LabView implementation of a MSR145 data logger

Requirements:

- Data logger MSR145 (or compatible)
- LabView Version 7 (or higher)
- MSR145_1.dll (inkluded in ZIP-File)

Included in ZIP-File:

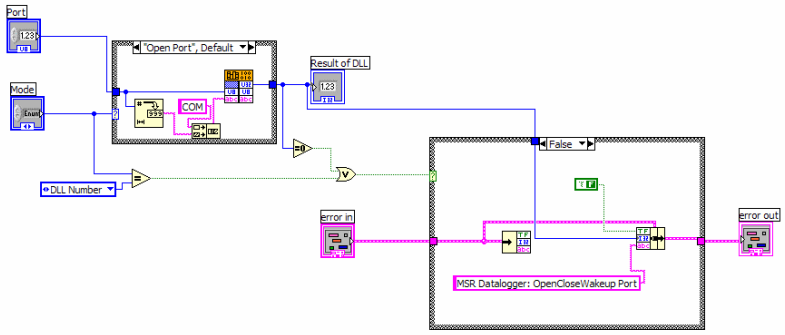
- MSR145_1.dll
- MSR145 OpenCloseWakeup.vi
- MSR145 StartMeasurement.vi
- MSR145 Read.vi
- MSR145 Example.vi

Getting Started:

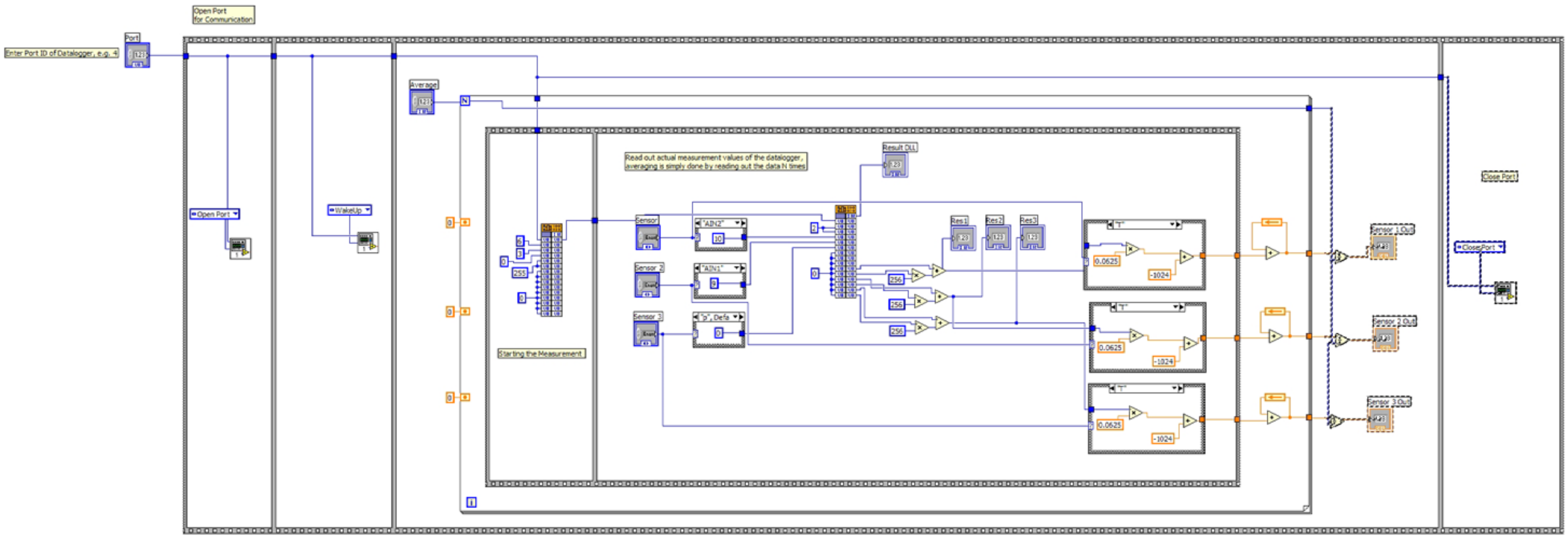
- Unpack the Zip-File to any destination

- the MSR145_1.dll should remain in the same folder as the LabView Vi's, if it is necessary to transfer the LabView-Files to any other system directory the source path of the DLL has to be corrected in the Vi's

- in order to use the data logger connected to a USB port of the computer, the port of the data logger has to be addressed and opened, to do so use the LabView "MSR145 OPENWakeupClose.vi" (please find the graphical representation of the source code below). Typically the port number is 4. By selecting the mode: "open" this port will be opened and can be used for measurements. If the port is already opened an error message will be occurring. This is not a problem for the readout of the data logger itself, but may be von issue for third party Vi`s!



- after opening the port for communication, the measurement can be started and the values can be read out, please use the "MSR145 StartMeasruement.vi" and "MSR145 Read.vi". By limitations of the "MSR145_1.dll" it is only possible to read out 3 actual values measured by the data logger. Implementation of time dependence has to be done in a separate Labview Vi, not included in this package. A graphical source code for data averaging is shown below ("MSR145 Example.vi").


Enter Port ID of Datalogger, e.g. 4
Port
Open Port
for Communication
Open Port
WakeUp
Average
Starting the Measurement
Read out actual measurement values of the datalogger,
averaging is simply done by reading out the data N times
Result DLL
Sensor
Sensor 2
Sensor 3
"AIN2"
"AIN1"
"p", Defa
Res1
Res2
Res3
0.0625
-1024
Sensor 1 Out
Sensor 2 Out
Sensor 3 Out
Close Port
Close Port

Remarks

- the program can only be used with the MSR145_1.dll, in order to use the MSR145_2.dll the source code has to be modified, according to changes between the two DLL's!

- It is not possible to run both the LabView code and the original MSR-programs at the same time!

- If the Vi directories and MSR145_1.dll are not the same, the source path for the DLL directory has to be changed in the call library function node of the corresponding Vi-File!