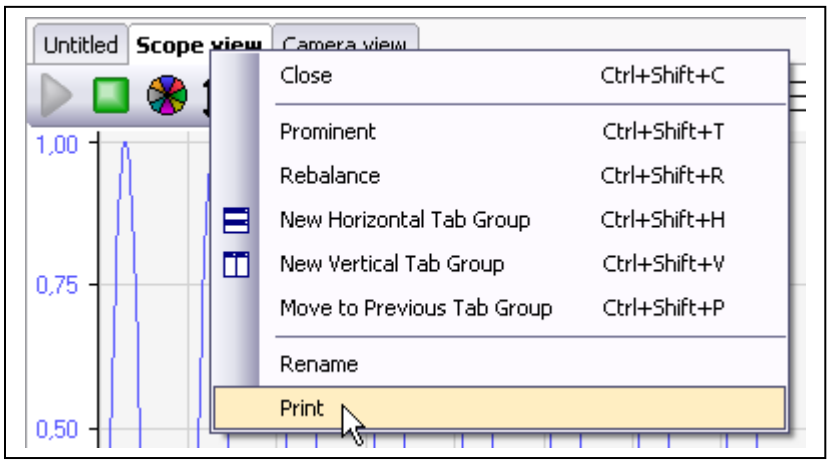
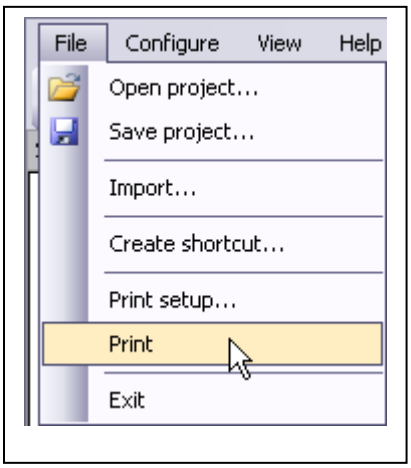
New features in ibaPDA v6.19.0

1 Printing

1.1 General

ibaPda supports printing of each view separately, or all views at once. The first option can be achieved by right clicking a view tab and selecting the ‘Print’ menu item. Printing all views at once can be done by clicking the ‘Print’ item in the ‘File’ menu.

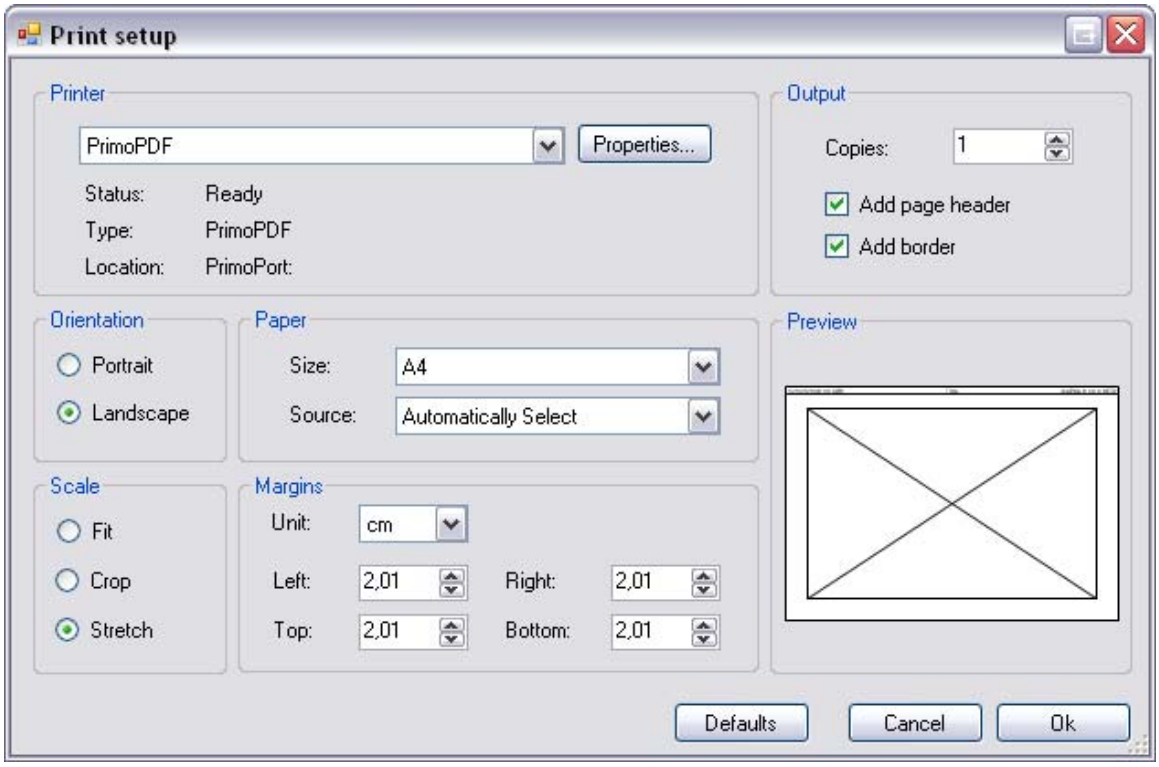




One can access the ibaPda print setup dialog in the File menu by clicking ‘Print Setup…’ When printing via a view’s tab menu, the print settings dialog will also appear.

This dialog provides the usual printing options:

- printer selection and the possibility to open printer specific options dialog
- number of copies
- page orientation
- page size and printer tray
- page margins

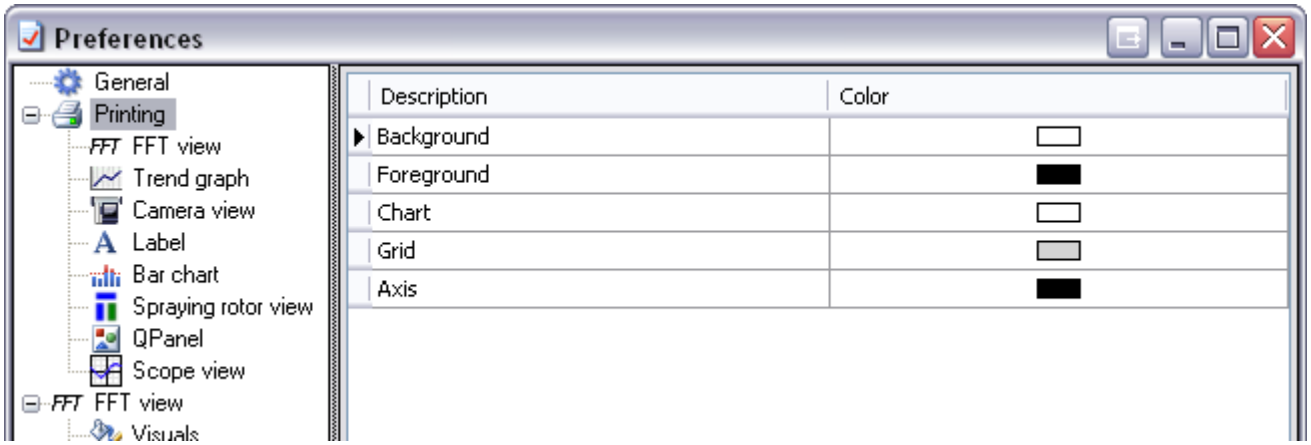


Some printing options are more specific to ibaPda:

- Scale
  - Fit: The views to be printed will be scaled to fit the margin area without changing their aspect ratio.
  - Crop: The views to be printed won't be scaled. They will be printed to screen size. The printed image will be cropped to the margin area if larger.
  - Stretch: The views to be printed will fit the entire margin area. Aspect ratio will not be maintained.
- Margins
  - The minimal values depend on the selected printer's non-printable page area.
- Preview
  - Shows a schematic print preview. When scaling mode 'fit' is selected the view's aspect ratio is assumed to be square.
- Output
  - A page header can be added to the top of the page which contains a time stamp, the title of the view being printed and the ibaPda version being used.
  - A border can be printed around the view.

1.2 Views

In order to save out on printer ink, printing colors can be assigned for all views. In the preferences dialog the printing options are grouped together. Here, the default printing options can be set.

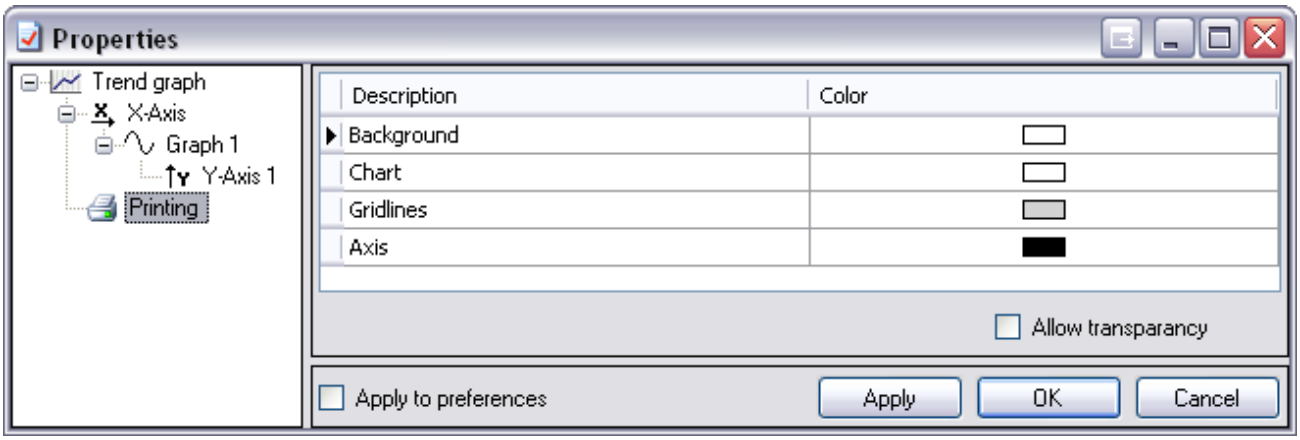


In most cases the print preferences allow to specify printing colors. For some views the use of transparent colors while printing can be en/disabled.

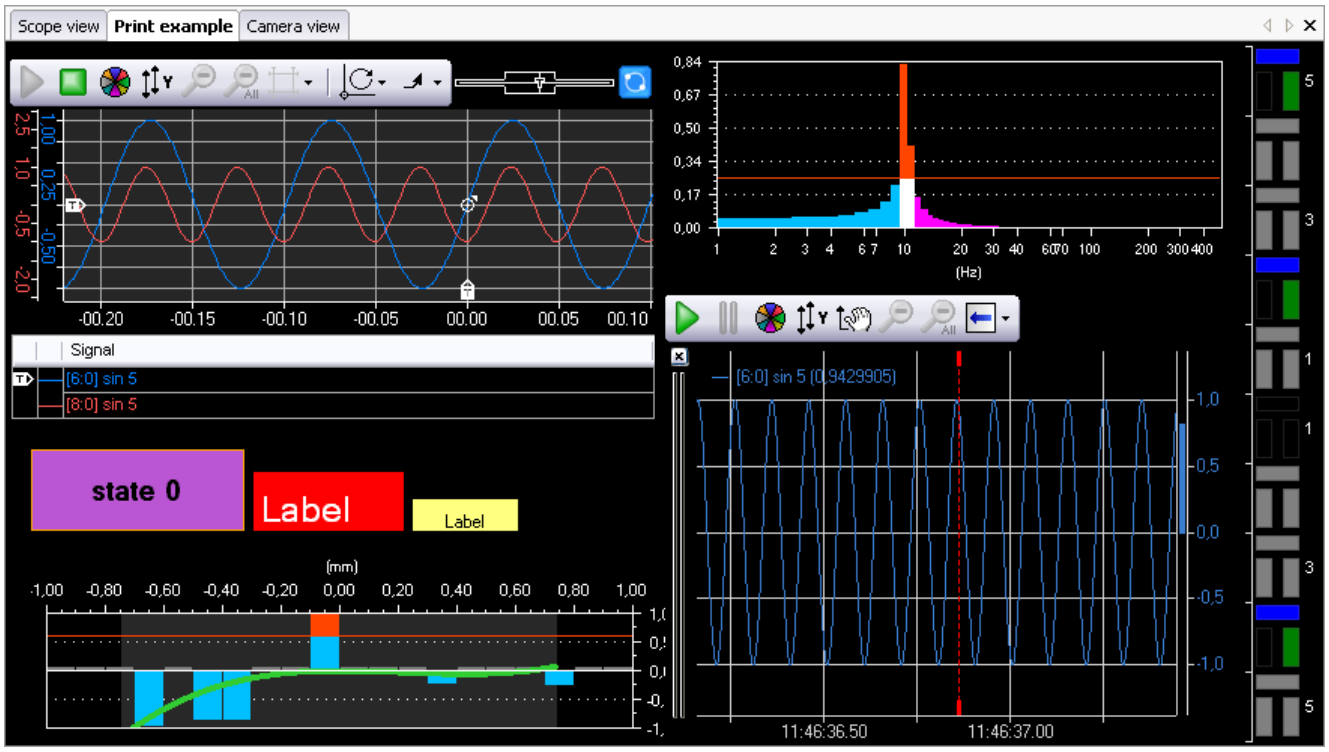
In the main printing node, printing colors can be specified as well. By clicking 

, these colors will be applied to all the views.

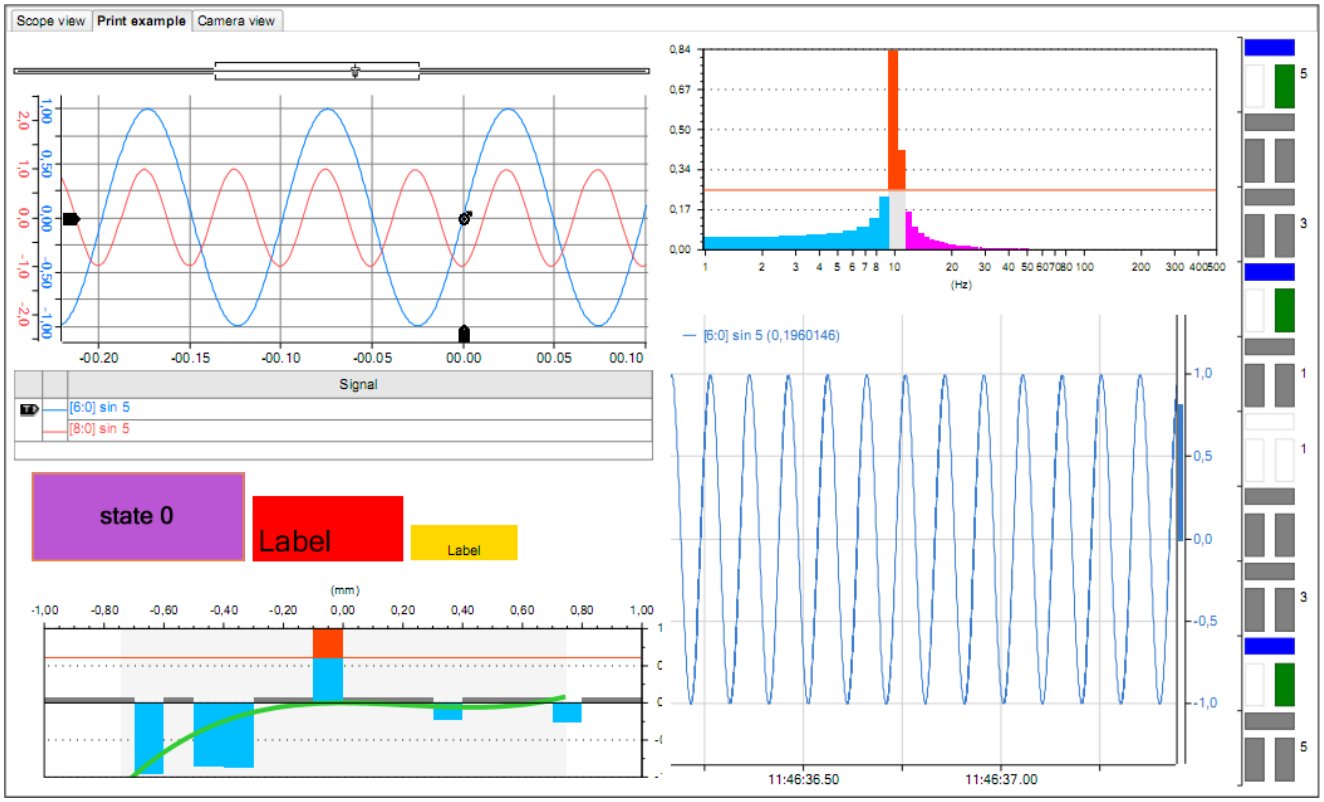
Printing properties have also been added to the properties of instances of all these views. So one trend graph can be printed using different printing settings than another trend graph.



This way, for example, an ibaQPanel view that looks like this on screen:



can be printed as:

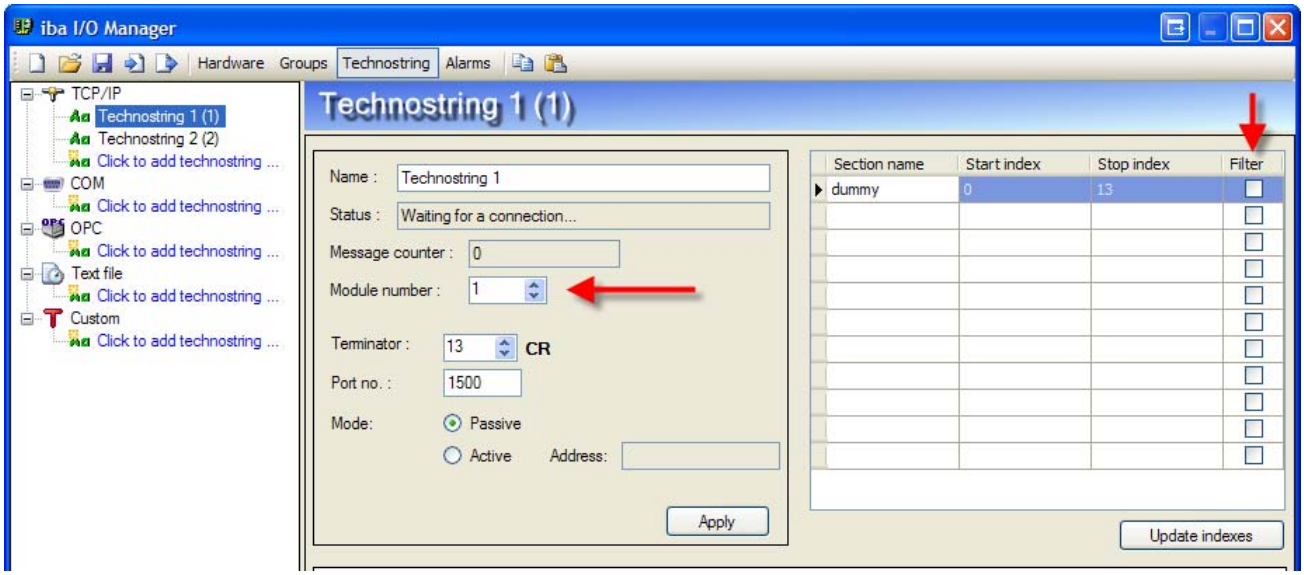


2 Changes to dat file

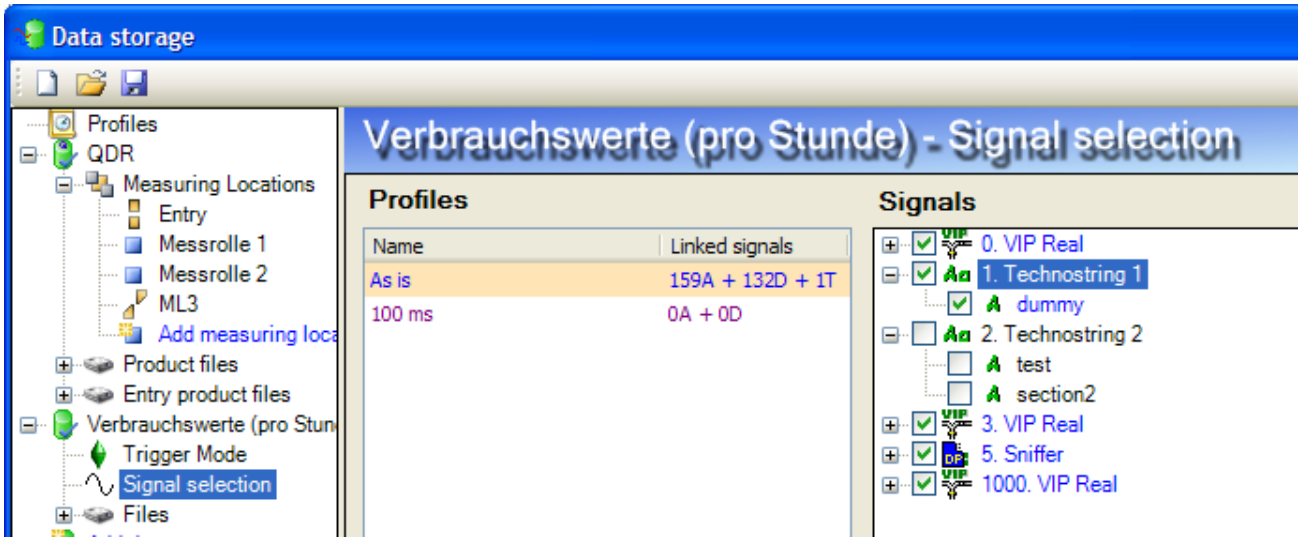
2.1 Text channels

Technostring sections could already be used as text channels in QPanel. Now these text channels can also be written to the dat file. ibaAnalyzer v5.14.0 is required to read these text channels from the dat file.

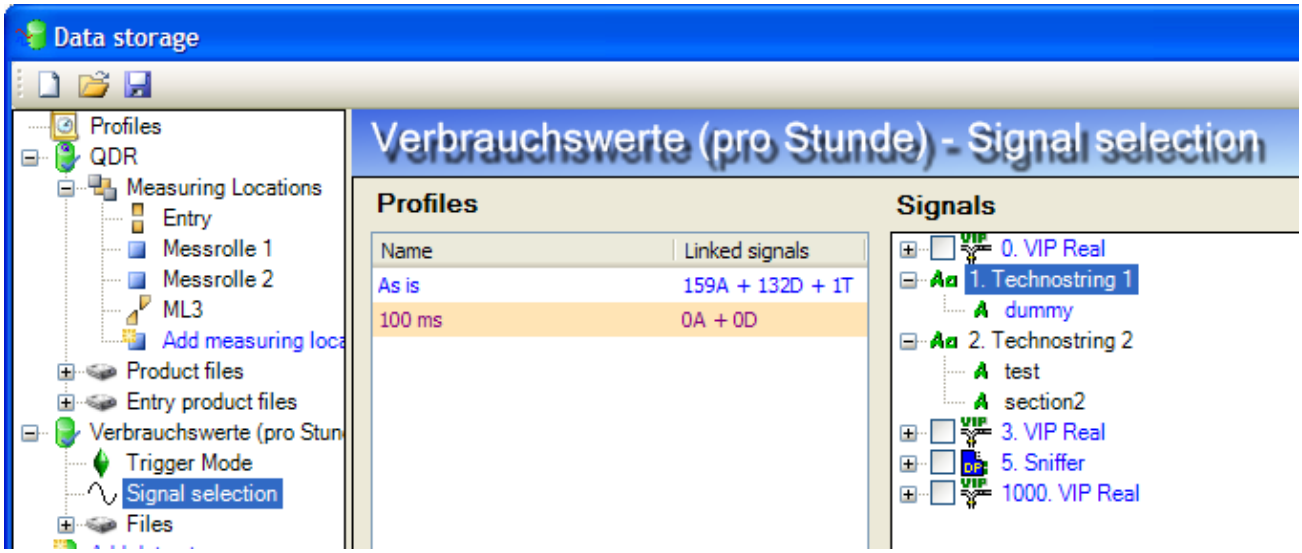
A signal in the dat file needs a signal number. That is why technostrings now have a module number. The module numbers must be unique so a module number cannot be used by both a real module and a technostring. ibaPDA automatically renumbers modules and technostrings when it detects duplicate module numbers. When an old configuration is loaded with technostrings without module numbers then ibaPDA automatically assigns free module numbers to the technostrings.



A technostring section has a new property called filter. If filter is disabled then each time a new technostring is received the section value is written to the dat file. If the filter is enabled then the section value is only written to the dat file if it is different than the previous section value.



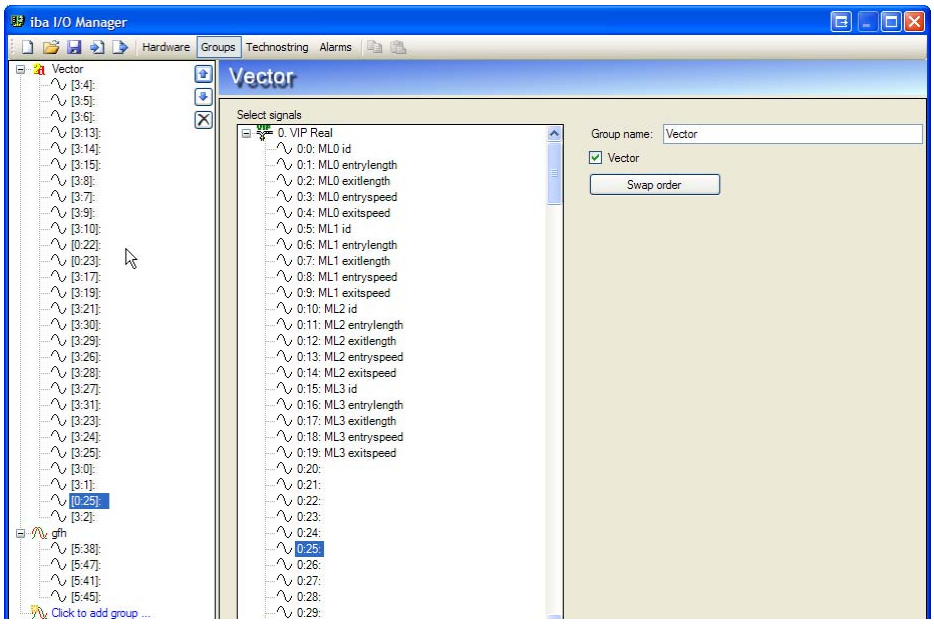
The text channels now appear in the signal tree in the data storage configuration dialog. You can only assign them to the As is profile. If another profile is selected then the checkboxes next to the text channels disappear.



2.2 Groups and vectors

The vector and group information has changed in the dat file. The order of the groups and the position of signals within a group or vector are now saved in the dat file. ibaAnalyzer v5.14.0 is required to read this new group and vector information. Vectors in the dat file are shown as multidimensional signals in ibaAnalyzer. The user doesn't have to do anything to add the group/vector information in the dat file. If only some signals of a vector are part of the dat file then you will get warning in the datastore validation dialog.

The group editor in the I/O manager is improved. You can now use buttons to change the order of groups and signals. You can also delete signals and groups via a button. You can add signals to a group by doubleclicking the signals in the right signal tree.

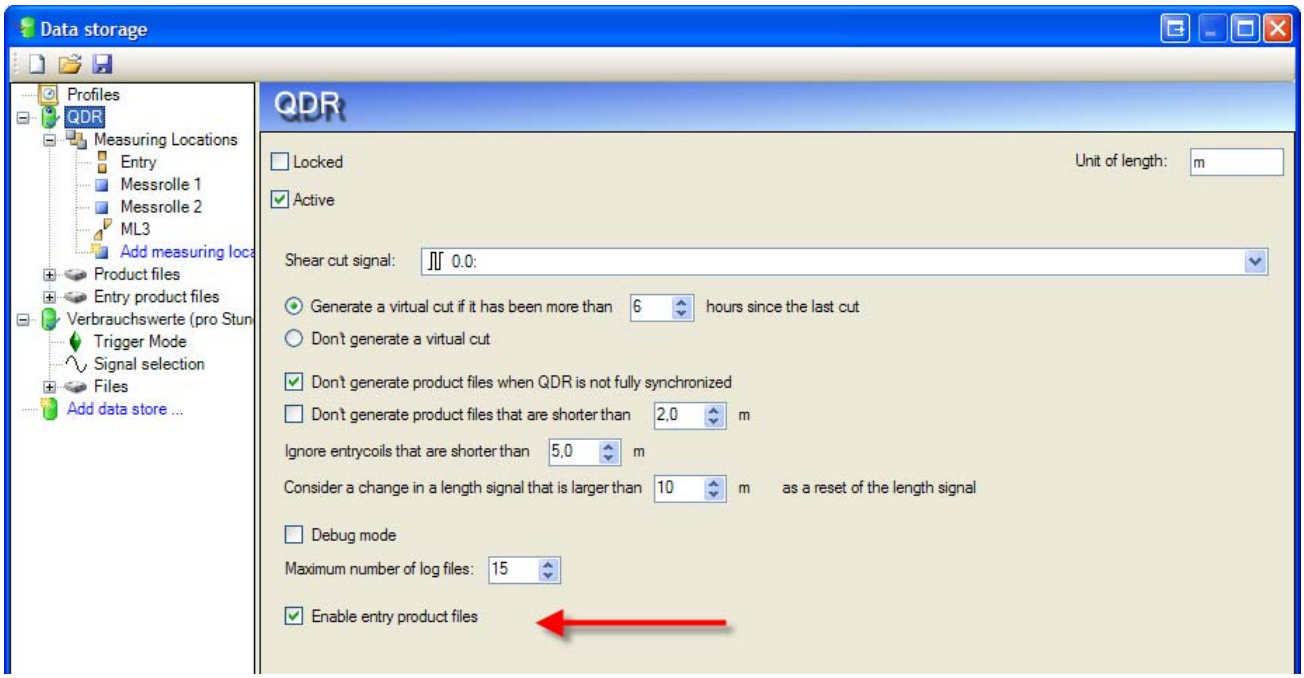


3 ibaCapture-CAM view

See separate document

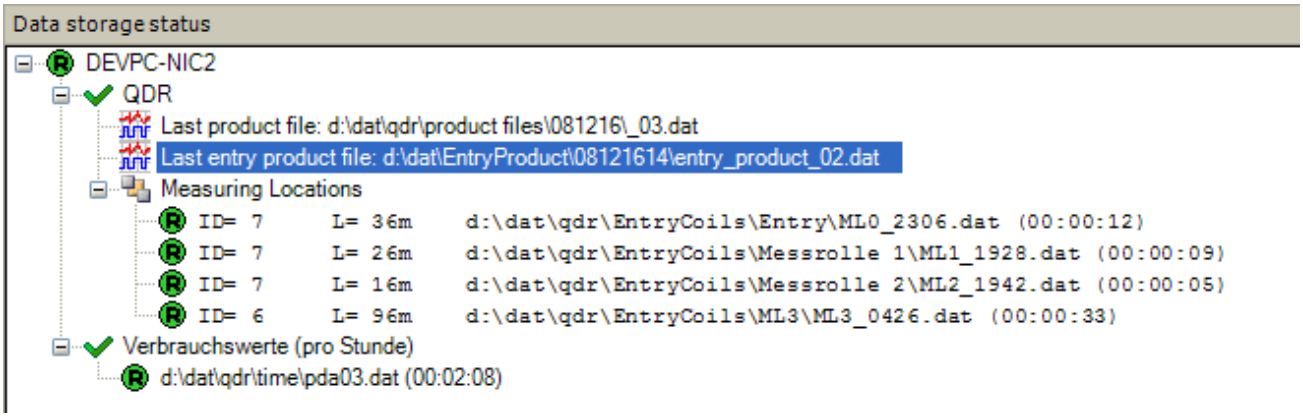
4 QDR new features

Entry product files are dat files that contain all process data measured along the entire processing line for a full entrycoil. An entry product file is in essence a normal product file created by a cut at every weld seam that passes the shear. The generation of entry product files can be enabled on the general QDR datastore node in the datastore configuration dialog.



When entry product files are enabled the entry product files node appears in the tree. Like with normal dat files and product files you can specify the file location, file naming, cleanup strategy and postprocessing. The signals in the entry product files are the same as the signals in the normal product files.

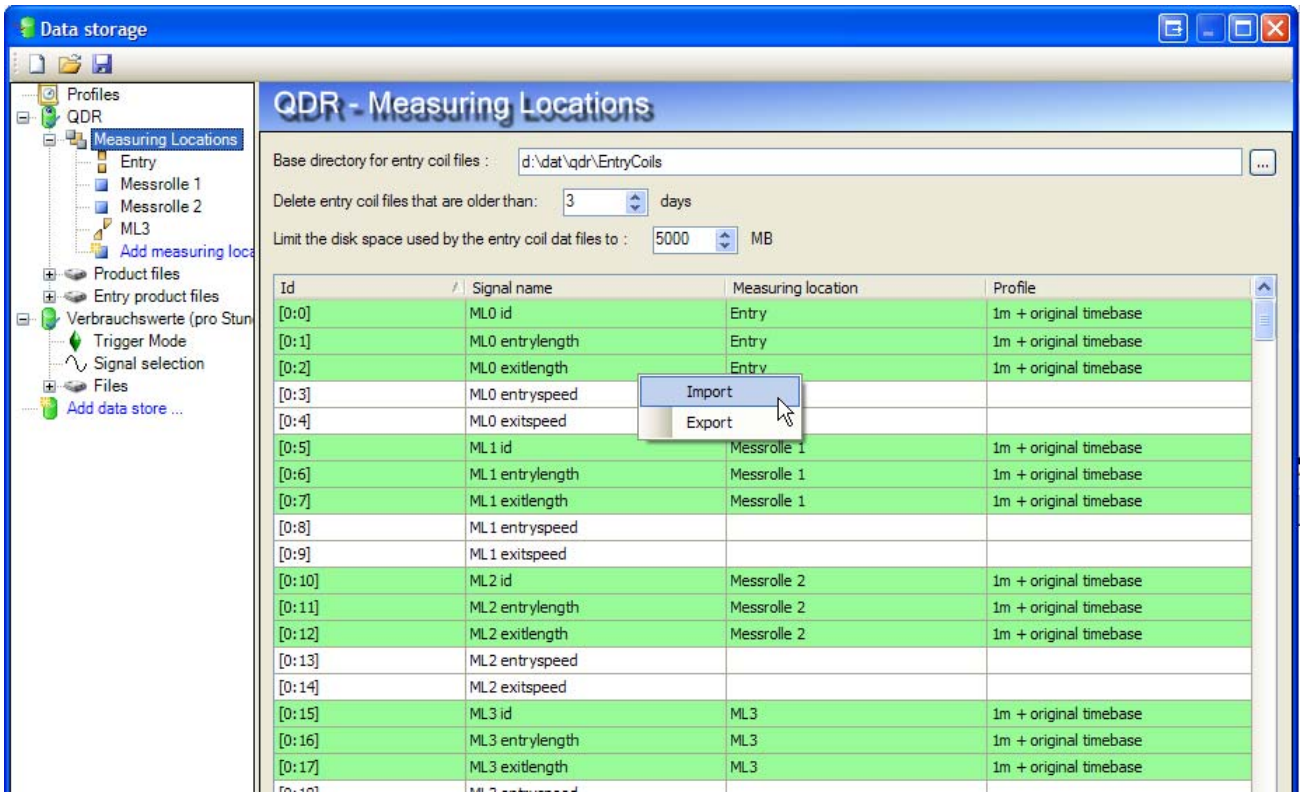
The QDR status tree also shows the last created entry product file.



The maximum number of QDR log files can now be configured by the user on the general QDR datastore node. Previously this number was fixed to 15. QDR automatically creates a new log file every day.

There is a new infofield in the product and entry product files called $QDR_WelderEntryTime. This infofield contains the timestamp when the product has passed the welder.

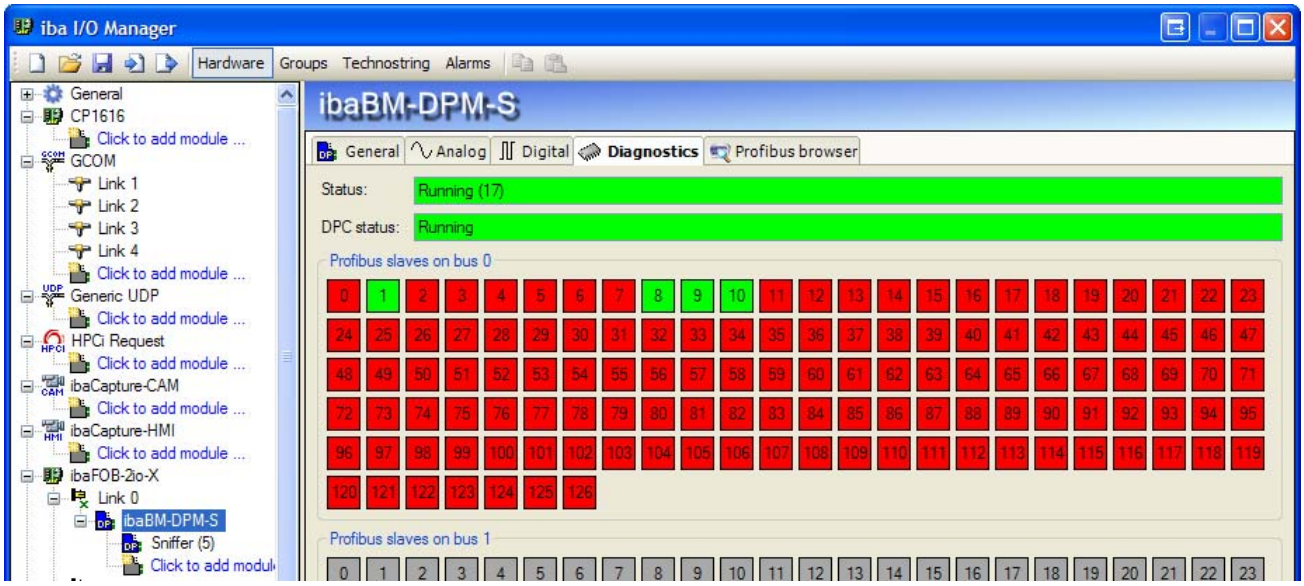
The assignment of signals to measuring locations and profiles can be exported and imported to/from a text file. This allows the user to use Excel for the signal assignment.



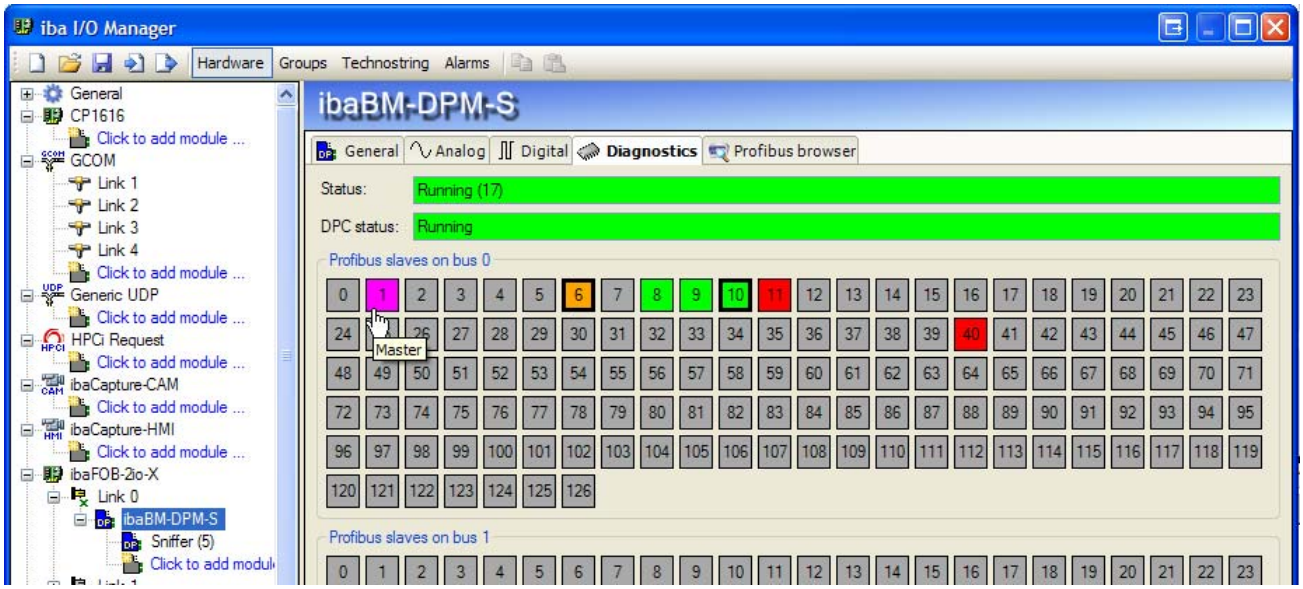
5 Improved ibaBM-DPM-S diagnostics

ibaPDA can now connect to the DPM-S via the network and get more advanced diagnostics. The DPM-S needs firmware A7 (TBD) or higher.

ibaPDA automatically tries to connect to the new diagnostics service of the DPM-S. If it can't connect then the new diagnose features are disabled. In the old mode you get the following bus overview.



In the old mode a slave can have only 2 states: slave is ok or not ok. A slave is ok if it is on the bus and the master is accessing it. The new diagnose gives more information.

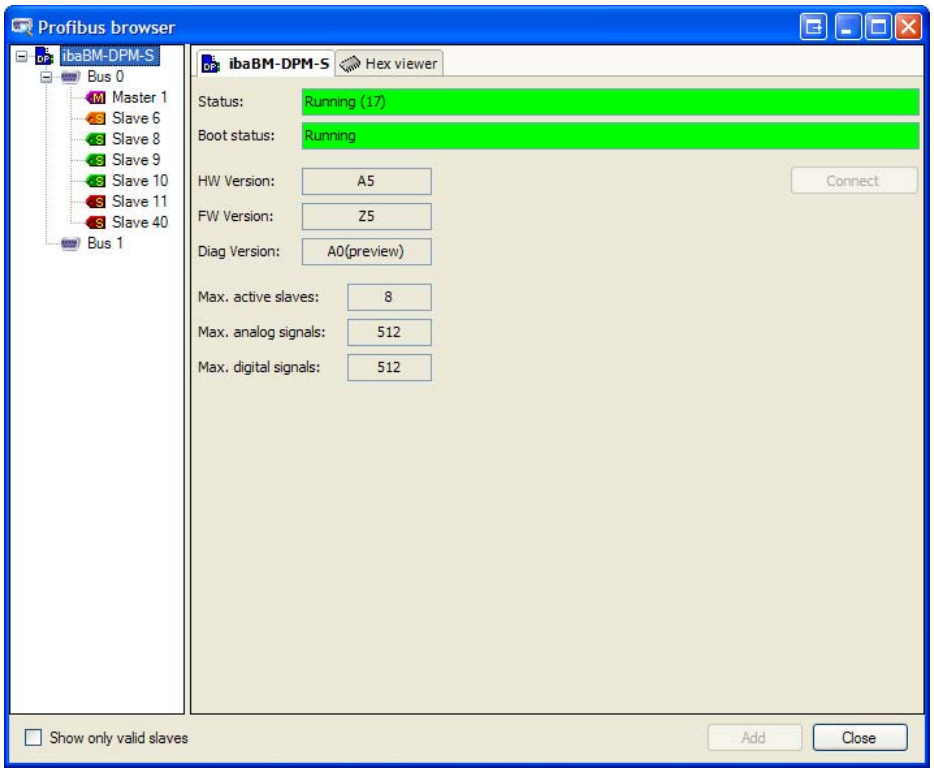


A slave can have the following states:

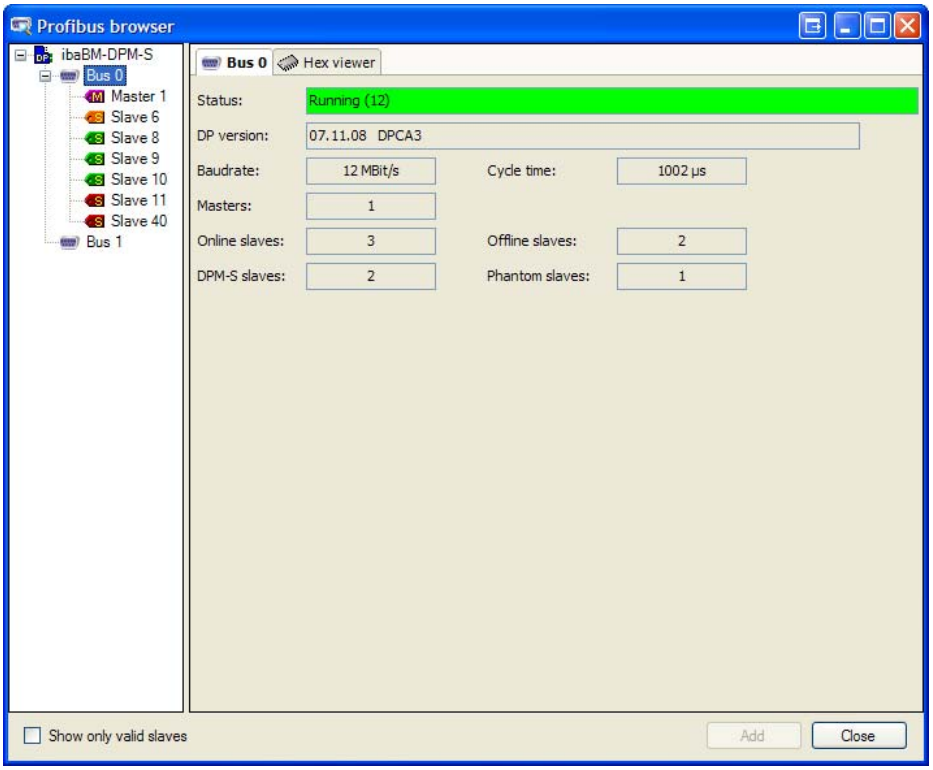
State	Color	Slave on bus?	Accessed by master?	Comment
OK	green	YES	YES	This slave is ok
Missing	red	NO	YES	This will result in a bus fault on the master.
Phantom	orange	YES	NO	This means that the slave is not configured on the master.
Inactive	gray	NO	NO	
Master	purple	YES	YES	This is a master

If the slave is mapped on the DPM-S itself then it gets a thick border. The DPM-S now also supports collision detection. Before the DPM-S activates a slave on itself it first checks the bus to see if that slave isn't already available. If it is then there is a collision. The DPM-S will not activate the slave if it detects such a collision. A slave with collision will be flashing in the bus overview.

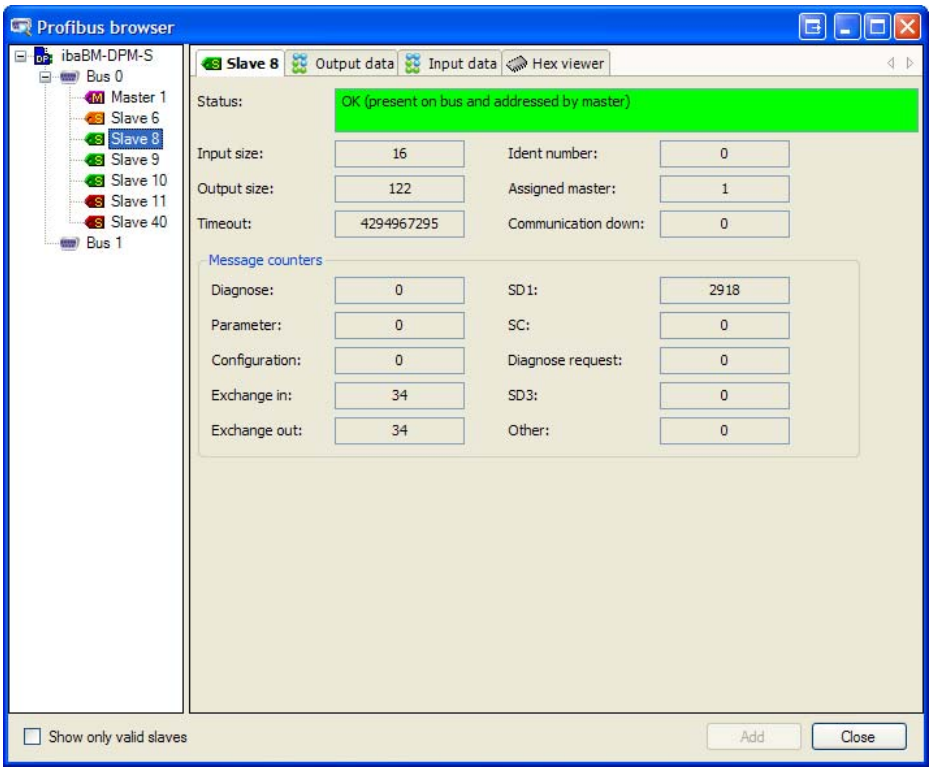
The slave status is displayed in a tooltip when you hover the mouse over a slave. You can click on a slave to go to that slave in the profibus browser.



The profibus browser allows you to get more detailed information about the profibus connected to the DPM-S. The root node shows some information about the DPM-S itself.

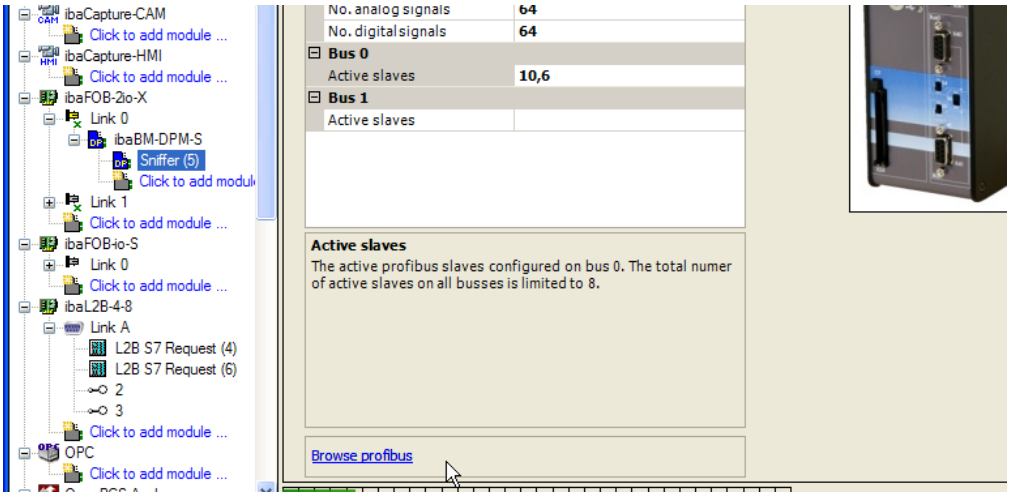


The bus node shows information about the profibus like the baudrate, cycle time and number of slaves.

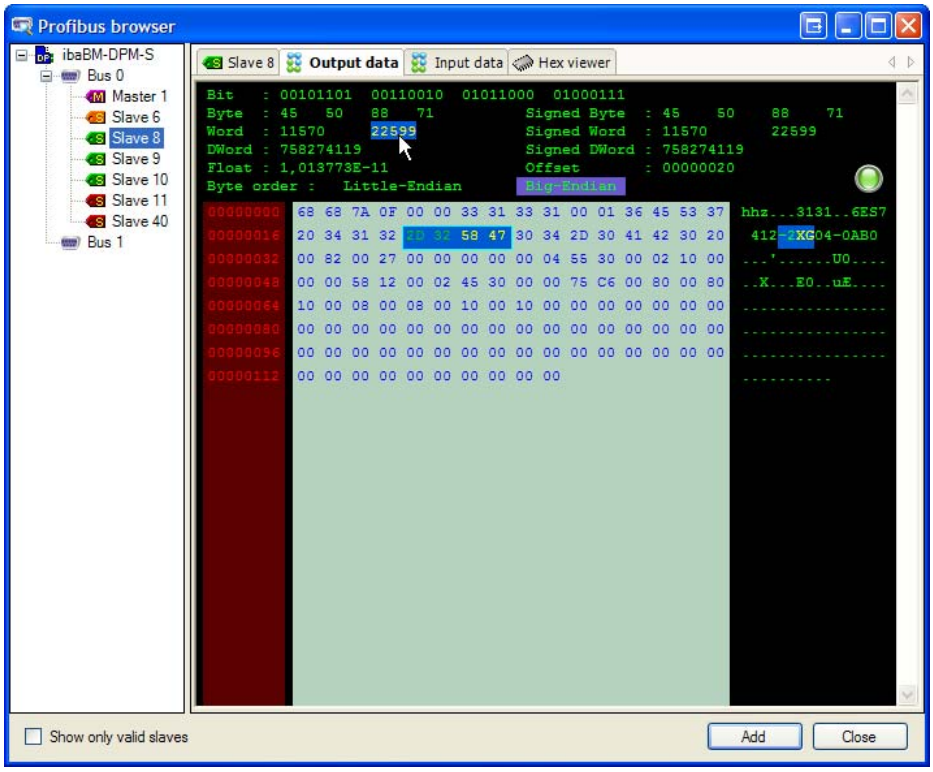


The slave node shows information about the profibus slave. You can see its status, message counters and live data.

The profibus browser can also be used to select signals on a sniffer module. You have to click the browse profibus link on the sniffer module to open the browser.

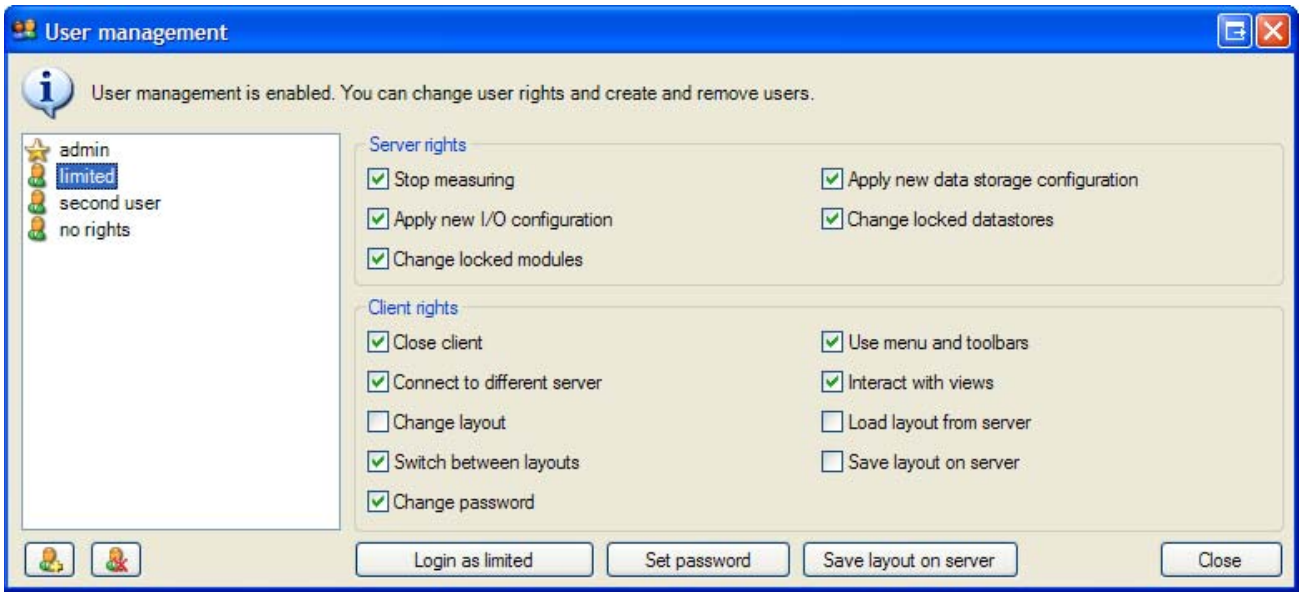


If a slave has input data and/or output data then these are shown in the profibus browser. The hex viewer can be used to interpret the binary data. The top part shows the value of the selected bytes interpreted as different datatypes. You can switch the byte order between little and big-endian. You can click the add button to add the currently marked value as a signal to the sniffer module. The bus number, slave number, direction, offset and datatype will be filled in. After you add a signal the selection advances to the next value with the same datatype. You can also doubleclick a value to add it as a signal.

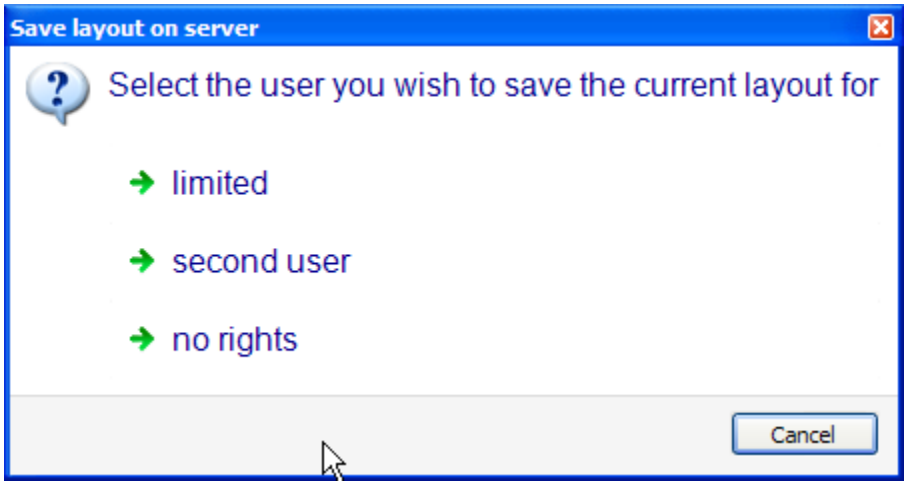


6 User right changes

There is a new right called ‘Interact with views’. If a user has this right then he can pause, zoom and scroll a trend graph. Normally an operator doesn’t have the ‘Change layout’ right so that he can’t change the screen. He can’t add/remove signals, remove graphs, … If you give the operator the ‘Interact with views’ right then he still can’t change the layout of the screen but he can pause a trend graph, scroll back and zoom in and out.

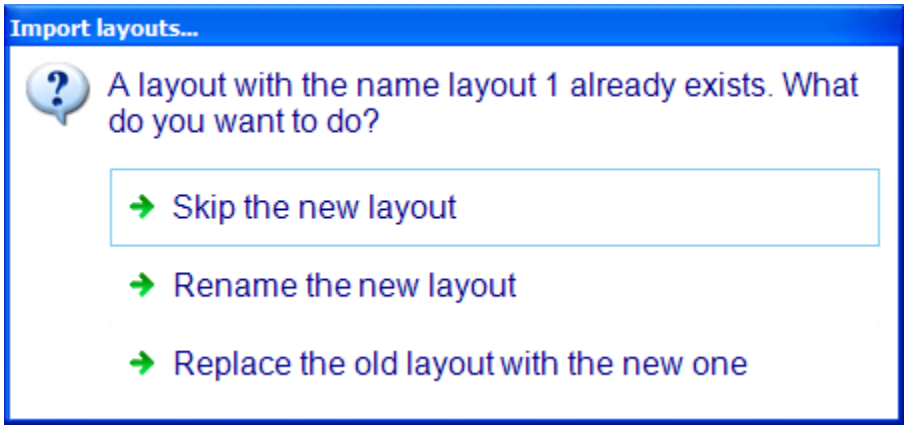


The store layout on server right has been split into 2 rights: load layout from server and save layout on server. Previously you could only save the current layout on the server when you disconnected from the server. This wasn’t very easy to manage the saved layouts. Now the logged on user can save the current layout on the server by clicking on save layout on server button in the user management dialog. There is also a new save layout on server menu item in the view menu. The layout is no longer automatically saved on the server when you disconnect from the server. If you are logged in as admin then pda will ask you for which user you want to save the current layout.

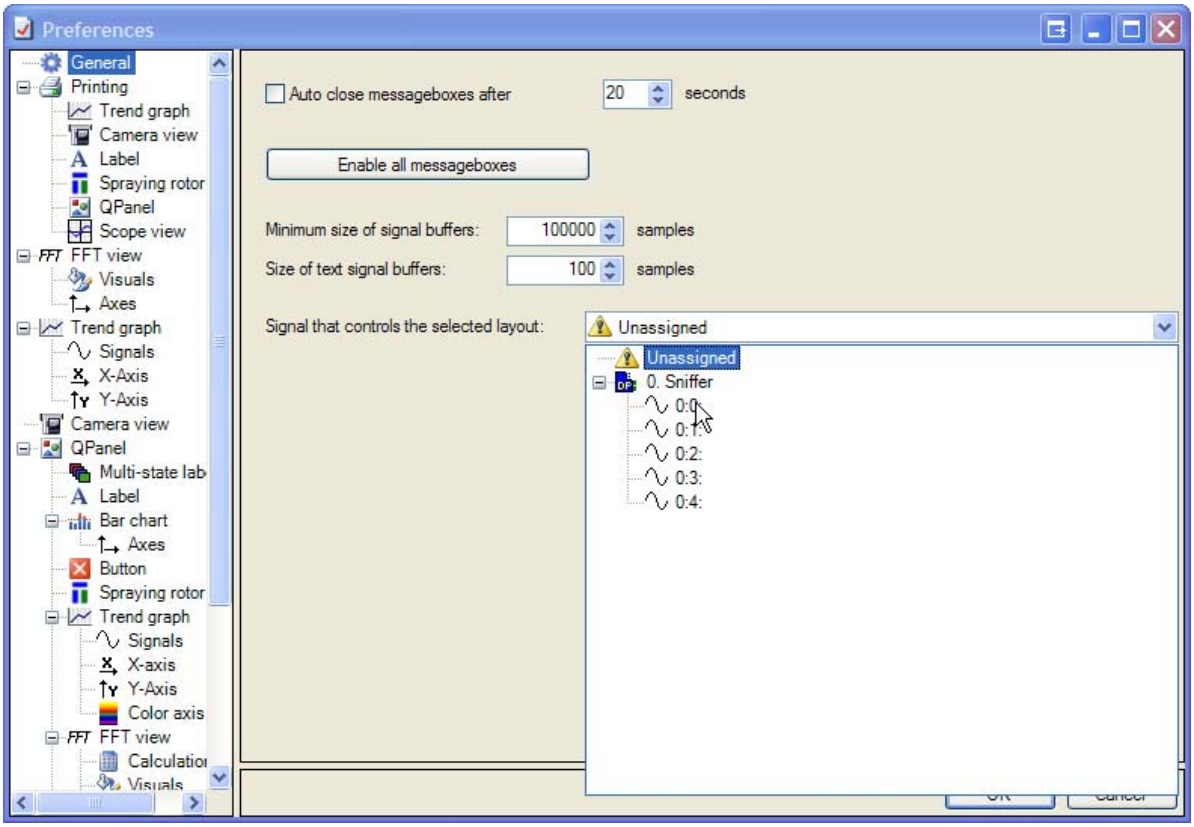


7 Layout changes

There is a new menu command to import layouts from a file. These layouts are added to the current layouts. If there exists already a layout with the same name then you get the choice to replace it, ignore it or rename it.



The selected layout can be controlled by a signal. On the general node of the preferences dialog you can select an analog signal. If the value of the signal is 0 then the first layout is selected. If it is 1 then the second layout is selected. The layout is switched whenever the signal value changes. You can still manually select another layout.

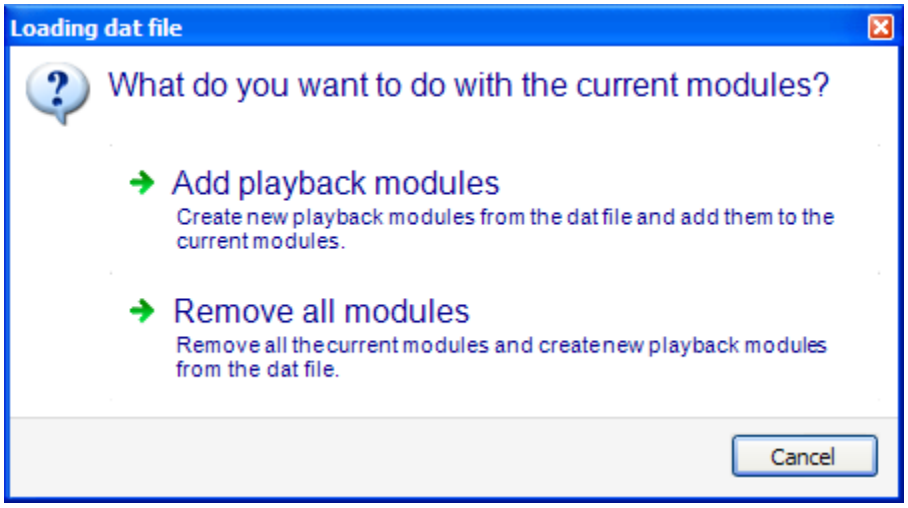


In the same dialog you can also specify the signal buffer size. If you want to have a trend graph with an X-axis of 1 hour you can increase the buffer size so that there is 1 hour of data available for each signal.

8 Playback improvements

You can specify a speed factor on the playback interface. This allows you to playback a dat file faster or slower than it was originally recorded.

When you click the read dat file button on the playback interface you now get more choices on what you want to do with the current modules. When you read a dat file and there aren't any playback modules yet then you get the following dialog.



If there are already playback modules then you get this dialog.