New Features
ibaAnalyzer v7.1.0

Authors: M. Verschaeve, C. Reinbrecht,
V. Palchikov, T. Seitz

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Table of contents

1 Support for compressed files

ibaAnalyzer now supports compressed files, i.e. for example compressed dat-files.

The archives must contain .dat files and/or files of other supported types (CSV, parquet, etc.). Further, the archives can contain .pdo or .lst files which will be automatically loaded along with the other files. Files must be located in the root of archive. Folders are ignored.

1.1 Supported formats and unpacking

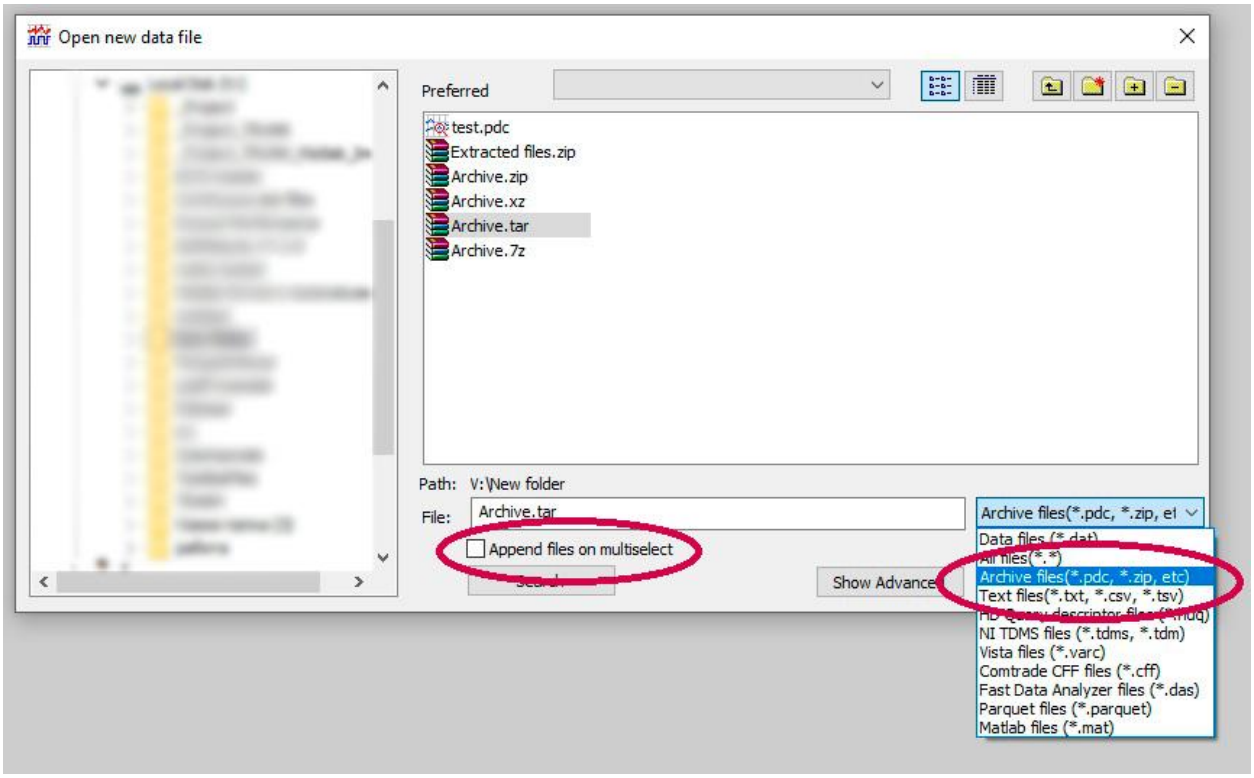
The following formats are supported:

- .zip
- .rar
- .7z
- .xz
- .tar
- .bz2
- .gz
- .gzip

ibaAnalyzer opens the archive and unpacks its content into default windows temporary directory (typically it is located in C:\Users\[User name]\AppData\Local\Temp\). Then the unpacked files are normally opened. When ibaAnalyzer closes it deletes the temporary files.

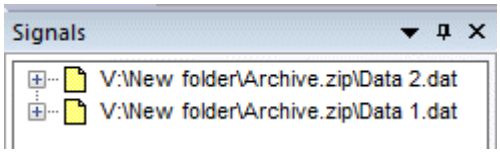
Note: Changes can be made to the opened files, but these changes will not be saved to the files in the archive.

1.2 Archives filter in “Open file” dialogue.



The “Open File” dialog has a new option “Archive files (*.pdc, *.zip, etc)” to show all supported archives. The option “Append file on multiselect” is working with archives if multiple data files are contained. Additionally, the switch “/append” is working if archives are opened via the command line.

The files contained in an archive are shown along with the archive name in the signal tree.



1.3 The .pdc format

Along with the standard archive formats, a new format “.pdc”, which stands for “process data container” has been introduced. These files are normal .zip archives with a different suffix and have the same functionality as the archives described above.

The advantage is, though, that ibaAnalyzer registers the file ending, and thus these files can be opened via double-click or ibaAnalyzer can be selected as default application when downloading such files from e.g. ibaDaVIS. The files have a separate icon

2 Support passwords in command line

In ibaPDA-V7, ibaFiles-V7, and ibaAnalyzer-V7, `.dat` files can be password protected.

When opening ibaAnalyzer with a `.dat` file from the command line, such password can be specified by adding a pipe character (‘`|`’) to the filename followed by the password.

Note that it is necessary to “quote” the entire argument since the pipe character has special meaning in command line instructions.

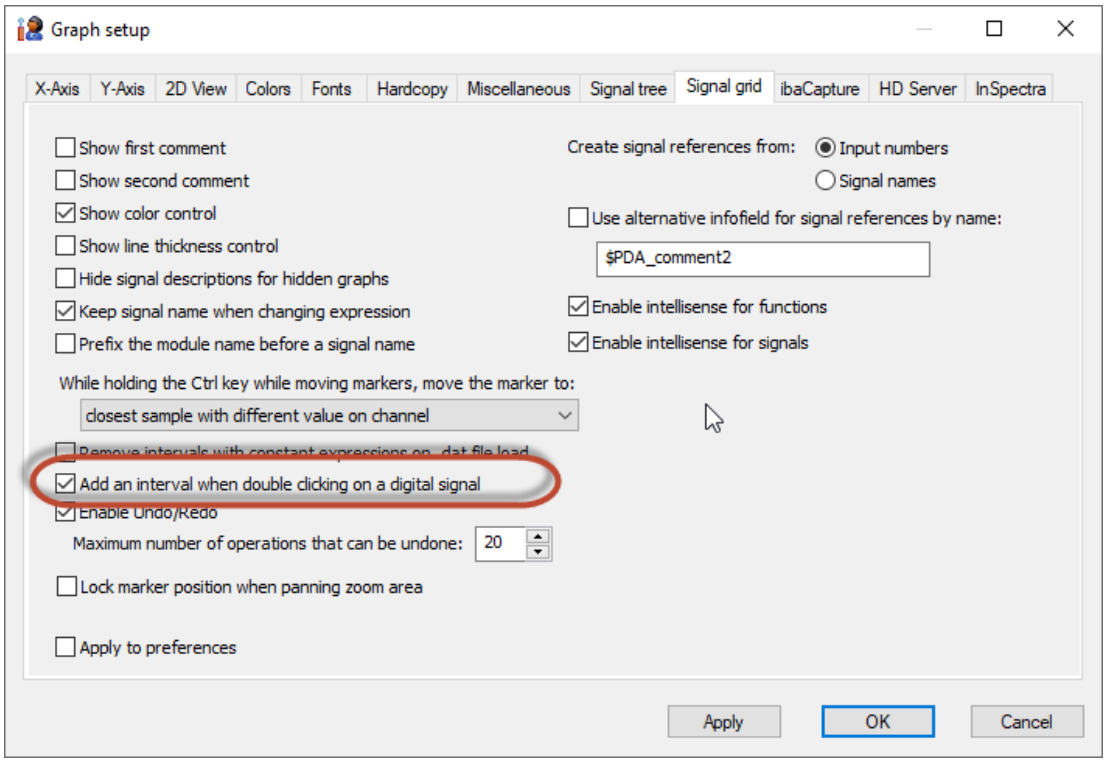
Example:

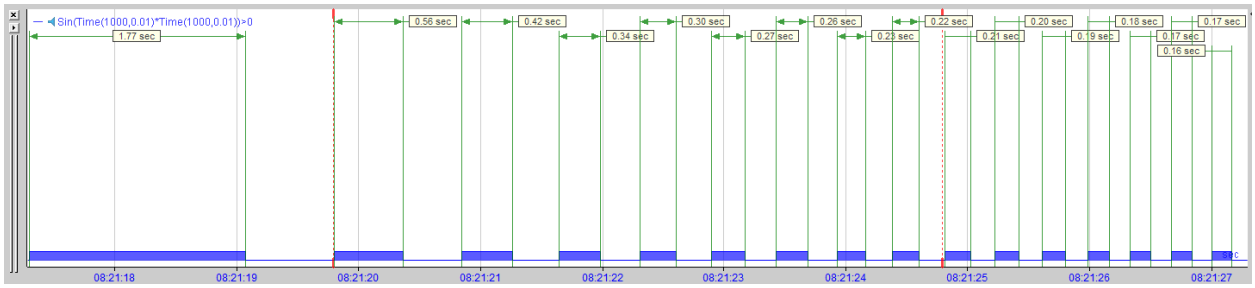
```
C:\Program Files\iba\ibaAnalyzer\ibaAnalyzer.exe
"myfile.dat|mypassword" myanalysis.pdo
```

3 Show multiple intervals at once

If the option “Add an interval when double clicking on a digital signal” is enabled in the signal grid preferences (by default it’s enabled), it is possible to add an interval by double clicking on a digital signal. If all intervals for the entire signal should be displayed, it might be tedious to click every part of the digital signal.

Hence in the current version of ibaAnalyzer, it is possible to hold the Ctrl key while double clicking and all intervals having the same value (TRUE or FALSE) will be selected automatically together with the clicked part of the digital signal.

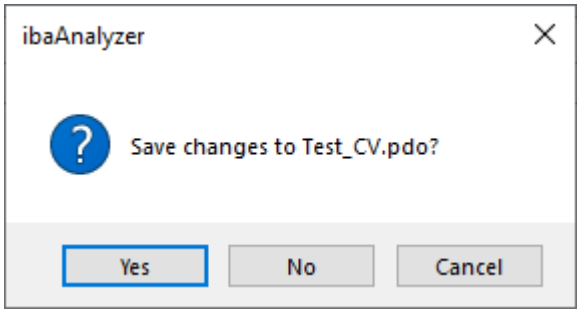


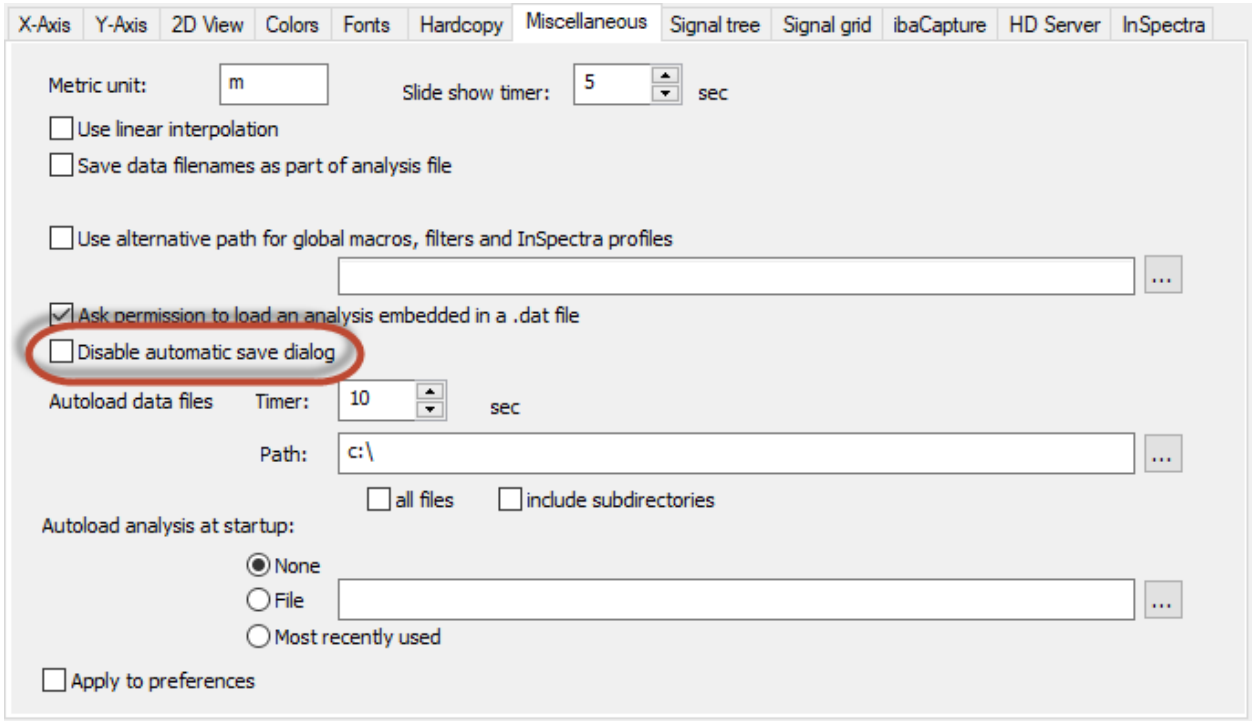


4 Disable the automatic save file dialog

By default, ibaAnalyzer requests to save the analysis if you try to close ibaAnalyzer itself or try to close the current analysis (e.g. by loading a new one). This behavior can now be disabled by choosing the corresponding option in the miscellaneous settings.

Important note: If you disable this dialog, all changes made to the analysis will get lost if ibaAnalyzer is closed.



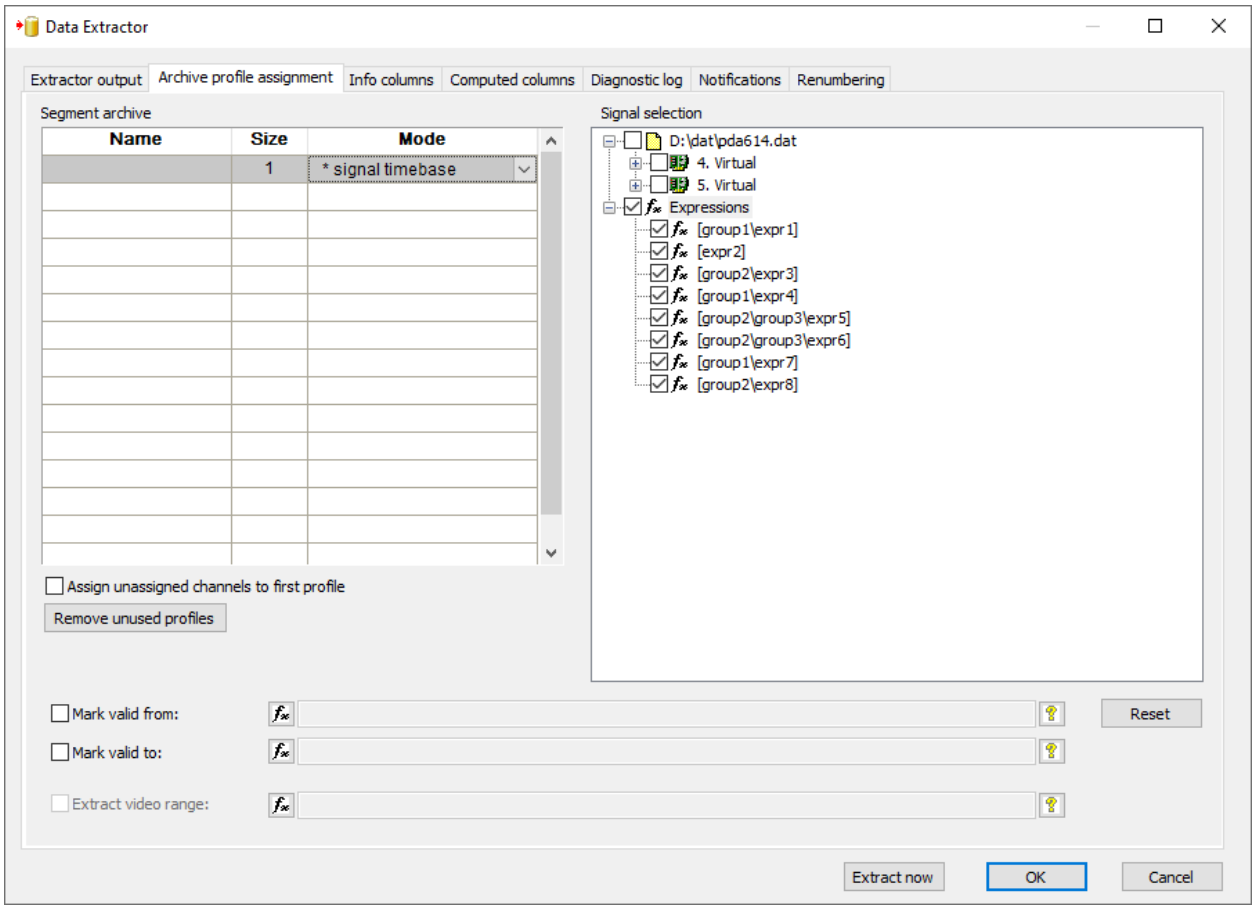


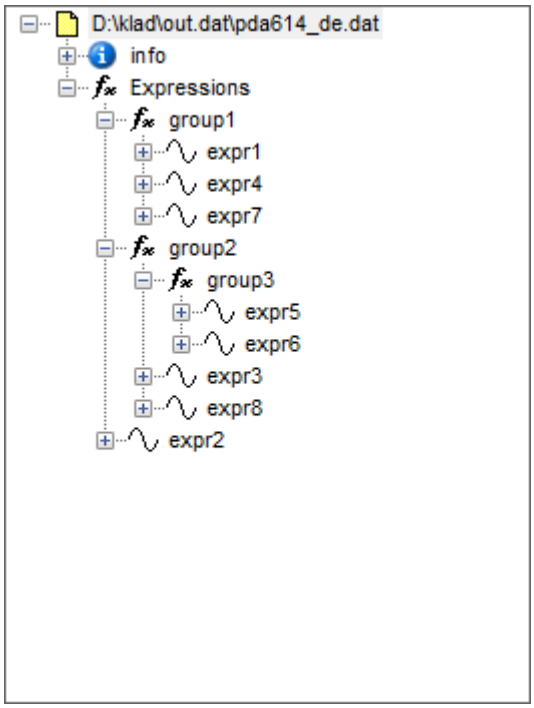
5 Miscellaneous

5.1 Grouping exported\extracted expressions

When exporting\extracting expressions to a dat-file, a group structure can be arranged for the extracted expressions by adding backslashes (‘\’) in their names. Currently, the grouping is only supported when opening the dat-file with ibaAnalyzer.

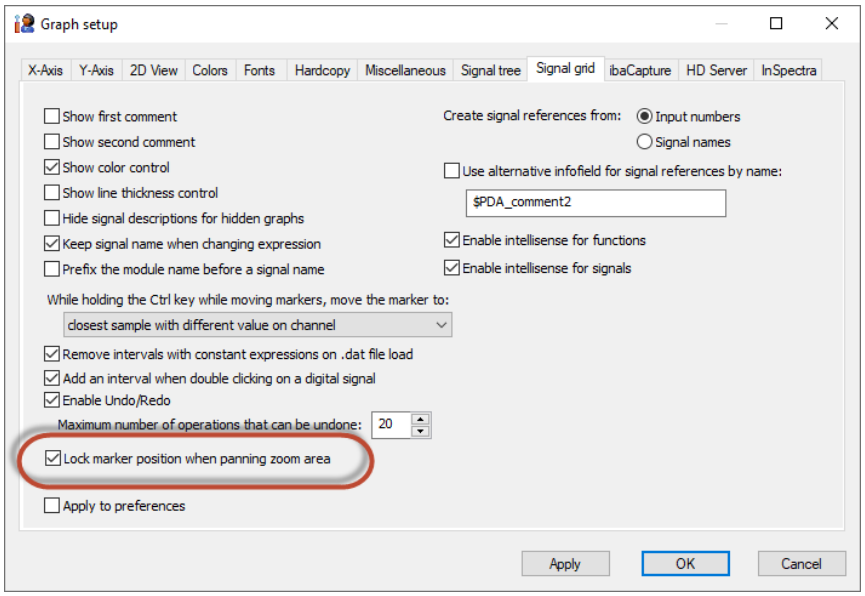
This is especially useful, when result signals of an ibaAnalyzer-InSpectra views are exported/extracted. These results are automatically grouped per view because all result channels have the view name and a backslash prepended.

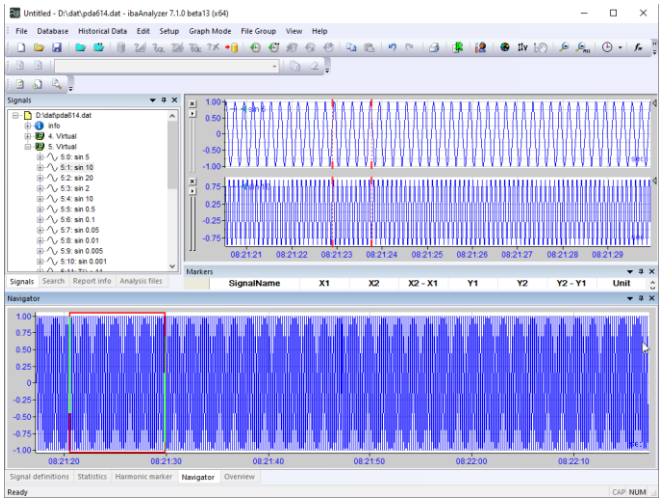

Data Extractor
Extractor output
Archive profile assignment
Info columns
Computed columns
Diagnostic log
Notifications
Renumbering
Segment archive
Name
Size
Mode
1
* signal timebase
Signal selection
D:\dat\pda614.dat
4. Virtual
5. Virtual
Expressions
[group1\expr1]
[expr2]
[group2\expr3]
[group1\expr4]
[group2\group3\expr5]
[group2\group3\expr6]
[group1\expr7]
[group2\expr8]
Assign unassigned channels to first profile
Remove unused profiles
Mark valid from:
Mark valid to:
Extract video range:
Reset
Extract now
OK
Cancel

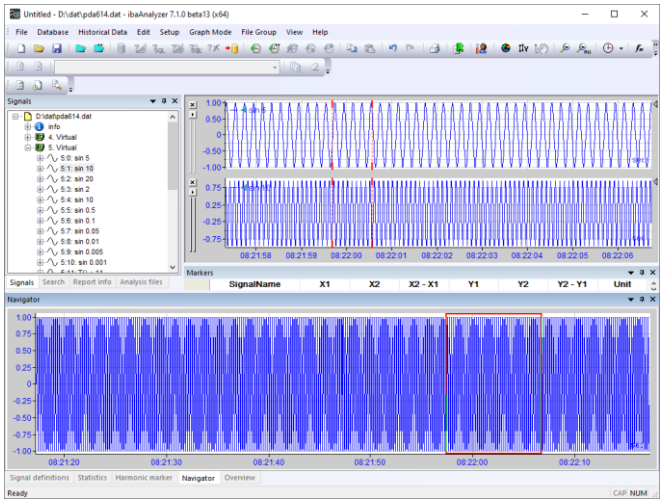

D:\klad\out.dat\pda614_de.dat
info
Expressions
group1
expr1
expr4
expr7
group2
group3
expr5
expr6
expr3
expr8
expr2

5.2 Marker position can be locked while panning

While panning (by either scrolling the X-axis, use the mouse middle button or operate the window in the navigator pane) it is possible to have the marker locked relative to the zoom area. The option can be found in the Signal Grid pane of the preferences/Graph setup.

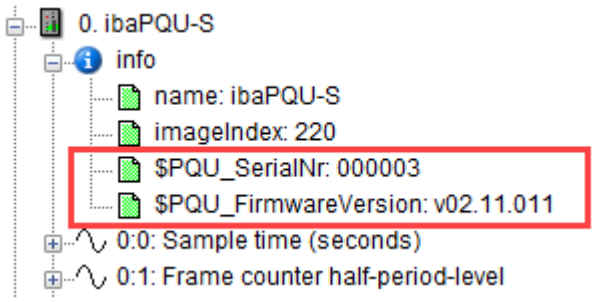






5.3 HD Module info

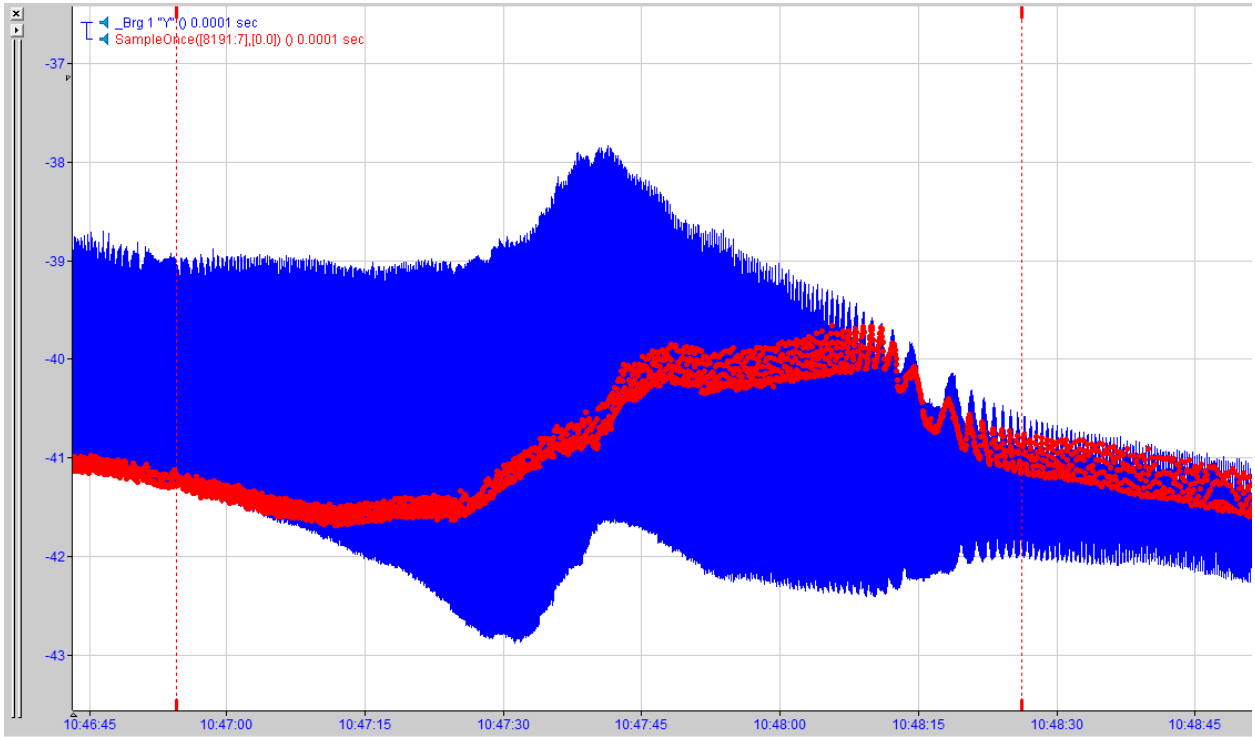
The ibaAnalyzer HD server interface is modified such that module info fields are correctly forwarded to ibaAnalyzer when performing an HD query. This is especially important for PQU modules where the firmware version and serial number information is encoded in such info fields.



5.4 New function SampleOnce

Usage: `SampleOnce('Expression','Sample')`

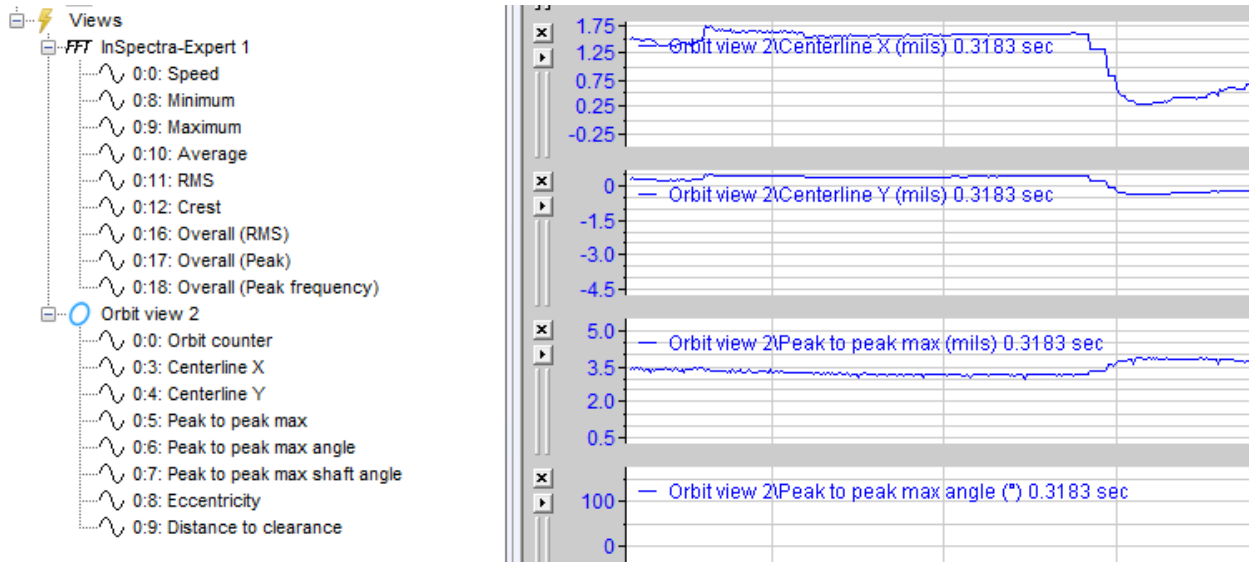
This function resamples an 'Expression' input signal at individual points determined by the rising edges of the digital signal 'Sample'. The result has one measuring point per rising edge and is invalid in the ranges in between.
This function can be used to visualize a phase sensor (keyphasor) signal in a time domain signal. Whenever the phase sensor jumps to 'TRUE', the current value of the time signal is sampled. By overlaying these values with the original signal the occurrence of the keyphasor is shown. In the example below, a 180° phase shift can be detected when passing a resonance, using this feature.



6 ibaAnalyzer-InSpectra

6.1 InSpectra results as signals

The analog and digital outputs of ibaInSpectra like general results, band results, characteristic values and events are now available as signals in the signal tree.



The time base of these signals is based on the calculations in the InSpectra-views. Note that for Expert-views with order resampling and also Orbit-views, the resulting time base is speed dependent. The results which should be shown in the signal tree, can be freely configured, see section 6.3.1.

In the signal tree the results are grouped per view. The name of the view can be changed via right-click on the title bar. The names for bands and characteristic values can be changed inside the calculation profile. The signal names cannot be changed.

When extracting the results to a dat-file, the extracted expressions are also grouped per view.

6.2 Changes in the Views

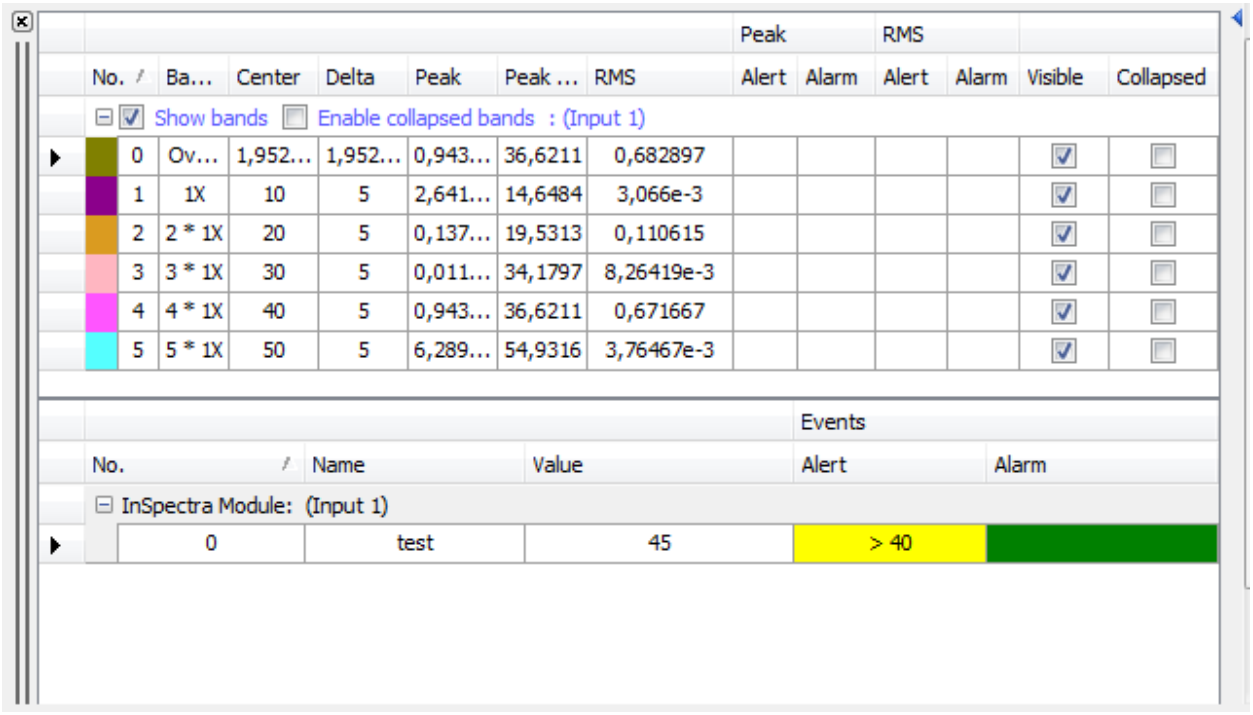
6.2.1 Keyboard shortcuts for playback

The following keyboard shortcuts were added for the playback area:

Key	Function
< ← >	One result backward
< → >	One result forward
< ↑ >	Increase playback speed
< ↓ >	Decrease playback speed
< Space bar >	Play / Pause

6.2.2 FFT-view: Characteristic values in the spectrum slave table

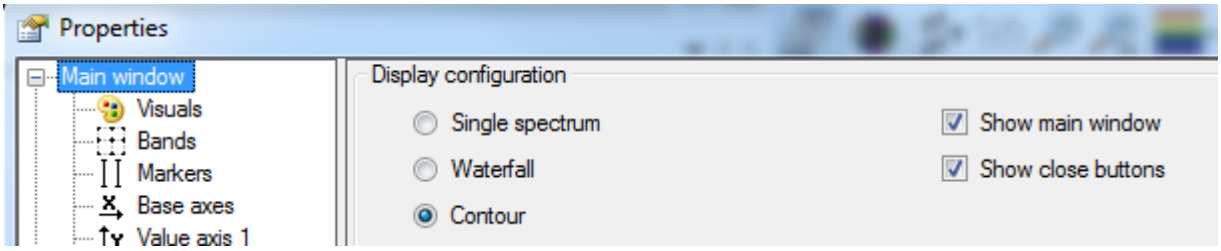
Results and alarms for characteristic values are displayed in the spectrum slave table. A new group with a line for every characteristic value is created below the area for band parameters and results.



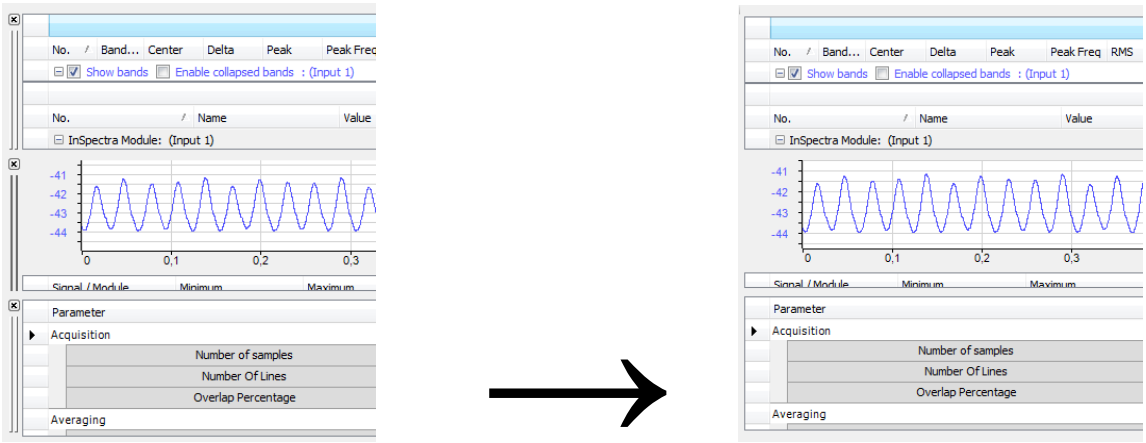
The parameter columns can be activated or hidden in the context menu. In every parameter column, the displayed values can be sorted by clicking on the table header.

6.2.3 FFT-view: show close button

In the FFT-view the option “show close buttons” was added.



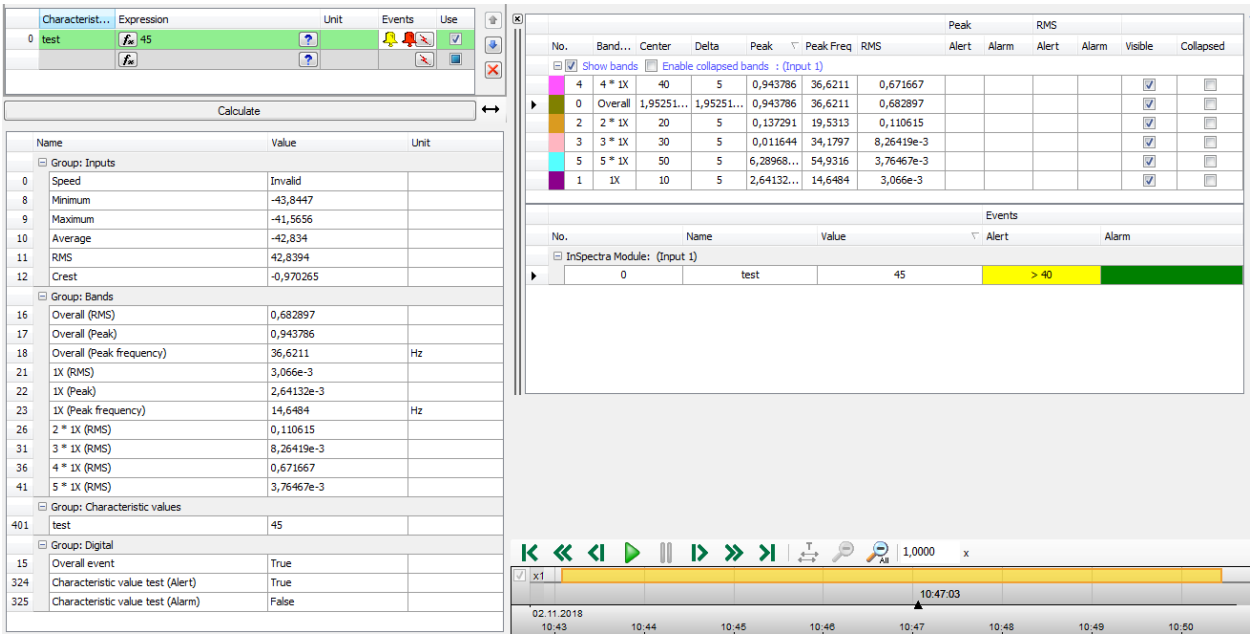
When this setting is disabled the close buttons and lines left of the slaves are hidden.



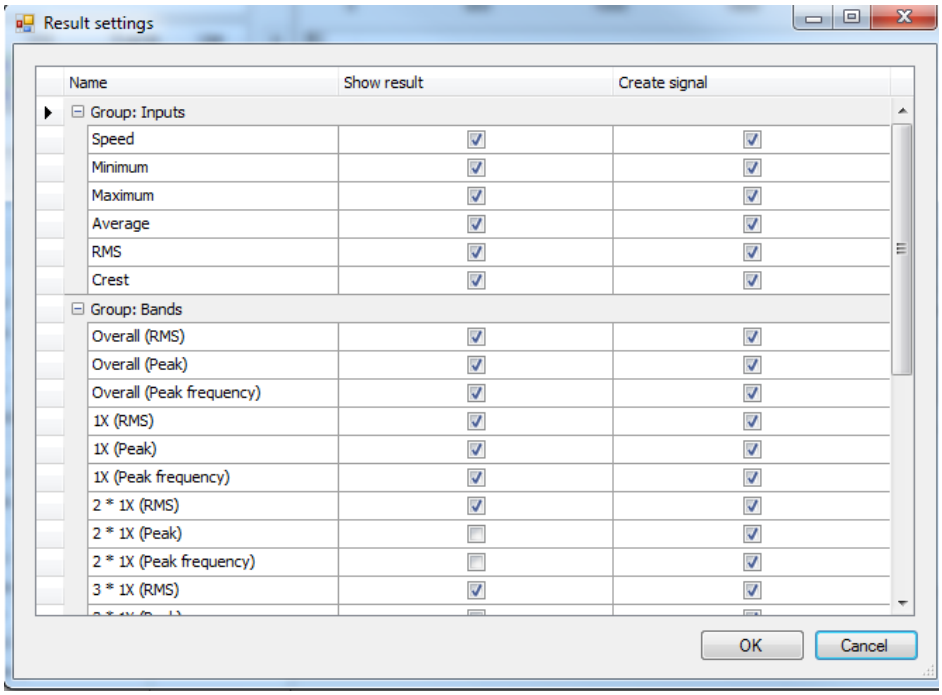
6.3 Changes for InSpectra-Expert

6.3.1 Signals in the result table

As for the InSpectra-Orbit, the analog and digital results for the InSpectra-Expert calculations at the current marker position in the playback area are shown in the result area on the left. The signals are grouped as Inputs, Bands, Characteristic values and Digital. The order of the signals is the same as in the analog and digital tab of ibaInSpectra-Expert in ibaPDA.



In the context menu of the result area the values that should be shown can be selected. In here you can also define which results will be available as signals in the signal tree.

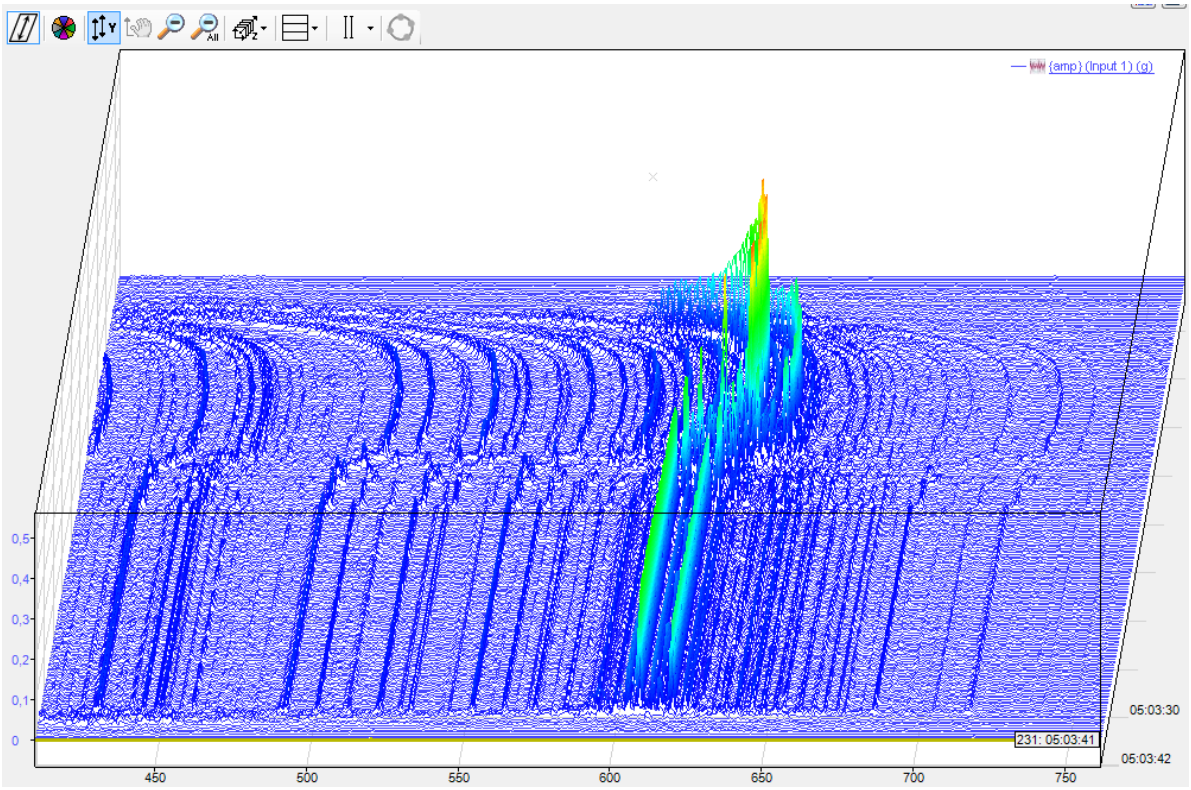


6.3.2 Online compatibility for Expressions

The functions available for expressions in the InSpectra-Expert configuration is limited to all functions that are compatible with the functions offered by ibaPDA. This ensures that all profiles can be imported and exported bidirectionally between ibaAnalyzer and ibaPDA.

6.3.3 Color coded amplitudes

The contour colors can now be applied to the waterfall plot.



The corresponding setting can be found in the properties for the value axis. When the checkbox “Apply color-coded amplitudes to waterfall” is enabled the scheme selected as contour colors is applied to the waterfall. The “number of color bands” defines the color resolution. The limit for the “number of color bands” is 50.

Please notice: If “Apply color-coded amplitudes to waterfall” is enabled, custom value bands will only be displayed in the spectrum slave view.

6.4 Miscellaneous

6.4.1 Filename and path in the input area

The file name and path is displayed in the input area for InSpectra-Expert and -Orbit. This indicates which file is used in the view in case several files are open.