signals).
5. The method name of the service (only for service signals with ARXML). ID and name are equivalent, thus, only one of both has to be selected.

Editing a frame signal

To edit a frame signal, follow the steps below:

1. Go to the **Signal groups** area and select **Frame Signals**.
2. Select a signal you want to edit.
3. Right-click on a signal and then select **Edit**.
4. In the window that opens, make the desired changes.
5. Click **OK** to confirm.

Deleting a frame signal

To delete a frame signal, follow the steps below:

1. Go to the **Signal groups** area and select **Frame Signals**.
2. Select a signal you want to delete.
3. Right-click on the signal and then select **Delete**.

CAUTION
To keep your frame signals for further usage, save them as a project. When you load the project in a later session, these frame signals will be restored.
If you make changes to a project, the changes are not going to be automatically saved. You have to save them manually (see Saving changes to a project)

Updating the frame signals

Frame signals are not rendered immediately after they are edited or created. The reason is that the measurement file is read from disk every time the signals are updated. Thus it is preferable to first create all signals needed and update the data afterwards. To update the frame signals, follow the steps below:

1. Go to the **Signal groups** area.
2. Right-click on **Frame signals** and then select **Update frame signals**.

5.3.4 SOME/IP individual signals

For SOME/IP services with a corresponding service description in form of an ARXML file, it is possible to extract individual values from the SOME/IP payload as signals. The signals are in this case added to a new signal group and can be plotted like other signals.

To create a signal group with signals from the SOME/IP payload, follow the steps below:

1. Go to the **Signal groups** area.
2. Right-click on the area and then select **New SOME/IP signal** and **Individual signals**.
3. In the window that opens, provide the name for the signal group to be created and filter criteria for the SOME/IP service. The parameters here correspond to the dialog for SOME/IP services with ARXML (5.3.3).
4. Click **OK** to confirm.
5. On the second page of the dialog (see Figure 18) select the values you want to be extracted as signals in the tree structure on the left.
6. Use the arrow keys in the middle to add the selected signals to the signal group or remove incorrectly added signals.
7. Click **OK** to confirm.

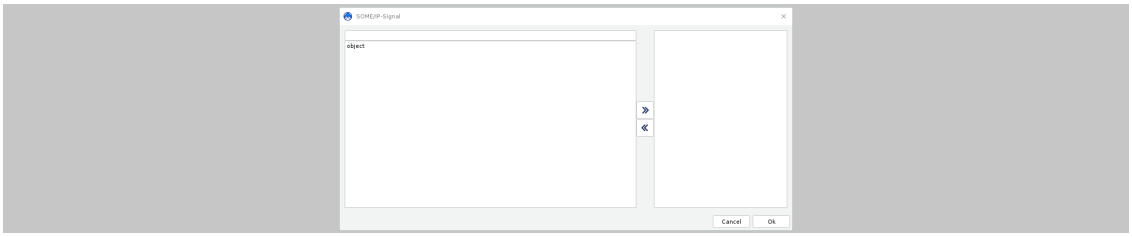


Figure 18: Selection of signals from SOME/IP payload

After confimation a new signal group with the selected name is created. The new signal group contains one signal for each selected value. The signal names are generated from the full path of the value in the structure of the payload from the SOME/IP frame.

CAUTION

Like frame signals these signals are rendered, when a project is loaded, a measurement is loaded or the signals are updated (see 5.3.3).

They are **not** updated immediately after they are created or edited.

5.4 Signal colour settings

While working with signals, the following is possible:

- Changing the colour of selected signals
- Recolouring visible signals

Changing the colour of selected signals

To change a colour of the selected signals, follow the steps below:

1. Select signals (one, several or all) whose colour is to be changed.
2. Press **Colour** in the Signal menu or use **F** key.
3. In the opened window (the New colour window, see Figure 19), select the desired colour.

   Various colours can be found in Swatches and modified in HSV, HSL, RGB, and CMYK colour models.

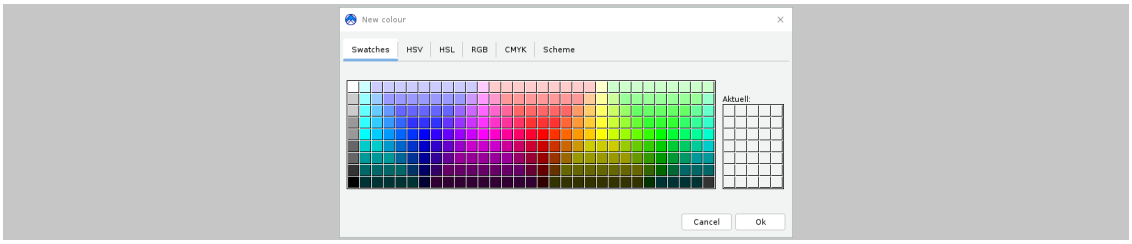


Figure 19: The New colour window

4. Click **OK** to confirm.

CAUTION
If no signal is selected, the **Colour** option will be unavailable.

Recolouring visible signals

To recolour visible signals, follow the steps below:

1. Go to the **Signal** menu.
2. Press **Recolour visible signals**.

   Once the process is completed, the visible signal colours will be automatically adjusted to the colours of the current colour scheme (see Colour scheme, to learn how to view and configure the colour scheme).

5.5 Signal information

The information on signals from the opened file can be viewed for an individual signal, a set of chosen signals, and for all signals. It should be noted that the specific signal information may vary depending on the file format.

The following is possible:

- Viewing signal information

Viewing signal information

To view signal information, press **I** key or follow the steps below:

1. Select a signal or signals whose information you would like to view.
2. Press **Info** in the Signal menu.

   Once it is done, the Signal info window containing comprehensive details about the signals will be displayed (see Figure 20).

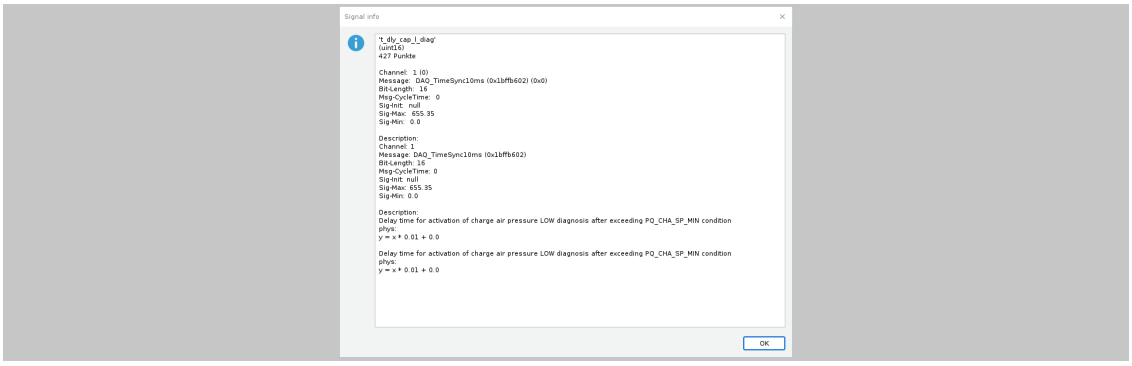


Figure 20: The Signal info window

CAUTION
If no signal is selected, the number of all signals and points of these signals are displayed.

5.6 Trace window

As an alternative way of displaying signals, the Trace window can be used.

The following is possible:

- Viewing signals in the Trace window
- Copying data of signal values in the Trace window

- Viewing format of frame-based signals

Viewing signals in the Trace window

To view the signals in the Trace window, press **T** key or follow the steps below:

1. Press **Trace window** in the Signal menu.

   After it is done, the Trace window will be displayed (see Figure 21).

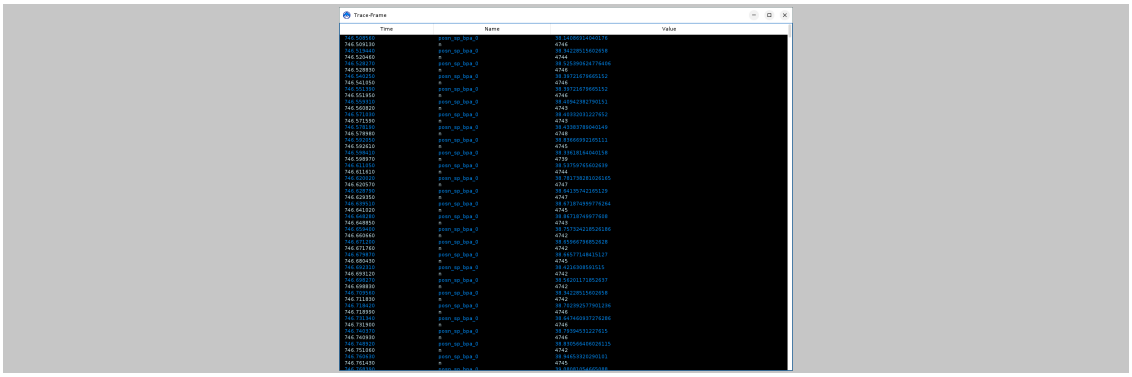


Figure 21: The Trace window

- **Alternatively**, you can open the Trace window by right-clicking on the Plot panel and selecting **Trace window** in the Signal sub-menu.

2. Drag the signals from the signals list to the Trace window.

NOTE
It is recommended to use the Trace window when frame signals, such as CAN frames, are to be displayed.

Copying data of signal values in the Trace window

Using the Trace window, you can copy data of signal values displayed in the window. Merida Signals provides several options to copy signals data depending on the signals type:

- Basic copying data of the signal values for all signal types
- Copying data in ASC format for frame-based signals

To copy data of **signal values in a basic way**, follow the steps below:

1. Hover the mouse cursor over the column cell in the Trace window.
2. Right-click on the column cell.

3. Press **Copy**.

To copy data of **frame-based signals in ASC format**, follow the steps below:

1. Hover the mouse cursor over the column cell in the Trace window.
2. Right-click on the column cell.
3. Press **Copy** in ASC format.

NOTE
If you want to copy data of several signal values, press **CTRL** to select individual signals in different location of the Trace window or **Shift+A** to select all signals.

Viewing format of frame-based signals

While operating with frame-based signals, it is possible to make the information on this type of signals more readable.

To view the format of signal values, follow the steps below:

1. Hover the mouse cursor over the column cell in the Cursor window.
2. Right-click on the column cell.
3. Press **Format view**.

CAUTION
By default, the **Format view** option is activated. If there is a need to view the format of the signal values as it is, the option should be deactivated.

5.7 Interpretations

Many signals have a physical interpretation alongside the raw data interpretation. When the signal has several interpretations, it is possible to select one of them.

The following is possible:

- Selecting interpretation

Selecting interpretation

To select interpretation, follow the steps below:

1. Select a signal in the Signal list area.
2. Press **Interpretation** in the Signal menu.

   - **Alternatively**, you can right-click on the **Plot panel** and hover the mouse cursor over **Signal**.
3. Press **Interpretation**.

   A small window will open where the appropriate interpretation can be selected.

6 Cursors

IAV Merida Signals provides the usage of a cursor. Cursors play a crucial role in obtaining more accurate information at specific time points.

6.1 Using cursors

When operating with cursors, the following is possible:

- Viewing signal values with Single cursor
- Viewing signal values with Double cursor
- Sorting signal values in the Cursor window
- Copying data of signal values in the Cursor window
- Viewing format of frame-based signals

Viewing signal values with Single cursor

To view signal values with Single cursor, press **Period** key or follow the steps below:

1. Press the left button in the Toolbar to activate the cursor.

   - **Alternatively**, you can activate the cursor by right-clicking on the Plot panel and pressing **Cursor**.

   After activation, the signal values of all the signals which are located at the position of the cursor will be shown in the Cursor window (see Figure 22).

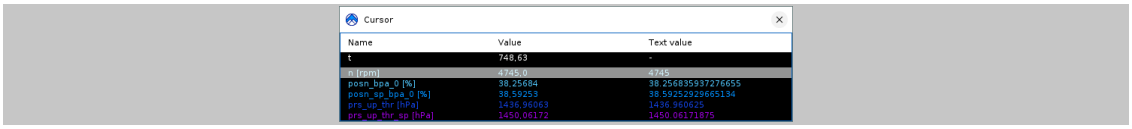


Figure 22: The Cursor window, Single cursor is activated

   The cursor position is represented by a vertical white line.

2. Hover the mouse cursor over the white line and drag it to the new position to view the desired signal values.

Viewing signal values with Double cursor

To view signal values with Double cursor, press **Comma** key or follow the steps below:

1. Press the right button in the Toolbar to activate the cursor.

   - **Alternatively**, you can activate the cursor by right-clicking on the Plot panel and pressing **Two cursors**.

After activation, the difference in time and signals between the two cursor positions, as well as the values at both cursor positions and the minimum and maximum values between the cursor positions, are displayed in the Cursor window (see Figure 23).

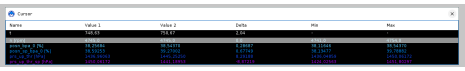


Figure 23: The Cursor window, Double cursor is activated

The positions of two cursors are represented by vertical white lines.

2. Hover the mouse cursor over the white line and drag cursors to the new positions to view the difference in time and signals between them.

Sorting signal values in the Cursor window

All signal values presented in the Cursor window, upon cursor activation, can be sorted in ascending or descending order.

To sort signal values in the Cursor window, follow the steps below:

1. Hover the mouse cursor over the column header in the Cursor window.
2. Press the corresponding header.
3. Repeat the previous steps to cycle through ascending, descending and default order.

The default order of the signals in the cursor window is the same as the order in the plot. It can be changed by moving the plotted signals to desired position.

Copying data of signal values in the Cursor window

Using the Cursor window, you can copy data of measurement values displayed in the window. Merida Signals provides several options to copy measurement data depending on the signals type:

- Basic copying data of the signal values for all signal types
- Copying data in ASC format for frame-based signals

To copy data of **signal values in a basic way**, follow the steps below:

1. Hover the mouse cursor over the column cell in the Cursor window.
2. Right-click on the column cell.
3. Press **Copy**.

To copy data of **frame-based signals in ASC format**, follow the steps below:

1. Hover the mouse cursor over the column cell in the Cursor window.
2. Right-click on the column cell.
3. Press **in ASC format**.

NOTE

- If you want to copy data of several signal values, press **CTRL** to select individual signals located at different positions within the Cursor window or **Shift+A** to select all signals.
- Data of signal values can be also copied in the Trace window (see 5.4 Trace window).

Viewing format of frame-based signals

While operating with frame-based signals, it is possible to make the information on this type of signals more readable.

To view the format of signal values, follow the steps below:

1. Hover the mouse cursor over the column cell in the Cursor window.
2. Right-click on the column cell.
3. Press **Format view**.

CAUTION
By default, the **Format view** option is activated. If there is a need to view the format of the signal values as it is, the option should be deactivated.

6.2 Notes on the signal

IAV Merida Signals allows you to leave notes on the signals. When some signals are selected, you can add notes to them.

When operating with notes, the following is possible:

- Adding a note
- Showing and hiding notes
- Removing a note

Adding a note

To add a note, use **CRTL+H** keyboard shortcut or follow the steps below:

1. Activate the cursor (see Using cursors).
2. Select a signal.

> **CAUTION**
> If no signal is selected, the note will be linked to the point with the nearest signal value.

3. Go to the **Signal** menu and hover the mouse cursor over **Note**.

   - **Alternatively**, you can right-click on the **Plot panel**, select **Signal** and hover the mouse cursor over **Note**.

4. Press **Add** in the Note sub-menu.

   After it is done, the Add note window will be displayed (see Figure 24).

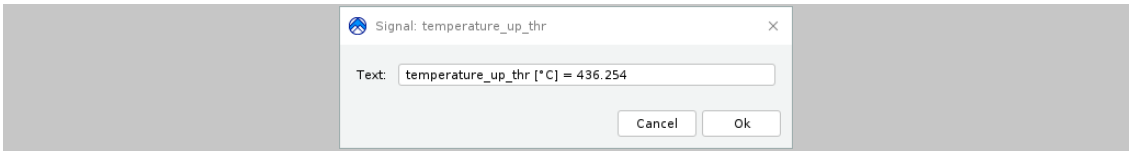


Figure 24: The Add note window

> **NOTE**
> By default, signal name and value are shown in the field which correspond to the signal position. Some signals have both a numeric and a textual display. In such a case, both the signal value in numerical form, and the signal value in the textual form are displayed. The text display will then be enclosed in square brackets.

5. Enter your notes in the **Text** field.
6. Click **OK** to confirm.

   After confirming, a note will be displayed on the Plot panel. The location of the note is determined by the type of cursor that is active. If the **Single cursor** is activated, the note will be linked to the nearest signal value. On the other hand, when **Two cursors** are activated, a note will be created between them and linked to the nearest signal values using two lines. In this way, it is possible, for example, to mark the range of the signal curve.

Showing and hiding notes

To show or hide notes, press **A** key or follow the steps below:

1. Go to the **Signal** menu and hover the mouse cursor over **Note**.

   - **Alternatively**, you can right-click on the **Plot panel**, select **Signal** and hover the mouse cursor over **Note**.

2. Press **Display notes** in the Note sub-menu.

Removing a note

To remove a note, follow the steps below:

1. Activate **Single** or **Double** cursor (see Using cursors).
2. Select signal the note on which you would like to remove.
3. Go to the **Signal** menu and hover the mouse cursor over **Note**.

   - **Alternatively**, you can right-click on the **Plot panel**, select **Signal** and hover the mouse cursor over **Note**.

4. Press **Remove**.

CAUTION

Before calling the **Remove** option, the cursor must be placed in close proximity to the corresponding signal value. If the note has been added with a double cursor, it can only be removed with both cursors being placed in close proximity.

7 Scaling configuration

7.1 Axes arrangement and scaling

When the signals are displayed for the first time, the arrangement of various signals and the display of axis is more or less disordered. To make them more orderly, you can configure a few basic settings in the Scaling menu and the Toolbar (see Figure 25).

Figure 25: Scaling buttons in the Toolbar

The following is possible:

- Scaling several signals at the same position in the Y axis
- Scaling X and Y axes manually
- Moving axes in X/Y direction
- Auto scaling X/Y axes with overlapping signals curve
- Auto scaling X/Y axes with Y axes positioned one below the other
- Auto sorting and scaling X /Y axes one below the other
- Auto recolouring signals and scaling X /Y axes one below the other
- Auto scaling Y axes side by side
- Auto scaling X axis
- Stretching the signal along Y axis

Scaling several signals at the same position in the Y axis

First of all, it should be noted that the scaling of the Y-axes occurs independently, differently from signal to signal, when several signals are displayed. If the shown signals are to be displayed in exactly the same Y-axis scaling, the **Adjust scaling** option in the Scaling menu can be used.

To scale the signals at the same position in the Y axis, follow the steps below:

1. Go to the **Scaling** menu

   - **Alternatively**, you can right-click on the **Plot panel** and hover the mouse cursor over **Scaling** or right-click on the **Signal list** area.

2. Press **Adjust scaling**

Scaling X and Y axes manually

There are two ways of scaling X and Y axes manually: by setting coordinates and by dragging axes.

To scale axes manually **by setting coordinates**, follow the steps below:

1. Select the signals in the Signal list area.
2. Go to the **Scaling** menu.

   - **Alternatively**, you can right-click on the Plot panel.
3. Hover the mouse cursor over **Y axis** or **X axis** depending on the axis you want to scale.
4. Press **Input X** or **Input Y**.
5. In the opened window (see Figure 26) enter values in the fields **From** and **To**, to set the range for all the selected signals.
6. Click **OK** to confirm.

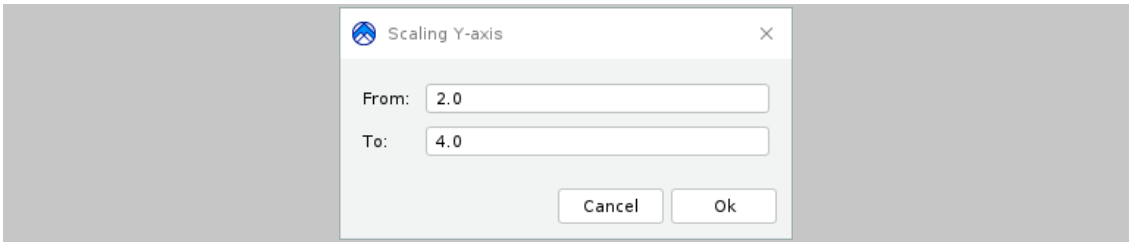


Figure 26: Manual scaling of Y axis

Moving axes in X/Y direction

To move axes manually **by dragging axes in both directions**, follow the steps below:

1. Select the signals you want to move.
2. Press **Alt** key and the mouse button.
3. Drag the axis.

To move axes manually **by dragging axes in one direction**, follow the steps below:

1. Select the signals you want to move.
2. Hover over an axis (left of or below the plot) and hold the left mouse button.
3. Drag the axis.
4. If you grabbed the y-axis, the selected signals are moved in y direction.
5. If you grabbed the x-axis, the whole plot is moved in x direction.

CAUTION
If no signals are selected, not only one but all the signals will be moved together with the mouse.

Auto scaling X/Y axes with overlapping signals curve

To scale X and Y axes with Y axis overlap, go to the **Scaling** menu and press **Auto overlap X/Y** or follow the steps below:

1. Go to the **Toolbar**.
2. Press the **second** or **fourth** scaling button.

   Alternatively, you can use the following way to scale X and Y axes with Y axis overlap:

   1. Right-click on the **Plot panel**.
   2. Hover the mouse cursor over **Scaling**.
   3. Press **Adjust Y overlap**.

   As a result, overlapping signals are displayed with X- and Y-axes scaled to fit the signals completely within the Plot panel (see Figure 27).

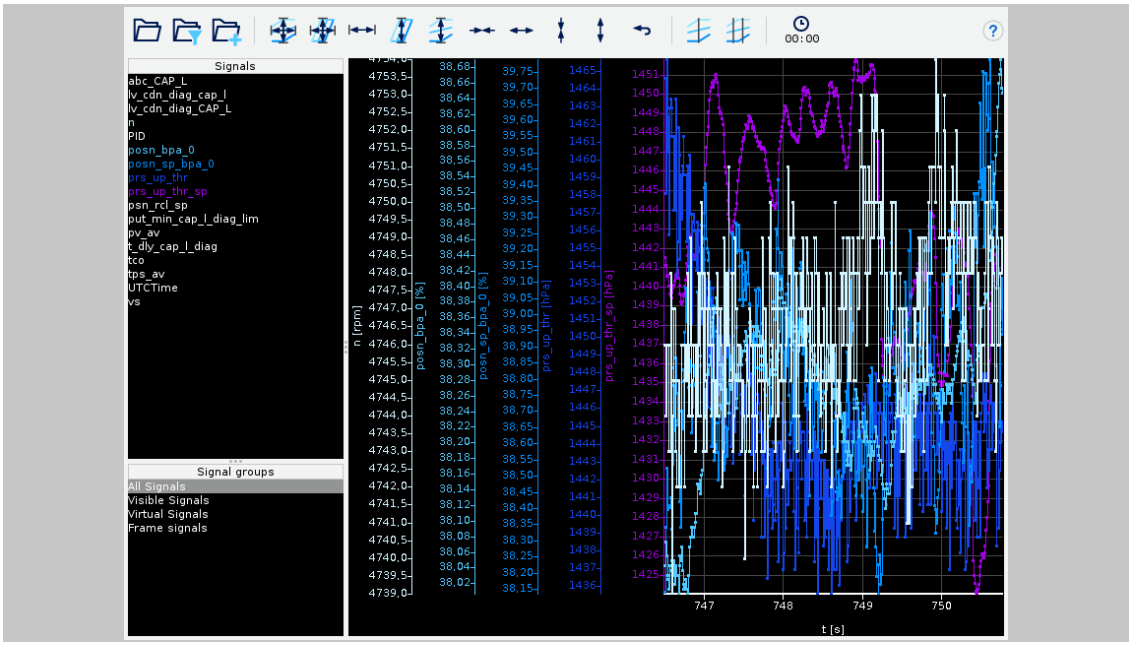


Figure 27: Overlapping signals

Auto scaling X/Y axes with Y axes positioned one below the other

To scale X/Y axes with Y axis positioned one below the other, go to the **Scaling** menu and press **Auto X/Y one below the other** or follow the steps below:

1. Go to the **Toolbar**.
2. Press the **first** or **fifth** scaling button.

   As a result, the Y axis are scaled one below the other (see Figure 28).

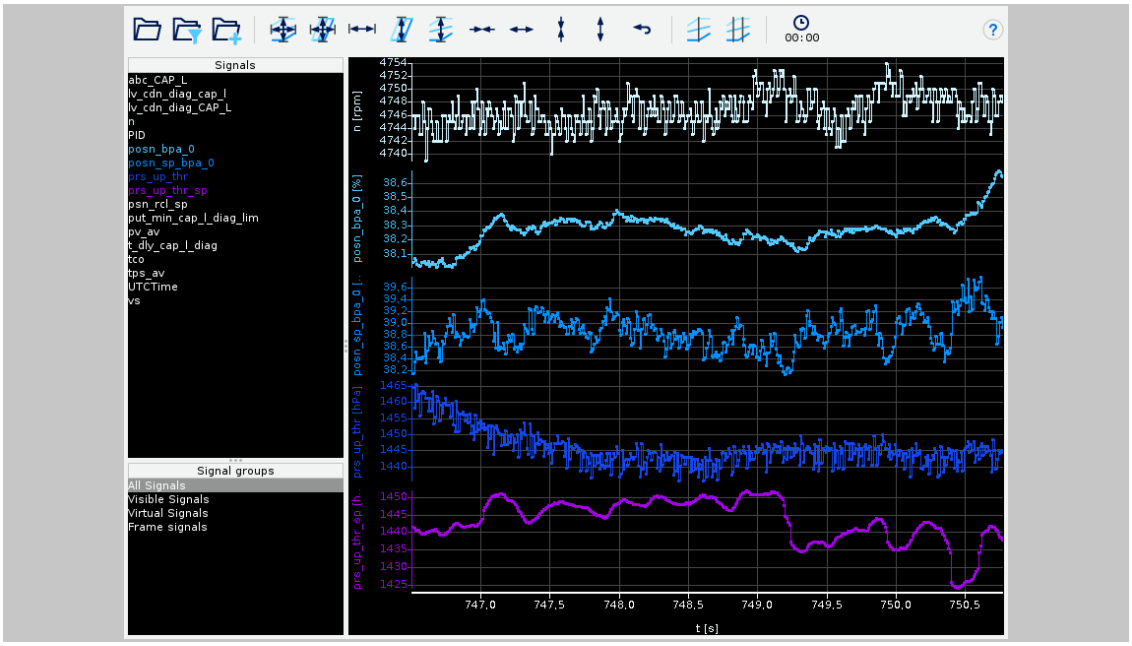


Figure 28: Y axes scaled one below the other

Alternatively, you can use the following ways to scale X and Y axes with Y-axis curves one below the other:

- From the Plot panel:

  1. Hover the mouse cursor over **Scaling**.
  2. Press **Auto X/Y one below the other**.

- From the Scaling menu:

  1. Hover the mouse cursor over **Y axis**.
  2. Press **Adjust X/Y one below the other**.

- From the Plot panel:

  1. Hover the mouse cursor over **Scaling** and then **Y axis**.

2. Press **Adjust X/Y one below the other**.

Auto sorting and scaling X /Y axes one below the other

To sort and scale X/Y axes one below the other, follow the steps below:

1. Go to the **Scaling** menu.
2. Press **Auto sort X/Y one below the other**.

> **NOTE**
> If the position of the Y axes has been changed manually before sorting the axes, the manually set order will maintain.

Alternatively, you can use the following ways to sort and scale X/Y axes one below the other:

- From the Plot panel:

    1. Hover the mouse cursor over **Scaling**.
    2. Press **Auto sort X/Y one below the other**.

- From the Scaling menu:

    1. Hover the mouse cursor over **Y axis**.
    2. Press **Adjust Y axis one below the other sorted**.

- From the Plot panel:

    1. Hover the mouse cursor over **Scaling** and then **Y axis**.
    2. Press **Adjust Y axis one below the other sorted**.

Auto recolouring signals and scaling X /Y axes one below the other

To recolour and scale X/Y axes one below the other, follow the steps below:

1. Go to the **Scaling** menu.
   - **Alternatively**, you can right-click on the **Plot panel** and hover the mouse cursor over **Scaling**.
2. Press **Auto colour X/Y one below the other**.

Auto scaling Y axes side by side

To scale Y axes side by side, follow the steps below:

1. Go to the **Scaling** menu.

   - **Alternatively**, you can right-click on the **Plot panel** and hover the mouse cursor over **Scaling**.

2. Hover the mouse cursor over **Y axis**.

3. Press **Auto Y axis side by side**.

   As a result, the Y-axes will be positioned side by side. That way the signals can be spread over the full extent.

Auto scaling X axis

To scale X axis automatically, follow the steps below:

1. Go to the **Toolbar**.

2. Press the **third** scaling button.

   Once it is done, only the X-axis is scaled so that the entire measurement is displayed in the X direction.

   Alternatively, you can use the following way to scale X axis in the X direction:

   1. Right-click on the **Plot panel**.
   2. Hover the mouse cursor over **Scaling** and then **X axis**.
   3. Press **Auto X**.

Stretching the signal along Y axis

To stretch the signal along Y axis, press N key or follow the steps below:

1. Go to the **Scaling** menu.

   - **Alternatively**, you can right-click on the **Plot panel** and hover the mouse cursor over **Scaling**.

2. Hover the mouse cursor over **Y axis**.

3. Press **Stretch Y**.

7.2 Zooming axes

IAV Merida Signals provides zooming options to optimize the representation of the axes (see Figure 29).

Figure 29: Zooming buttons

The following is possible:

- Zooming out along the X and Y axis
- Zooming in along the X and Y axis
- Zooming in by drawing a rectangle

Zooming out along the X and Y axis

To zoom out along the X and Y axis, follow the steps below:

1. Select an individual signal or signals.
2. Go to the **Toolbar**.
3. Do one of the following:
   - Press the **first** zooming button to zoom out along **X axis**.
   - Press the **third** zooming button to zoom out along **Y axis**.

   Alternatively, you can zoom out along the X axis by using the mouse wheel.

NOTE
If no signal is selected, the zooming will be applied to all visible signals.

Zooming in along the X and Y axis

To zoom in along the X and Y axis, follow the steps below:

1. Select an individual signal or signals.
2. Go to the **Toolbar**.
3. Do one of the following:
   - Press the **second** zooming button to zoom in along **X axis**.
   - Press the **fourth** zooming button to zoom in along **Y axis**.

   Alternatively, you can zoom in along the X axis by using the mouse wheel.

NOTE
If no signal is selected, the zooming will be applied to all visible signals.

Zooming in by drawing a rectangle

To zoom in by drawing a rectangle with the mouse:

1. Hold down the left mouse button.
2. Draw a rectangle.
3. Release the mouse button.
4. The whole plot is zoomed to the selected region.

7.3 Showing and hiding the Y axes

Y-axis can be shown and hidden on the Plot panel. These options can be applied only if **Show all Y axes** option in the Graphic menu is not active. When Y axis is hidden, it will no longer be visible in the Plot panel unless a signal which belongs to the axis is currently selected.

The following is possible:

- Showing or hiding Y axes

Showing or hiding Y axes

To show or hide Y axes, press **Ctrl+E**/**Ctrl+Q** keyboard shortcut or follow the steps below:

1. Select an individual signal or signals.

   CAUTION
   Make sure that the selected signals are visible on the Plot Panel. Otherwise, nothing will happen.

2. Go to the **Signal** menu

   - **Alternatively**, you can right-click on the **Plot panel** and hover the mouse cursor over **Signal**.

3. Hover the mouse cursor over **Y-axis**.
4. Press **Show** or **Hide**, depending on which action you want to perform.

   CAUTION
   If no signal is selected, the options **Hide** or **Show** will be applied to Y axes of all visible signals.

   An alternative way to show or hide all Y axes on the Plot panel is to activate the **Show all Y axes** option. To do this, follow the steps below:

   1. Go to the **Graphic** menu.
   2. Press **Show all Y axes**.

7.4 Operating with views

The Views allow to store different signal representations on the graph. This is particularly useful for visualizing signals with varying scaling options, enabling convenient comparison and analysis. A view always contains information about signals to display and their scaling.

The Views allows the following:

- Creating a new view
- Displaying the saved view
- Editing the saved views
- Overwriting the selected view
- Adding visible signals to the selected view

Creating a new view

To create a new view, follow the steps below:

1. Go to the **View** menu.
2. Press **New**.
3. In the New view window that opens, enter a view name.
4. Click **OK** to confirm.
   After confirming, the newly saved view will appear in the Views list.

Displaying the saved view

To display the list of the saved views, follow the steps below:

1. Go to the **View** menu.
2. Hover the mouse cursor over **Views**.
   After that the selected view with its signals in the saved scaling position will be displayed.

NOTE
In the Views list you can find all the views that have ever been saved. However, only signals that are presented in the currently opened file will be displayed in the selected view.

Editing the saved views

To edit the saved views, follow the steps below:

1. Go to the **View** menu.
2. Press **Edit**.
3. In the Views window that opens, select the view you want to change.

   Here it is possible to:

   - change the views order in the list by pressing **Up** and **Down**
   - delete a view by pressing **Delete** and confirming with **OK**
   - create a new view by pressing **New** (see Creating a new view)
   - export a view by pressing **Export**
   - import a view by pressing **Import**
   - search for a view

Overwriting the selected view

To overwrite the selected view, follow the steps below:

1. Go to the **View** menu.
2. Press "***View name***" **Overwrite**.

Adding visible signals to the selected view

To add visible signals to the selected view, follow the steps below:

1. Go to the **View** menu.
2. Press "***View name***" **Append**.

8 Representation settings

8.1 Graphs settings

The representation of the graph on the Plot panel can be set up by using some options in the Graphic menu.

The following is possible:

- Displaying all points on the Graph
- Showing and hiding the Graph' s elements
- Displaying the signal curves with interpolation
- Using dynamic Y axes
- Changing the time values representation on the Graph

Displaying all points on the Graph

If you want to view a measurement with an extremely large numbers of points, some of them may not be displayed and an error message *'Not all measurement points are shown!'* can appear. It is done to keep the display speed.

To display all points on the Graph, follow the steps below:

1. Go to the **Graphic** menu.
2. Press **Display all points**.

   After this function is activated, all points of all signals will be displayed on the Plot panel.

NOTE
The **Display all points** option will display all points for just one time in order to avoid display errors.

Showing and hiding the Graph' s elements

In the Graphic menu, there is a possibility to show and hide the elements on the Graph such as Lines, Points and Grid.

To show or hide elements on the Graph, follow the steps below:

1. Go to the **Graphic** menu.
2. To activate or deactivate a specific element in the Graphic menu (Lines, Points, Grid), toggle its state by selecting or deselecting the corresponding option.

Displaying the signal curves with interpolation

To display the signal curves with interpolation, follow the steps below:

1. Go to the **Graphic** menu.
2. Press **Lines interp.**

> **CAUTION**
> If a smooth curve is to be displayed, it makes sense to deactivate the points and display the lines with interpolation. If interpolation is not activated, the lines are displayed in a staggered form.

Using dynamic Y axes

Dynamic Y-axes is a mechanism that aligns the Y axes so that they take up as little space on the plot panel as possible. The axes are also placed one below another, depending on how far the associated signal extends in the Y-direction.

To use dynamic Y axes, follow the steps below:

1. Go to the **Graphic** menu.
2. Press **Dyn. Y-axes.**

Figure 30 shows an example of a display with dynamic Y-axes. In contrast, Figure 31 shows without dynamic Y-axes.

> **NOTE**
> If the **Dyn. Y-axes** option is activated, you can change the order of Y axes on the Plot by dragging it.

Changing the time values representation on the Graph

It is possible to change the representation of time values on X-axis. Time values can be displayed in a date and time format as follows '24.06.2000 13:43:00' or in seconds.

To change the time values representation, follow the steps below:

1. Go to the **Graphic** menu.
2. Press **Time as Date** to change time values into a date and time format or **Time in seconds** to represent time values in seconds.

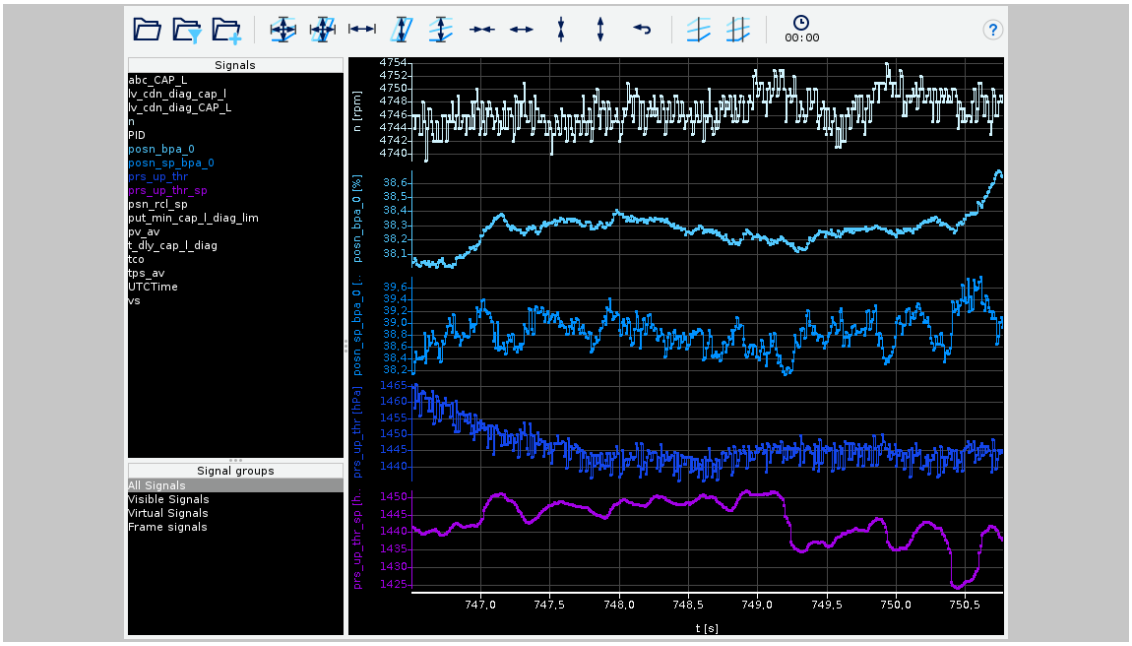


Figure 30: Representation with dynamic Y-axes

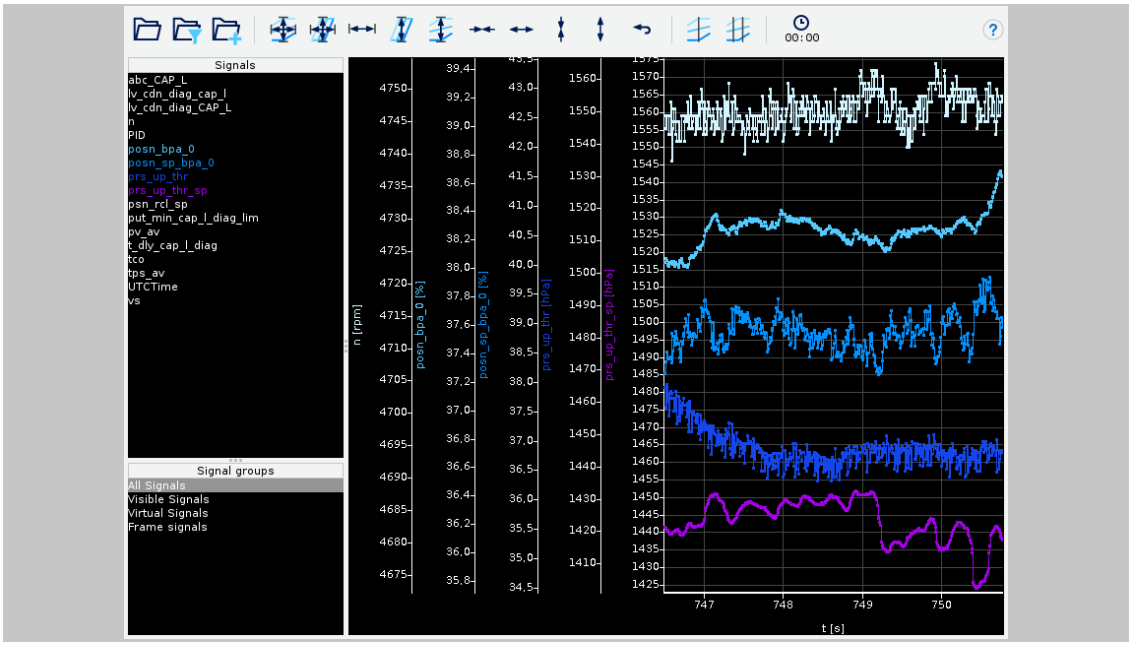


Figure 31: Representation without dynamic Y-axes

NOTE

If none of the options is selected, time is shown as hours, minutes and seconds.

9 Exporting measurement data

9.1 Export of signals and messages

Signals and messages can be exported in the form of a file. For this purpose, different formats are supported.

The following is possible:

- Exporting signals
- Exporting messages
- Setting export parameters
- Editing a file comment

Exporting signals

To export signals, follow the steps below:

1. Press **Export signals** in the File menu or use **E** key to open the Export signals window (see Figure 32).

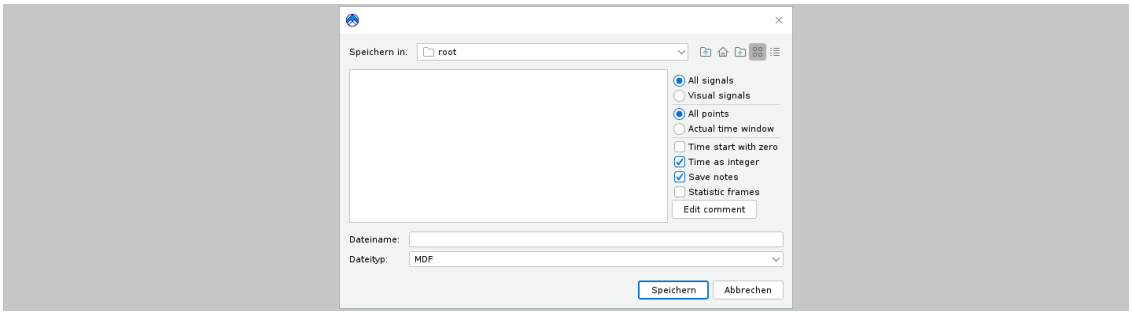


Figure 32: The Export signals window

2. Enter a file name and set export parameters if it necessary (see Setting export parameters).

> **CAUTION**
> If you do not modify the export parameters, the exported file will be saved with the default settings applied.

3. Select an appropriate file format.
4. Click **Save** to export the signals.

Exporting messages

Generally speaking, exporting messages works in a similar way to exporting signals. Here it is only necessary to select the message-based file format –ASC, BLF and PCAPNG are supported. However, it should be noted that the source measurement must also be based on messages.

To export messages, follow the steps below:

1. Open the **File** menu and deactivate the **Load signals** only option.

   CAUTION
   For exporting to message-based formats, the **Load signals only** option must be deactivated before loading the source measurement file.

2. Press **Export signals** in the File menu or use **E** key to open the Export signals window (see Figure 32).
3. Enter a file name and set export parameters if necessary (see Setting export parameters).

   CAUTION
   If you do not modify the export parameters, the exported file will be saved with the default settings applied.

4. Select an appropriate message-based file format (e.g., ASC, BLF or PCAPNG).
5. Click **Save** to export the signals.

Setting export parameters

To set export parameters, follow the steps below:

1. Select the parameter in the right sidebar of the Export signal window.

   The following are available:

   - **All signals** - to export all signals.
   - **Visual signals** - to export only visual signals.
   - **All points** - to export values for the whole period.
   - **Actual time window** - to export values only for the area currently displayed in the Plot panel.

   While exporting signals in **MDF format**, more options are available:

   - **Time start with zero** - to set the exporting start time. If the option is activated, the time will start from zero. Otherwise, the time will be output as is.
   - **Time as integer** - to set the time values as an integer (by activating the option) or double.

- **Save notes** - to save notes on signals (see 6.2 Notes on the signal).
- **Edit comment** - to edit a file comment (see Viewing and editing a file' s metadata).

Editing a file comment

With the **Edit comment** option, an MDF-specific comment can also be written in the file. The comment of the currently opened file (only with MDF) can be displayed with the **Display comment** option in the Signal menu.

To edit a file comment, follow the steps below:

1. Press **Edit comment**.
2. Make changes in the Comment window.
3. Click **OK** to confirm.

9.2 Graphic export

The following is possible:

- Graphic exporting

Graphic exporting

The current view in the Plot panel can be exported as PNG and SVG graphs.
To export the graphic, follow the steps below:

1. Press **Graphic export** in the File menu.

   - **Alternatively**, you can press **Graphic export** in the Graphic menu or right-click on the **Plot panel** and then press **Graphic export** in the Graphic menu.

   The Graphic export window will appear (see Figure 33).

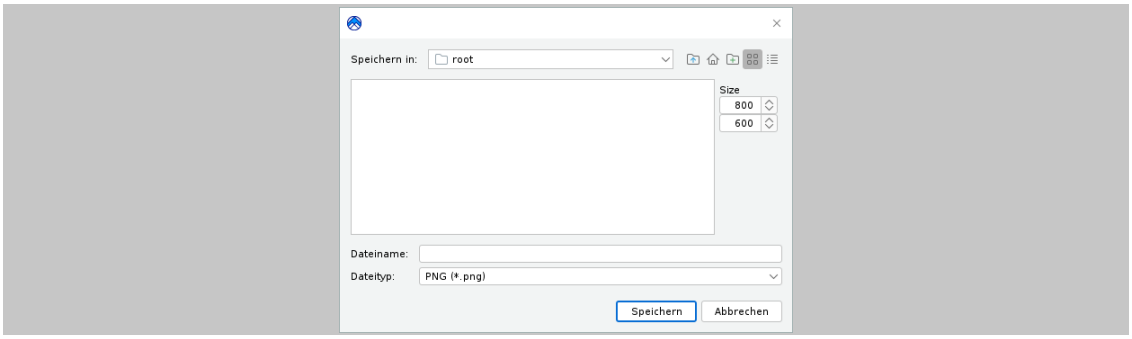


Figure 33: The Graphic export window

2. Enter a file name, file type and set the size of the downloaded graphics (in pixels) if necessary.
3. Click **Save** to export the graphic.

9.3 Signal list export

The signal list of a measurement file can be exported in a text format. This list of signals can be used in other tools.

The following is possible:

- Exporting signals as a list

Exporting signals as a list

To export signals as a list, follow the steps below:

1. Press **Export signals as list** in the Signal menu.

   - **Alternatively**, you can right-click on the **Plot panel** and press **Export signals as list** in the Signal menu.

2. Enter a file name in the opened window.

3. Click **Save** to export the signal list.

NOTE
The exported signal list can be later used when opening a measurement file with the option of a signal list preview. This means that a previously exported signal list (via the 'Export signals as a list' option) can be imported into the 'Signal selection' window to promptly mark the signals that need to be displayed. For more information on how to import a signal list, see Importing and exporting a signal list.

10 Tools

IAV Merida Signals provides a variety of tools for working with measurement files, offering the following capabilities:

- Determining the most appropriate channel for DBC files (see Platform detection for DBC files).
- Viewing CAN message statistics (see CAN messages statistics).

10.1 Platform detection for DBC files

The Platform detector can be used to detect the most appropriate channel for a DBC file.

Using the Platform detector, the following is possible:

- Detecting an appropriate channel
- Filtering the estimation results
- Saving settings as a new platform
- Deleting a data description file

Detecting an appropriate channel

To detect an appropriate channel, follow the steps below:

1. Press **Platform detector** in the Tools menu.
   After it is done, the Platform detector window is opened (see Figure 34).

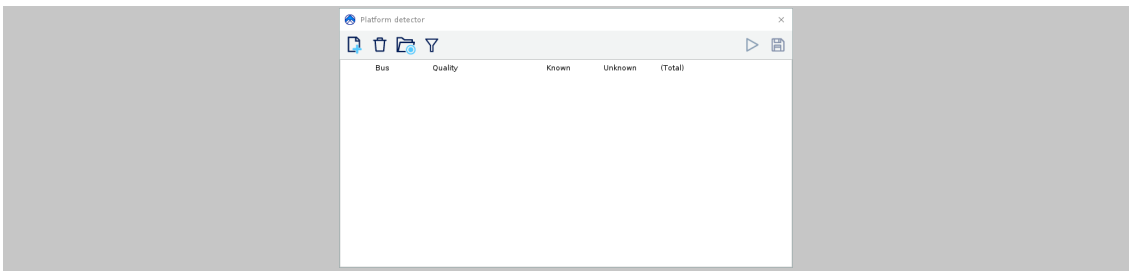


Figure 34: The Platform detector window

2. Press **Folder** icon and add a measurement file (frame-based).
   After it is done, a measurement file appears in the window.
3. Press **New decoder** icon and add data description files.
4. Press **Start** icon at the right corner of the window to run the detection.
   When the processing ends, the list of channels that can be used to open a file is provided together with:

- **Quality** (%) - the estimations of how suitable a particular channel is.
- **Known** and **Unknown** - the number of CAN messages that can and cannot be decoded correspondingly.
- **Total** - the total number of messages in your DBC file.

NOTE

- For some measurement files another small window appears where a data format must be specified.
- If a measurement file is quite large, it is also possible to pause the detection by clicking on the **Start** icon once again and to view intermediate results.

Filtering the estimation results

The estimation results of Quality value can be filtered to see the most and the least relevant channels for DBC files with the help of the Filter function.

To filter the estimation results, follow the steps below:

1. Press **Filter** icon
2. Drag a slider to set the Quality value.
   - **Alternatively**, you can enter a particular number in the square next to the slider.

Saving settings as a new platform

To save the selected settings as a new platform, follow the steps below:

1. Select the channels by ticking a box.
2. Press **Save** icon
3. Enter a platform name in the opened window.
4. Click **OK** to confirm the saving.
   After saving, the platform appears in the Platform dialog box (to see it, press **P** keyboard key).

Deleting a data description file

To delete a data description, follow the steps below:

1. Select the file name by clicking on it.
2. Press **Delete** icon in the menu.

10.2 CAN messages statistics

IAV Merida Signals allows viewing statistics on CAN channels presented in frame-based measurement files.

The following is possible:

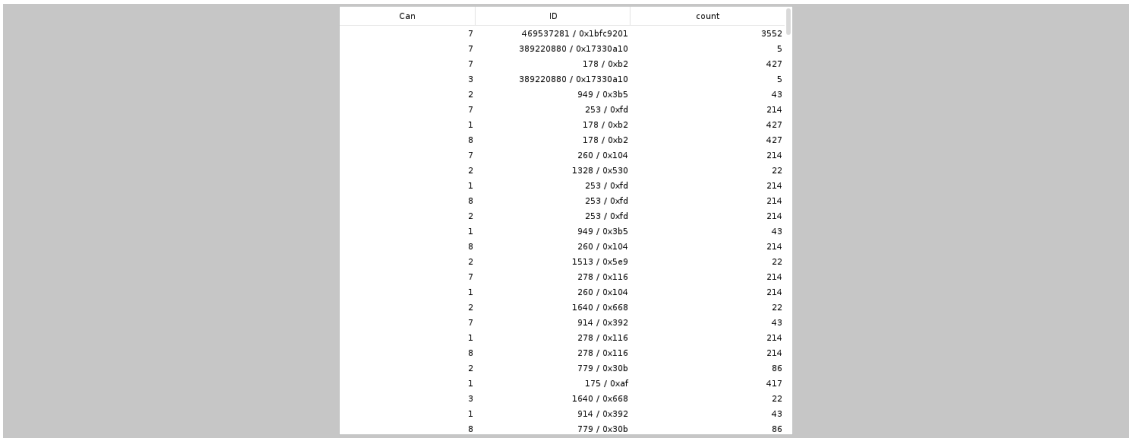
- Viewing statistics on CAN channels

Viewing statistics on CAN channels

To view statistics on CAN channels, follow the steps below:

1. Press **CANStat** in the Tools menu.
2. Select a measurement file (frame-based) on your computer and press **Open**.

   After it is done, the CAN statistics window opens (see Figure 35). Here you can view such data as CAN channel, message ID and the total number of CAN messages contained in the file.



Can	ID	count
7	469537281 / 0x1bfc9201	3552
7	389220880 / 0x17330a10	5
7	178 / 0xb2	427
3	389220880 / 0x17330a10	5
2	949 / 0x3b5	43
7	253 / 0xfd	214
1	178 / 0xb2	427
8	178 / 0xb2	427
7	260 / 0x104	214
2	1328 / 0x530	22
1	253 / 0xfd	214
8	253 / 0xfd	214
2	253 / 0xfd	214
1	949 / 0x3b5	43
8	260 / 0x104	214
2	1513 / 0x5e9	22
7	278 / 0x116	214
1	260 / 0x104	214
2	1640 / 0x668	22
7	914 / 0x392	43
1	278 / 0x116	214
8	278 / 0x116	214
2	779 / 0x30b	86
1	175 / 0xaf	417
3	1640 / 0x668	22
1	914 / 0x392	43
8	779 / 0x30b	86

Figure 35: The CAN statistics window

CAUTION
In some cases, to open statistics a data format must be first specified.

NOTE
By clicking on the column name, the values presented in the dialog box, can be sorted in descending and ascending order.

11 Interface language settings

IAV Merida Signals interface supports German and English languages.

The following is possible:

- Changing the interface language

Changing the interface language

To change the interface language, follow the steps below:

1. Go to the **Language** menu.
2. Select the desired one by clicking on it.

CAUTION
To change the interface language, Merida Signals must be restarted.

12 Help

In the Help menu, you can find supplementary information about IAV Merida Signals.

The following is possible:

- Viewing the IAV Merida Signals manual
- Requesting the support
- Renewing licence
- Viewing IAV Merida Signals changelog
- Viewing IAV Merida Signals information

Viewing the IAV Merida Signals manual

To view the IAV Merida Signals manual, follow the steps below:

1. Hover the mouse cursor over **Manual** in the Help menu.
2. Select the manual in the desired language.
   After one is selected, the manual opens in PDF format.

Requesting the support

To request the technical support, follow the steps below:

1. Press **Contact support** in the Help menu.
   After it is done, your e-mail client opens automatically.
2. Enter the subject line and your request.

   CAUTION
   Be sure the subject line is filled and specifies your request.
3. Press **Send** to e-mail the technical support team.

Renewing licence

You can request for another 180 days of activation once your current activation period expires.

To renew licence, follow the steps below:

Figure 36: The Confirmation window

1. Press **Renew Licence** in the Help menu.

   After it is done, the confirming window opens (see Figure 36).

2. Click **OK** to confirm.

   After confirming, IAV Merida Signals will be closed.

   > **NOTE**
   > When you send this request, the current activation will be deactivated and you will only be able to use IAV Merida Signals again after reactivation.

3. Restart **Merida Signals** and request a new license (see Activating Merida Signals to get familiarized with the activation process).

Viewing IAV Merida Signals changelog

To view IAV Merida Signals updates, follow the steps below:

1. Go to the **Help** menu.
2. Press **Changelog**.

   After it is pressed, the Changelog window opens (see Figure 37). Here you can view information about Merida Signals releases (their versions, fixed bugs and new features).

Viewing IAV Merida Signals information

To view IAV Merida Signals information, follow the steps below:

1. Go to the **Help** menu.
2. Press **Info**.

   After it is pressed, the Info window opens (see Figure 38). Here you can find quick information about the latest update and support contacts.

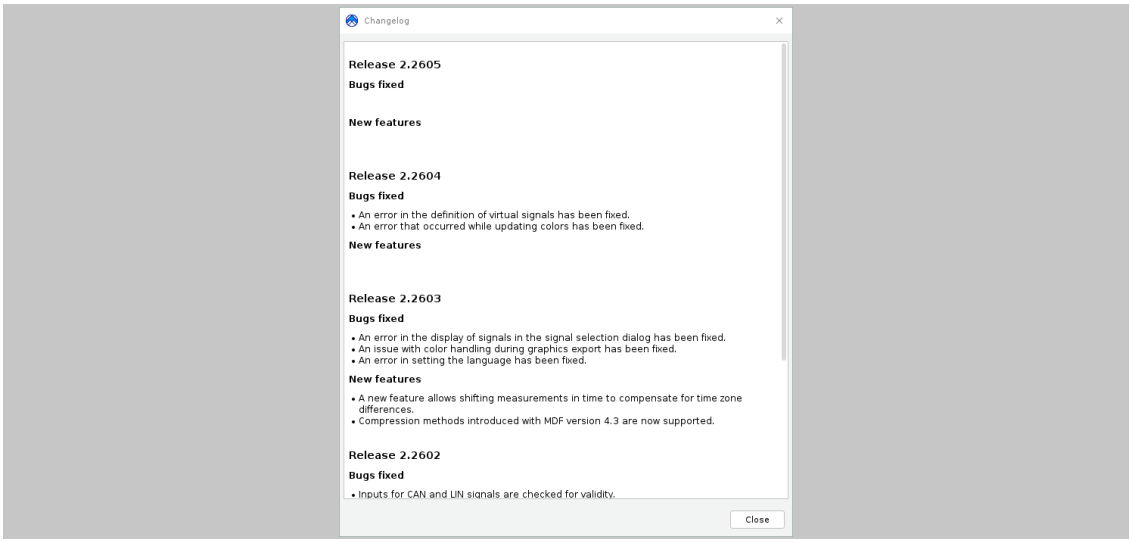


Figure 37: The Changelog window

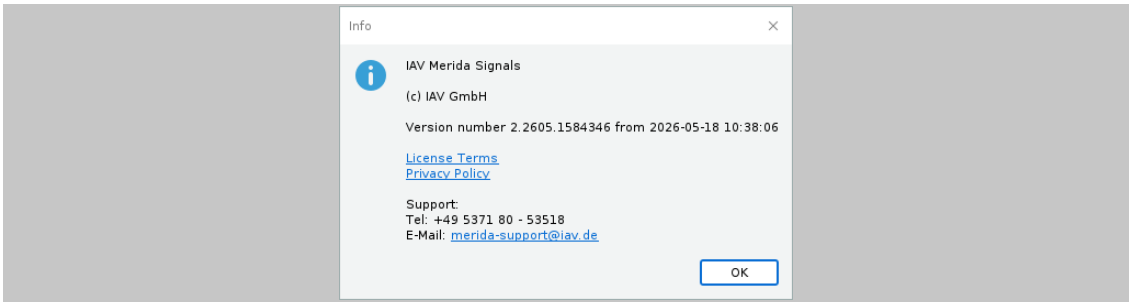


Figure 38: The Info window

13 Operating Merida Signals via Keyboard

This section describes all the keys and key combinations that will help you quickly operate Merida Signals functions.

Function in Merida Signals	Description	Key/Keyboard shortcuts	Reference to the manual
Select all	Select all the signals in the Signal list	CTRL + A	Displaying signals on the Plot panel
Search	Basic search for signals	F1	Searching for signals
Search with RegEx	Search for signals with regular expressions	F11	Searching for signals
Switch list	Switching from one signal group to another in the Signal list area	M	Switching between signal groups
Toggle extended info	Show or hide all additional parameters in the signal names	CRTL+I	Showing and hiding additional information on signals
Colour	Change a colour of the selected signals	F	Changing the colour of selected signals
Recolour visible signals	Recolour visible signals	CTRL + F	Recolouring visible signals
Info	View signal information	I	Viewing signal information
Trace window	Open the Trace window	T	Trace window
Cursor	Display a single cursor	Period	Viewing signal values with Single cursor
Two cursors	Display a double cursor	Comma	Viewing signal values with Double cursor
Add	Add note to the signals	Ctrl +H	Adding a note
Display notes	Display the signals notes	A	Adding a note
Remove	Remove signal from the Plot panel	Delete	Removing a note

Table 1: Operating with signals

Function in Merida Signals	Description	Key/Keyboard shortcuts	Reference to the manual
Adjust scaling	Scale the signals at the same position in the Y and X axes	F2	Scaling several signals at the same position in the Y axis
Input Y	Scale Y axes manually by setting coordinates (from, to)	Shift+Y	Scaling X and Y axes manually
Input X	Scale X axis manually by setting coordinates (from, to)	Shift+X	Scaling X and Y axes manually
Auto overlap X/Y / Adjust Y overlap	Auto scale X/Y axes with overlapping signals curve	Shift+W/ W	Auto scaling X/Y axes with overlapping signals curve
Auto X/Y one below the other	Auto scale X/Y axes with Y-axis curves one below the other	B	Auto scaling X/Y axes with Y axes positioned one below the other
Auto sort X/Y one below the other	Auto sort and scale X/Y axes with Y-axis curves one below the other	Shift+V/V	Auto sorting and scaling X /Y axes one below the other
Auto colour X/Y one below the other	Auto recolour signals and scale X /Y axes one below the other	Shift+F	Auto recolouring signals and scaling X /Y axes one below the other
Stretch Y	Stretch the signal along Y axis	N	Auto scaling Y axes side by side
Show	Show Y axes on the Plot panel	Ctrl+E	Auto scaling X axis
Hide	Hide Y axes on the Plot panel	Ctrl+Q	Stretching the signal along Y axis

Table 2: Scaling configuration

Function in Merida Signals	Description	Key/Keyboard shortcuts	Reference to the manual
Export signals	Signals and messages export	E	Exporting signals

Table 3: Exporting measurement data

14 Troubleshooting

Signals are not displayed

Issue: When opening a message-based measurement with 'data description' selected, the expected signals are not displayed.

Solution: Check that all data descriptions have been applied to the correct channels (see Configuring a platform).

NOTE
IAV Merida Signals integrates data descriptions for each individual channel.

RegEx search returns no results

Issue: When using a search with the regular expression (e.g. '^start*end$'), the expected result is not displayed. The list of signals is empty.

Solution: When using regular expressions, the asterisk (*) is commonly used as a repetition symbol. However, if you are looking for a wildcard character that represents multiple symbols, you can use ".*" (e.g. '^start.*end$'). This combination allows you to match any character or sequence of characters in the specified position.

Error 'null InvalidPathException'

Issue: A measurement file does not open and the error message "null InvalidPathException" is displayed.

Solution: Make sure that your measurement file and its corresponding data description, which were configured earlier, retain their original file paths and still exist on your device. If either of these files is deleted or moved to another folder, an error message may occur. This issue arises due to the disruption of settings in the previously configured platform.

Not all signals are displayed

Issue: After a message-based measurement file is opened and the Platform is configured, no signals but 'UTCTime' and 'arrayVariable' are displayed.

Solution: To open and view signals from your measurement file, make sure that an appropriate platform is chosen. If the platform is not chosen, only certain signals as 'UTCTime' and/or 'arrayVariable' are displayed.

No possibility to choose a platform

Issue: After selecting a decoder with the matching channel, the OK button is not active, only 'Cancel' and 'Skip' can be selected.

Solution: To choose a platform, you should first select the platform name and confirm your choice by pressing the OK button. If you ignore this step or select the channel name first, the OK button will be unavailable.

Merida Signals does not start

Issue: Merida Signals is not launching.

Solution: Most common it can occur due to an outdated version of Merida Signals. To resolve the issue, update Merida Signals to the latest version. If the issue persists, contact our support team at merida-support@iav.de.

15 Uninstallation the software

If you need to remove the IAV Merida Signals from the computer, it can be done with the help of Uninstaller.

To uninstall IAV Merida Signals, follow the steps below:

1. Find IAV Merida Signals in the **Start** menu.
2. Right-click on the tool.
3. Select **Uninstall**.

Glossary

ASC

Proprietary logging format designed by the company Vector. 13

BLF

Proprietary logging format designed by the company Vector. 13

CAN

Controller Area Network is a bus system. 4

CAN message

Messages on the CAN. 13

Data description

Files that do not contain data in the actual sense, but metadata. For example, a data description can contain the information in which CAN message and in which form a certain signal was transmitted. 13

Data loggers

Measuring device for recording CAN messages. 13

DBC

The database CAN file format for describing CAN messages. 4

IAV Merida Signals

IAV Merida Signals is a tool designed for viewing measurement files from the vehicle. 4

MDF

Measurement Data Format (MDF) is a binary file format for measurement data that was developed by Vector in collaboration with Robert Bosch GmbH in 1991. 4

Message

Data packets transmitted in bus systems such as CAN. 13

Platform

In IAV Merida Signals, a platform is the set of data descriptions needed to open a measurement from a specific measuring device with a specific configuration. 13

Plot Panel

In IAV Merida Signals, the plot panel is the window where measurement signals are displayed. 56