Streaming data from LabChart to MATLAB while Sampling

Overview

These demonstration files show how you can stream live data from LabChart to MATLAB for display and analysis. They are an example only, you will need MATLAB experience to tailor the .m files to your needs. ADInstruments does not provide any official support for analysis with third party tools like MATLAB.

Instructions:

1. After installing the LabChart Package you will have a tab called ‘MATLAB Sampling’ in your LabChart Welcome Center. Open that tab.
2. Double click the ‘MATLAB_Sampling.m’ file. This should open MATLAB and show you the source code for that file.
3. Open a document in LabChart ready for sampling.
4. Run the MATLAB_Sampling.m file in MATLAB.
5. MATLAB may display an error relating to the current folder and MATLAB path. If so click ‘Change Folder’.
6. Start Sampling in LabChart. 8. MATLAB should display the live data as it is being sampled

Advanced

- Each MATLAB file contains comments which explains their intention and use
- The MATLAB code in these files can handle non-contiguous channel sampling e.g. gChans=[1 4], as well as contiguous channels e.g. gChans=[1:4].
- If there are errors while sampling, users can call doOnNewSamples(1), manually on the MATLAB command line after sampling has stopped, making it easier to debug their code.
- The data received from LabChart is stored in the global cell array gChansData. This is allocated in OnBlockStart(), and accumulates the data for the whole Block while sampling. It is cleared out when you start sampling again.