



## Data Translation Driver for DASyLab

### System Requirements

The driver supports one or more DT DAQ devices under DASyLab 9 or higher for Windows XP (32-bit), Windows Vista (32-bit and 64-bit) and Windows 7 (32-bit and 64-bit).

### Installation Instructions

- 1.) Copy the DASyLab driver file **DT\_Dlab\_ux1.dll** to the directory where DASyLab installation is located. Typically this is C:\Program Files\DASyLab 9.0.
- 2.) Open the configuration file **dasylib.ini** which is located in the same directory if you use DASyLab 9.0. If you are using DASyLab 10 or higher the dasylib.ini is located in a different folder, depending on your system settings (e.g. C:\Users\Public\Public documents\Dasylib\10.0.0\ENG).
- 3.) Change the entry

DLL1=DLAB\_UX1.DLL

to

DLL1=DT\_DLAB\_UX1.DLL

and save the settings and start DASyLab. DASyLab automatically loads the driver during startup.

### Data Translation Modules

For each subsystem of your DT DAQ device you find a single module in the tree structure "Modules -> Input/Output -> DataTranslation" which can be dragged & dropped onto the worksheet:

- 1.) AnalogInput
- 2.) AnalogOutput
- 3.) DigitalInput
- 4.) DigitalOutput
- 5.) Counter/Timer
- 6.) RateGenerator

### Please read if you want to use the analog output of the DT9837A module

The minimum sampling rate of the DT9837A analog output channel is 10 kHz. Therefore please ensure that a value  $\geq 10$  kHz is selected in the menu "Experiment -> Experiment Setup -> Driver".

### Please read if you want to use two or more DT9837A or DT9837B modules

If you want to synchronize two (or more) DT9837A or DT9837B devices please ensure that the slave device is selected in the first AnalogInput module and that the master device is selected in the last AnalogInput module on the worksheet.

*This is necessary because the device selected in the first AnalogInput module is started first. Slave devices must be started first and the master device at last.*

### Please read if you want to use one or more Counter/Timer subsystems


The Counter/Timer module and the RateGenerator module always use the first subsystem element available. The entry next to "Port Number: " in the modules Counter/Timer and RateGenerator shows the number of the subsystem in use. You can't configure this!

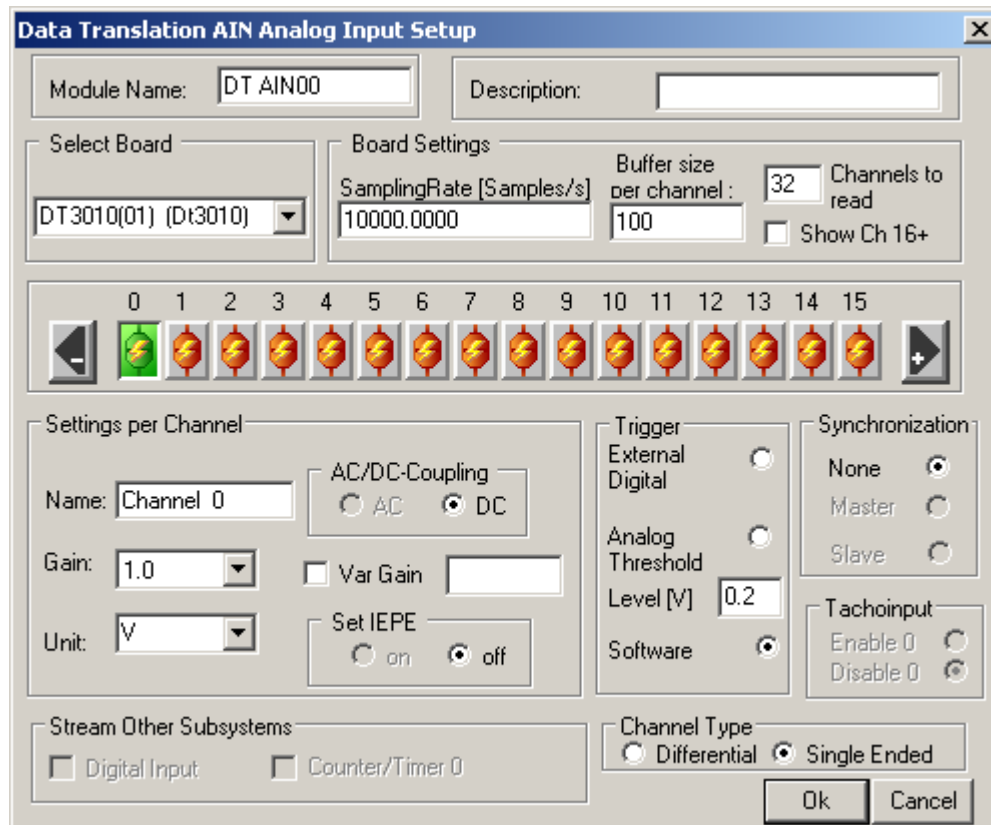
**Please read if you want to use global variables**

The AnalogInput module supports global variables for the gains and sampling rate.


**Please read if you are using a DT DAQ device with more than 16 analog input channels**

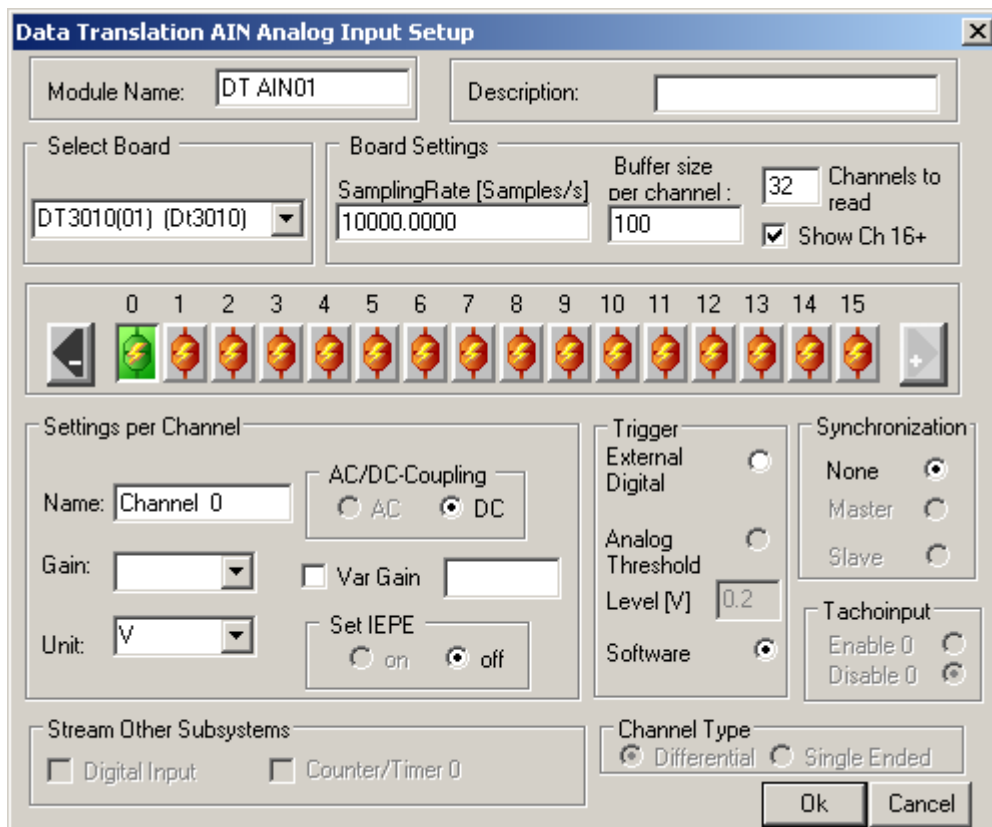
As you know DASYLab does not support any modules with more than 16 input or output channels. So if you want to acquire e.g. all 32 analog input channels of the USB DAQ module DT9818-32 or PCI DAQ board DT3034 you need to use two AnalogInput modules. Here comes a short description of the correct usage.

- 1.) Drag & Drop one AnalogInput module on the worksheet.
- 2.) Select the board.
- 3.) Configure the channel and hardware settings.
- 4.) In the text field next to “**Channels to read**” enter the number of analog input channels you want to acquire.
- 5.) Add the 16 channels by clicking on the  button
- 6.) Click on “Ok” to close the dialog



**AnalogInput module for the first 16 channels**

- 7.) Drag & Drop a second AnalogInput module on the worksheet.
- 8.) At first check the box **"Show Ch 16+"**.
- 9.) Then enter the buffer size per channel and the number of channels to read.  
**Caution:** Those two values have to be the same as defined in the first AnalogInput
- 10.) Now select the very same board as in the first AnalogInput module. If you do step 10 before step 9 you will get the error message "Subsystem already in use".  
*If you get this error message you must delete the second analog input module and drag and drop a new one on the worksheet.*
- 11.) Click in the SamplingRate textbox to activate the module
- 12.) Add the 16+ channels by clicking on the  button
- 13.) Any settings like Single Ended or Differential you perform now are not used. This module is just needed to show the signals on the analog input channels higher 16.
- 14.) Click on "Ok" to close the dialog



**AnalogInput module for the 16+ channels**



### **Error Messages**

Queue done: Increase the buffer size or decrease the sample rate.

### **Not supported yet**

- 1.) So far only one analog output channel from each DT DAQ device can be used in continuous (streaming) mode. (In single value mode you can use several analog output channels)
- 2.) Quadrature Encoder inputs are not supported.
- 3.) The Counter inputs can not be streamed together with the analog input channels.
- 4.) Global variable to configure the buffer size is not supported.

### **Technical Support**

If you need any further information, Data Translations' Technical Support group is available to provide technical assistance. To request technical support, go to the support area on our web site [www.datatranslation.com](http://www.datatranslation.com). If you are located outside the U.S., go to [www.datatranslation.eu](http://www.datatranslation.eu)