New Features in ibaLogic v5.5.0

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Content

1 New dat-file Format

ibaPDA version 7.0.0 introduces a new file format for dat-files. It is now possible to protect dat-files with a password. This new format is called v3, the previous version was called v2.

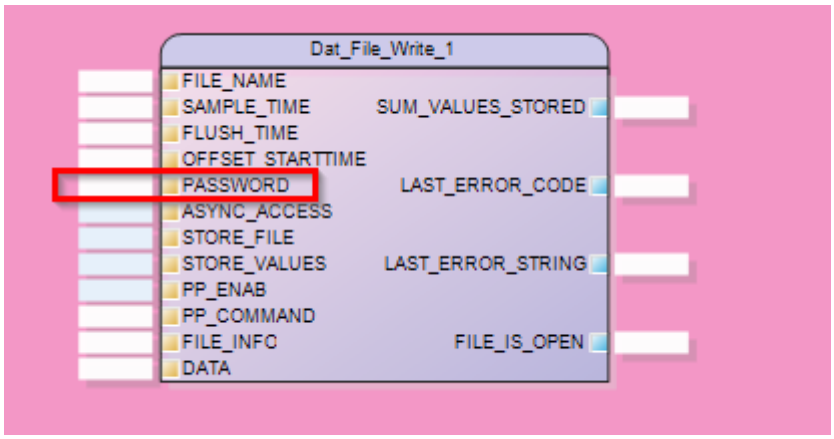
This new format is only available on “normal” Windows system, e.g. on a Windows PC or a DAQ system. It is not supported on the PADU-S-IT2x16

This means:

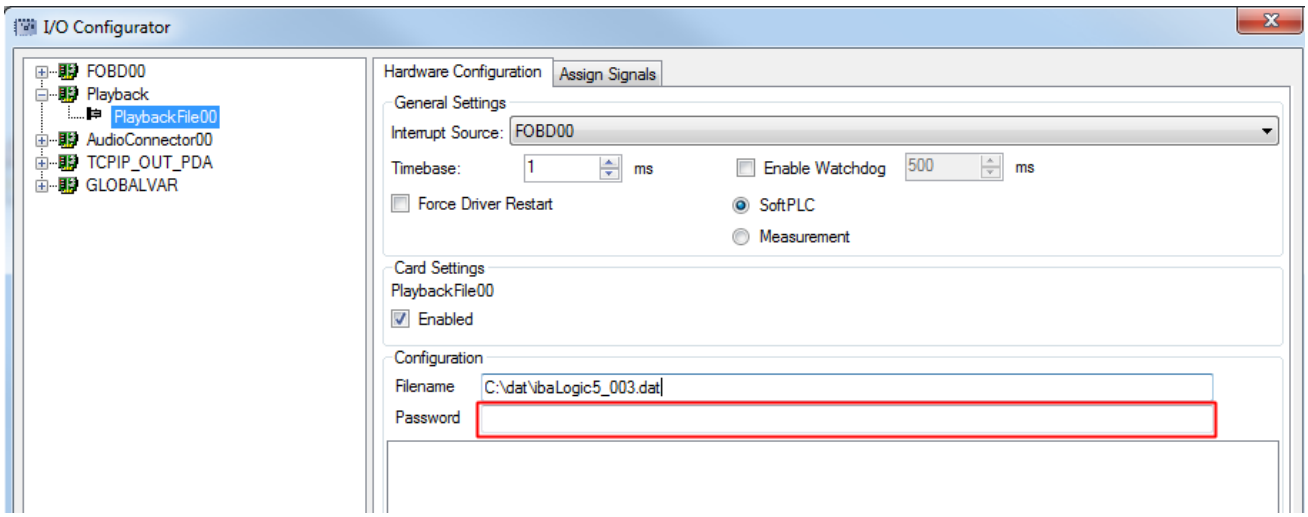
Playback:	PC, DAQx → v2,v3	PADU-S-IT2x16: only reads v2
Dat_File_Write:	PC, DAQx → v3	PADU-S-IT2x16: still writes v2

ibaAnalyzer supports the new format from version 7.0.1 on, the old format can still be used.

The Function Block Dat_File_Write has a new input for the password. This is only available when a new instance is created. If a password protection is needed, an older instance must be replaced by a new one.



Playback was extended for the password option, too. If a password is used, when switching the files from within the layout, all dat-files used must be protected by the same password.



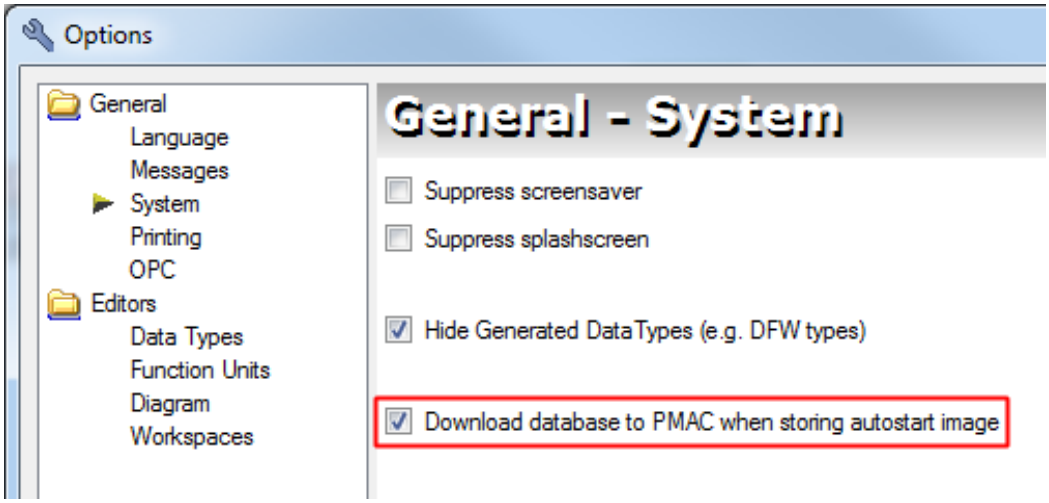
2 Store database on target system

To have access to the project running on the target system (PMAC), a database backup can be stored on the PMAC. This is possible for PC, DAQx and PADU-S-IT2x16.

The backup can be uploaded from the target system and used to restore the database for ibaLogic server. With this you can be sure to have the matching project to the running PMAC.

Storing this backup is connected to the function “Store Autostart image on target”. This function stores an image for automatic system start on the PMAC.

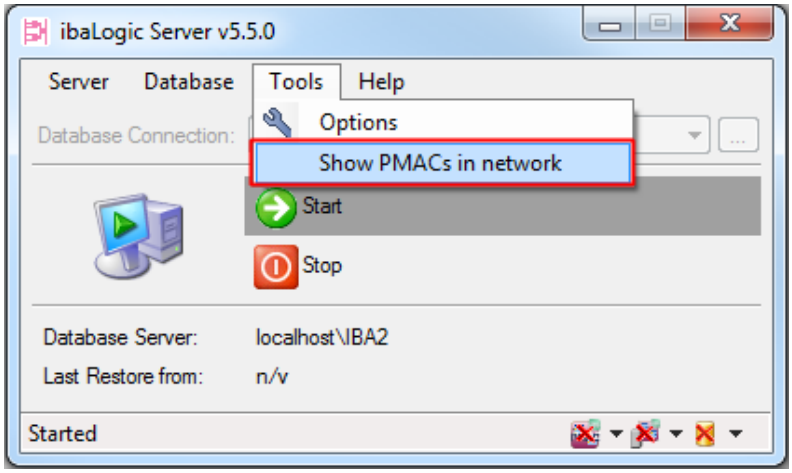
There is a new option und Configuration->Options:



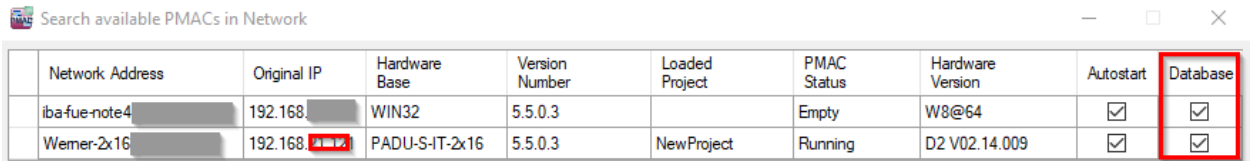
If this is active, the complete backup file is stored on the target PMAC when the function is used.

ibaLogic Server can be used to upload the backup file from the PMAC.

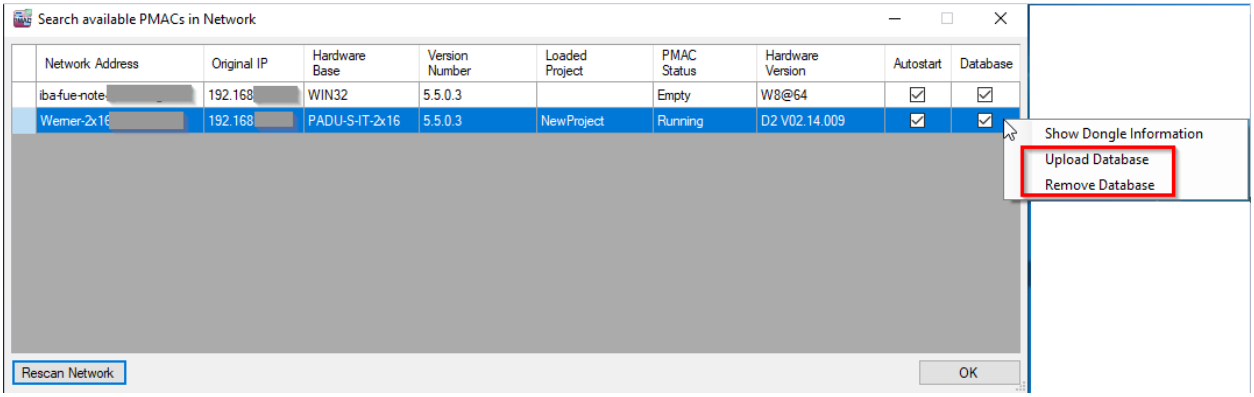
For this, go to Tools -> Show PMACs in network



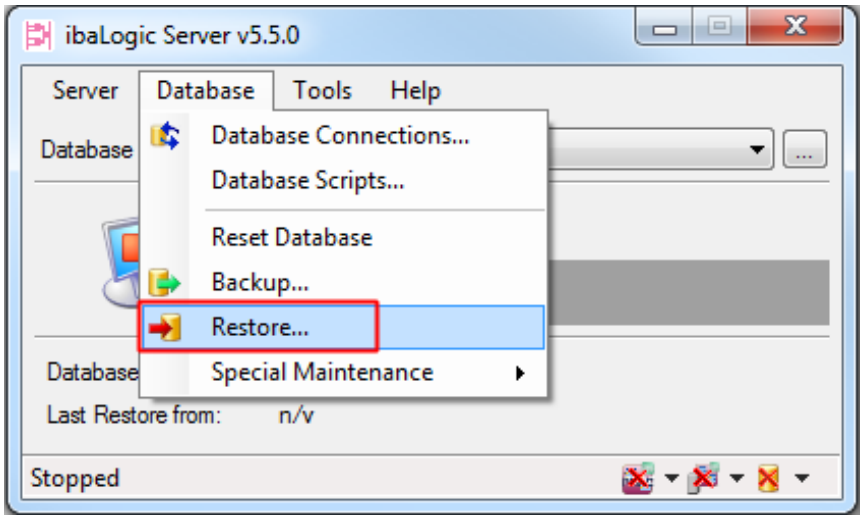
Here you see all PMACs in the local network segment. This now includes the information if a backup file is present.



With a right click on the desired PMAC you activate the context menu, and can upload the database and save it on your local PC.



The saved file can now be used with the normal “Restore” function

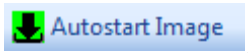


Now you can open the ibaLogic Client, load the project, and connect to the target PMAC

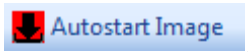
3 Show if a stored autostart image is up to date

When an autostart image is stored on the PMAC and some online changes were performed, it was not possible to find out if the stored image still corresponed to the currently running project. This is now shown by a new button in the toolbar when the project is online.

No autostart image stored on PMAC



Autostart image and active project are identical



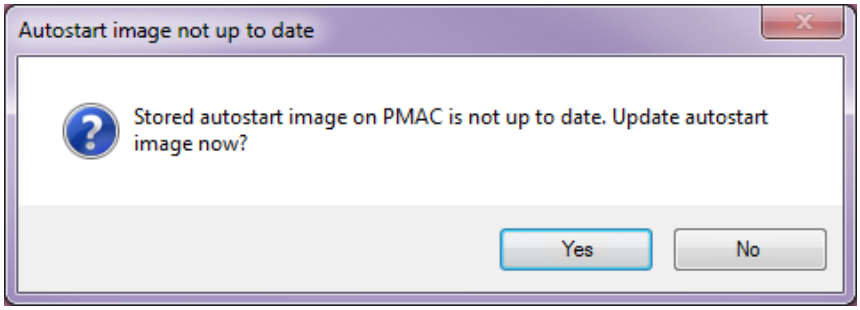
Autostart image and active project are different

In case that autostart image and active project are identical, next to the menu entry “Store Autostart image on target” a check mark is shown.

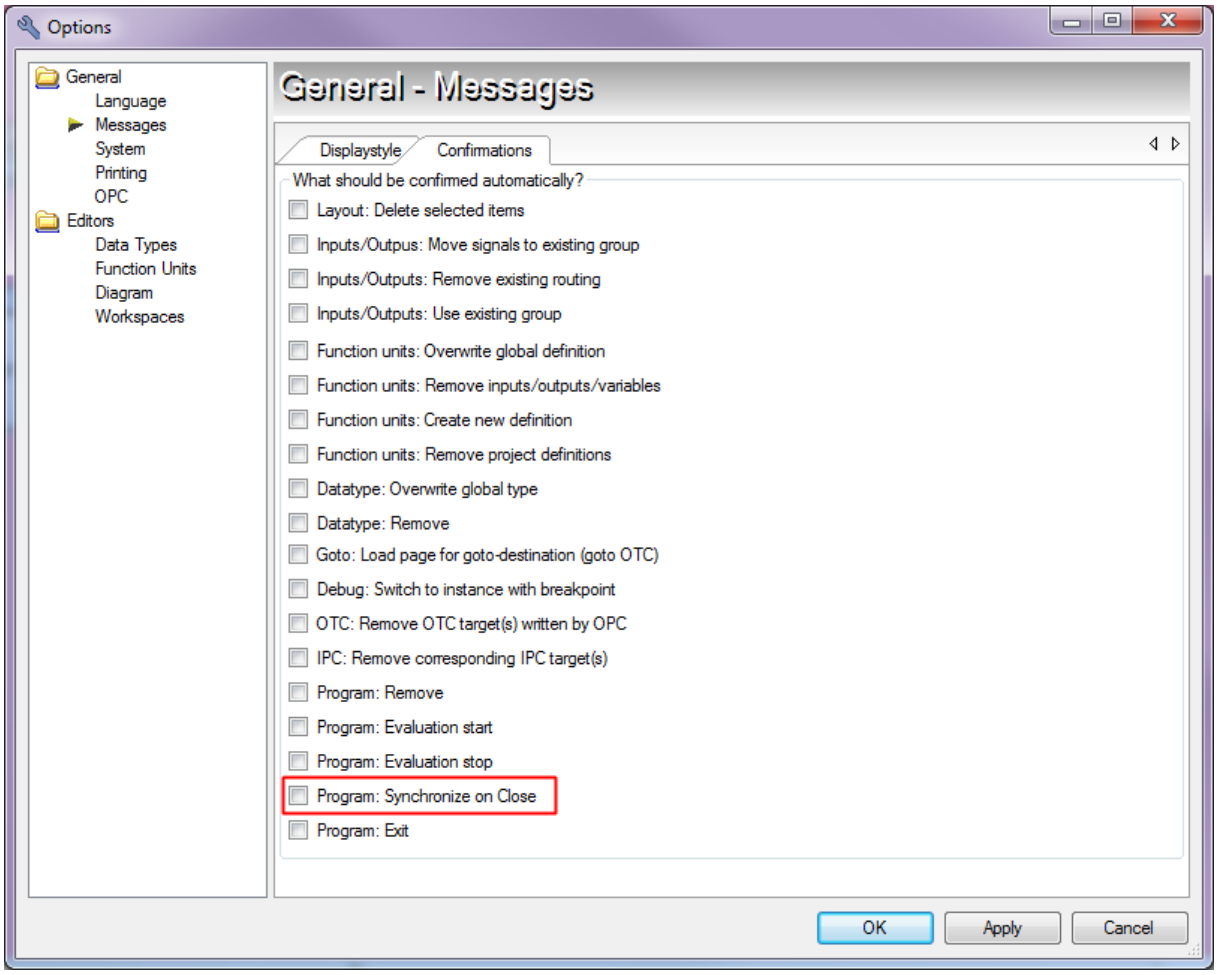
Pressing this button stores the current project as autostart image on the PMAC. If the backup function is active, the database backup is stored on the PMAC, too.

4 Security query when closing a project

When an autostart image is stored on the PMAC and it is not up to date, on closing the project the user is asked if he wants to update it.



This dialog can be hidden by setting the appropriate option in the settings, under Messages -> Confirmations. The question is then automatically answered with “no”.

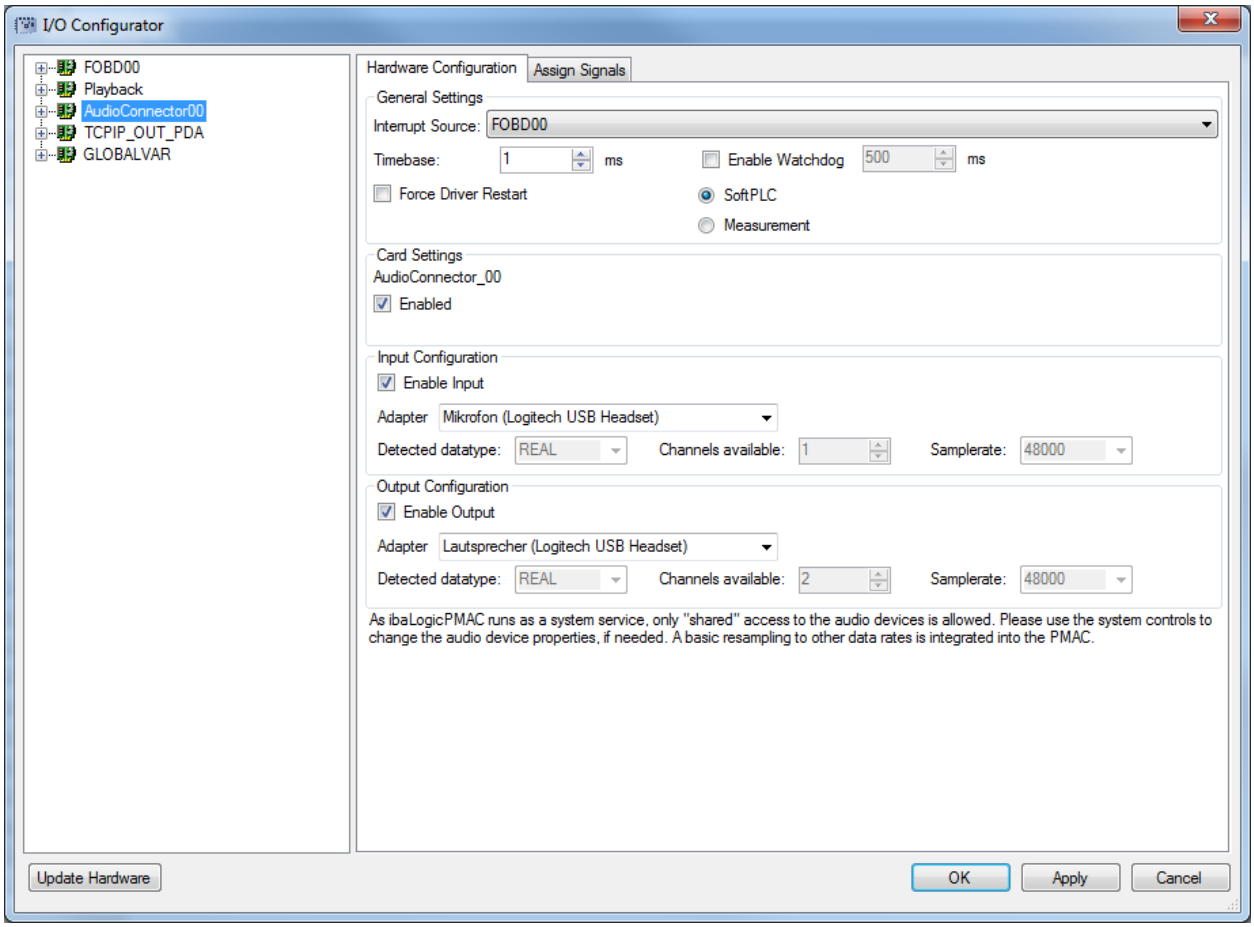


5 Audio interface

If the target system has audio input and/or output devices connected (e.g. microphone, line-in, speakers), these can be used as I/O device. Using the input, audio recordings can be made using a Dat_File_Write, or the values can be analysed by FFT or similar functions.

That works on (PC, DAQ, DAQ-C, **not DAQ-S**),

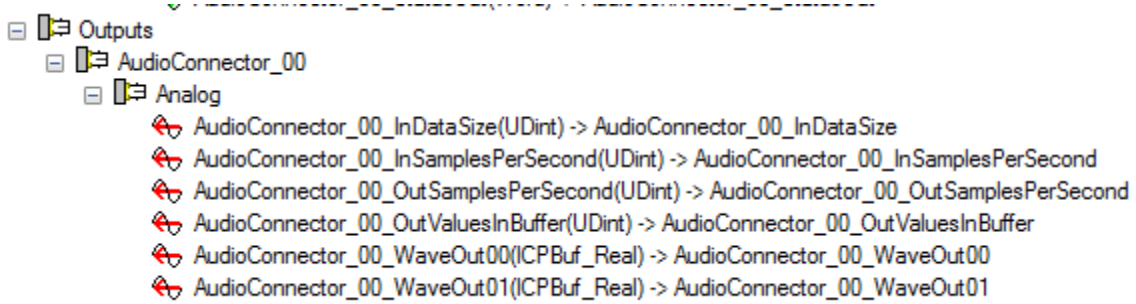
The output can be used to make signals audible.



If an audio interface is detected, the AudioConnector can be found in the I/O Configurator. According to the capabilities of the interface, 1 or 2 channels are available. The sample rate can be adjusted by using the Windows system settings for the audio device.

By assigning these signals to virtual signals, they can be used in ibaLogic. They are always available as buffered signals (arrays).

The available outputs are:



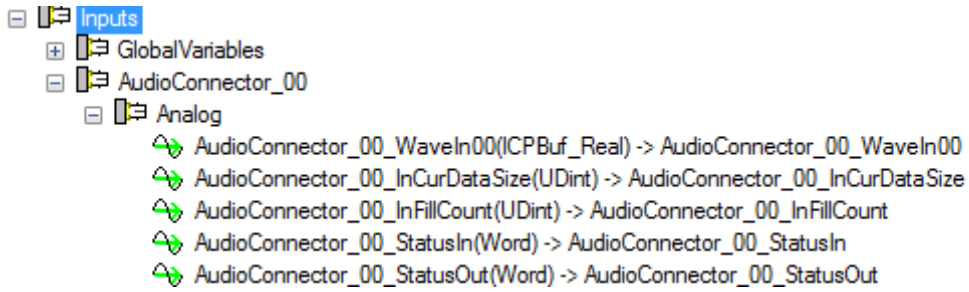
InDataSize: Used input buffer size (1..1024)

InSamplesPerSecond: Desired input sample rate, resampled from the system sample rate

OutSamplesPerSecond: Desired output sample rate, resampled to the system sample rate

OutValuesInBuffer: Number of currently available values for the output (0..1024). If in the current cycle no new values are provided, this output has to be set to 0.

WaveOut0x: Buffered output channels (data)



WaveIn0x: Buffered input channels (data)

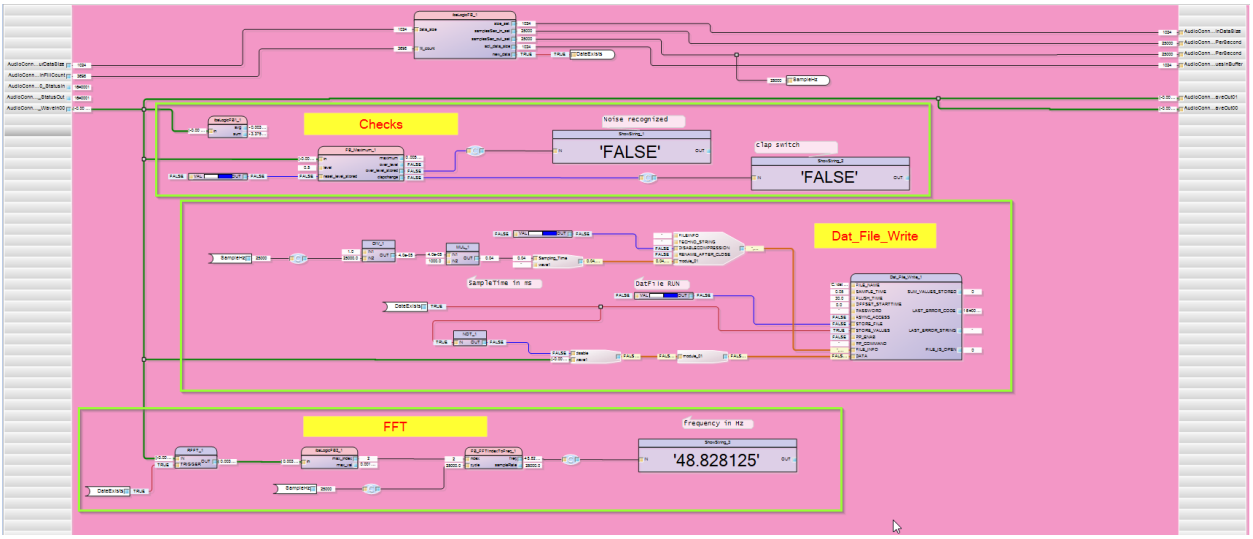
InCurDataSize: current used size of the input buffer (as set at the output InDataSize)

InFillCount: counts up when the buffered input has new data

StatusIn: 1 if the input audio device is active

StatusOut: 1 if the output audio device is active

Example (input and output):



In the upper part, the appropriate values for the buffersizes are configured.

In this case, one microphone channel is read and is sent to two speaker channels

The “Checks” area contains some simple analysis functions. One is a noise detection, if a certain level is reached, or a clap switch.

The audio data can be written into a dat file (activated by a switch)

An FFT block is used to detect the current main frequency.

This example can be found on our Product-DVD.