

# Advantech AE Technical Share Document

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Category	<input type="checkbox"/> FAQ <input checked="" type="checkbox"/> SOP	Related OS	NA
Abstract	DAQNavi Assistant VI User Guide for LabVIEW		
Keyword	Assistant VI, LabVIEW, DAQNavi		
Related Product	DAQNavi supported devices		

## Before You Start...

Please make sure you have done steps as follow:

1. Install LabVIEW.
2. Install DAQNavi SDK.

You must have LabVIEW installed first in your computer so that DAQNavi can detect LabVIEW and install relative modules in LabVIEW so that you would be able to find Advantech DAQNavi Kits in LabVIEW.

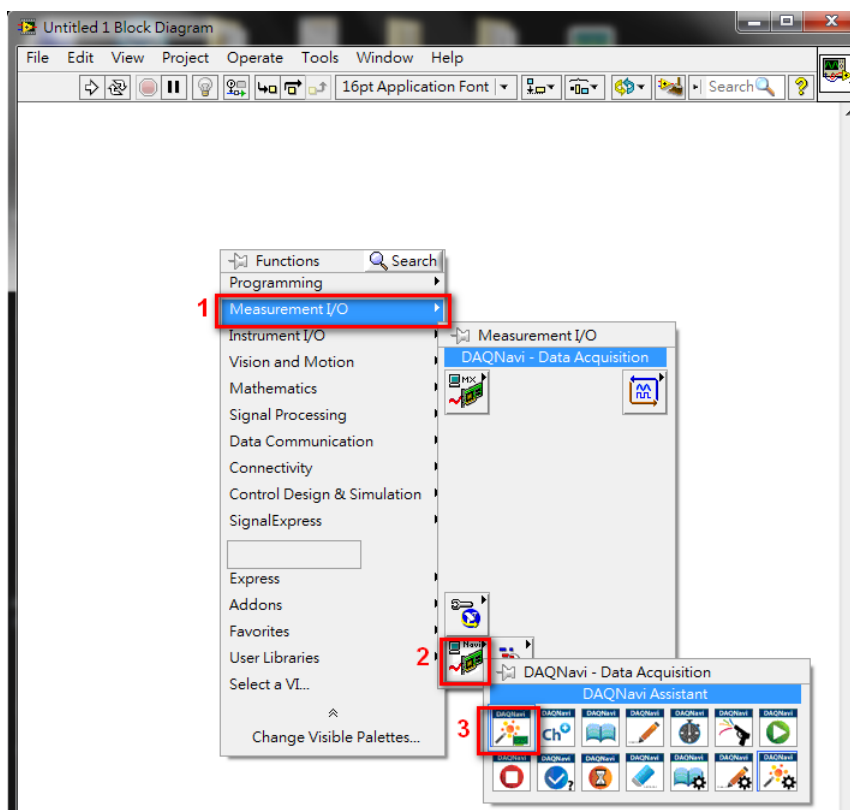
This guide takes PCIE-1810 as an example. Some of the property would be a little bit different from boards to boards. For more information, please refer to the user manual in DAQNavi Navigator or the HW manual in CDs. You can browse the support portal [http://support.advantech.com.tw/support/new\\_default.aspx](http://support.advantech.com.tw/support/new_default.aspx) for the board information.

## • Digital Input

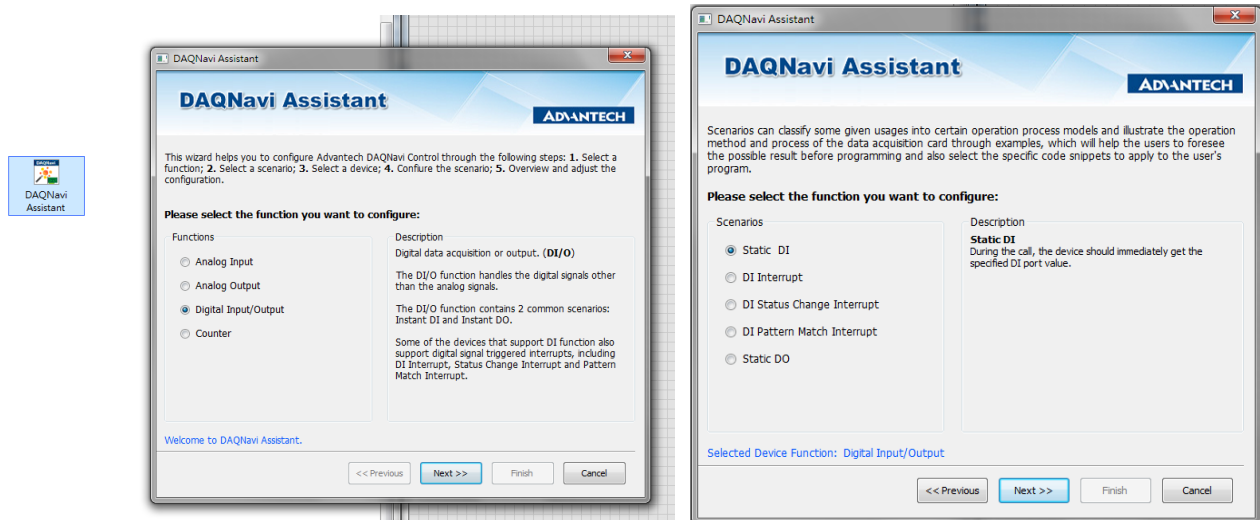
### Step1: Configure the VI

Create a DAQNavi Assistant VI.

After you installed SDK, you will find DAQNavi VI in Measurement I/O as below picture.



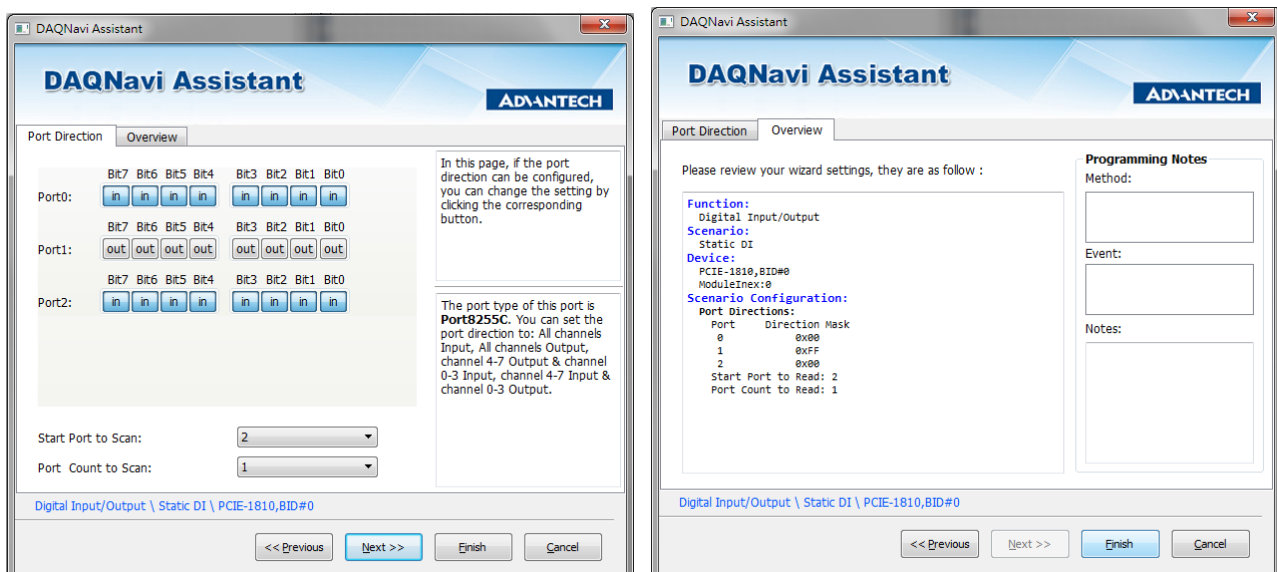
Double click the DAQNav Assistant Vi, the Wizard will show and you can use it to configure PCIE-1810's settings. First, choose DIO function. And select your scenarios with "Static DI".



Then pick your device which is plugged in your PC. You can also pick DemoDevice to test this function.

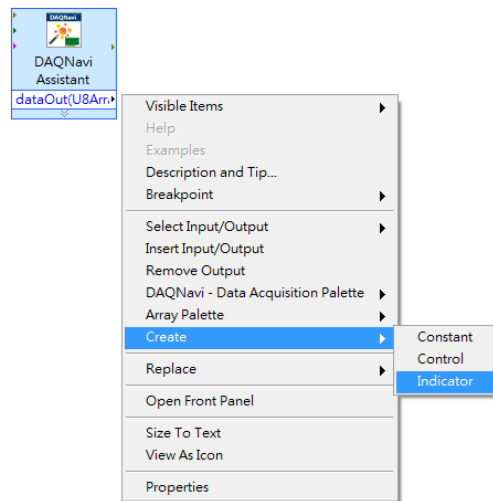


You can configure its port direction and choose which port you want to read from. In this example we read port2. After these are finished you'll get the summary of your settings then click on **Finish**.

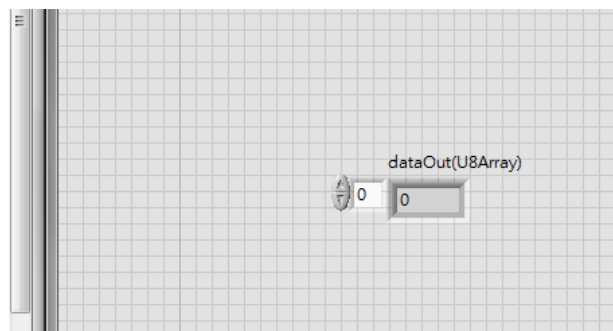
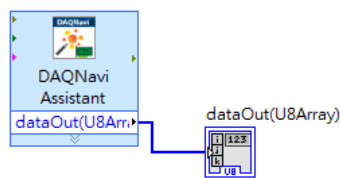


## Step2: Configure the system

After finished the settings, right click the data-out pin to create an indicator which would show DI status in front panel.

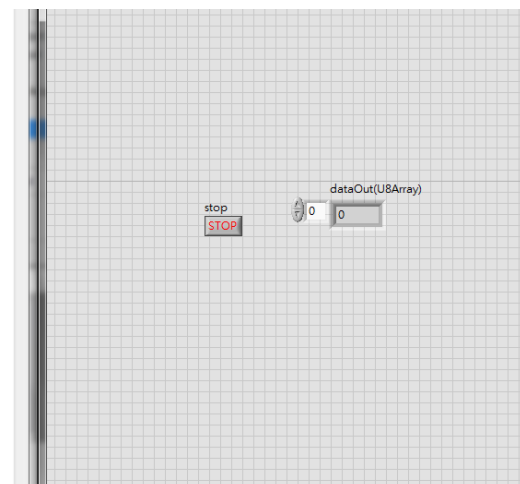
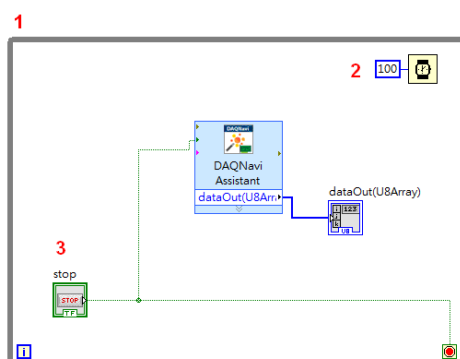


Then we can read DI status from this VI.



If you want to update the status every 100ms, you can also add some flow control tools:

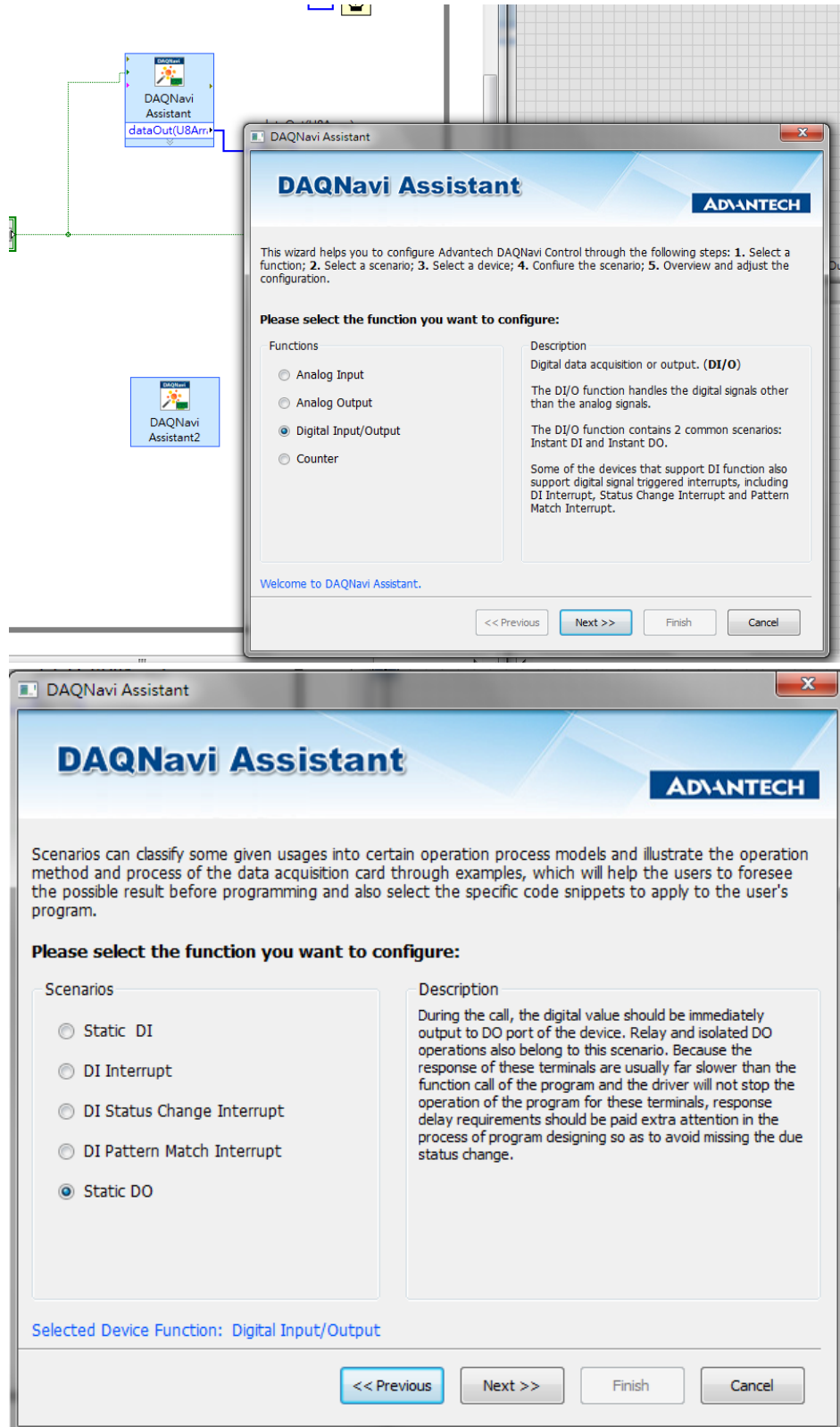
1. Create a while loop.
2. Add a timer which would count to wait 100ms.
3. Add a button to stop while loop.



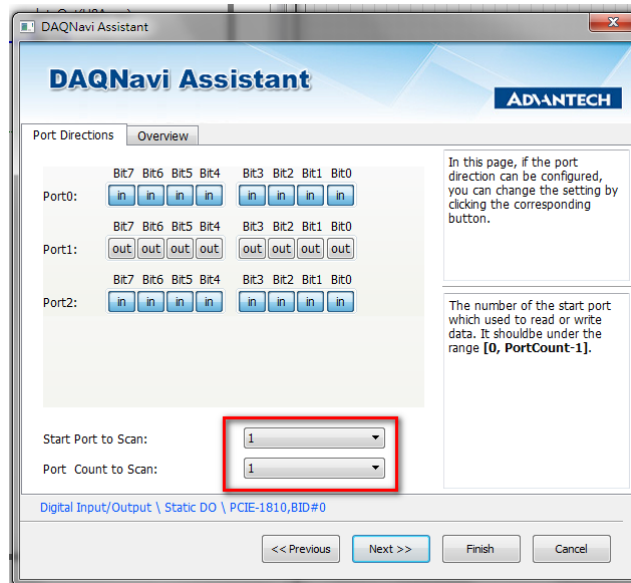
## • Digital Output

### Step1: Configure the VI

Create a DAQNav Assistant Vi. It is similar as the settings in digital input.

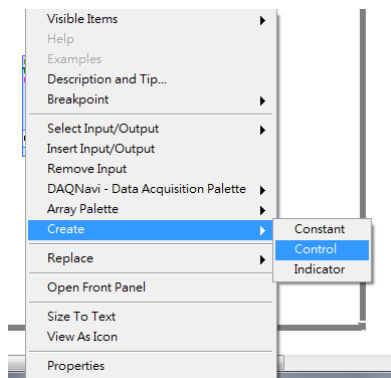


Choose which port you want to control with. In this example we would like to control port1.

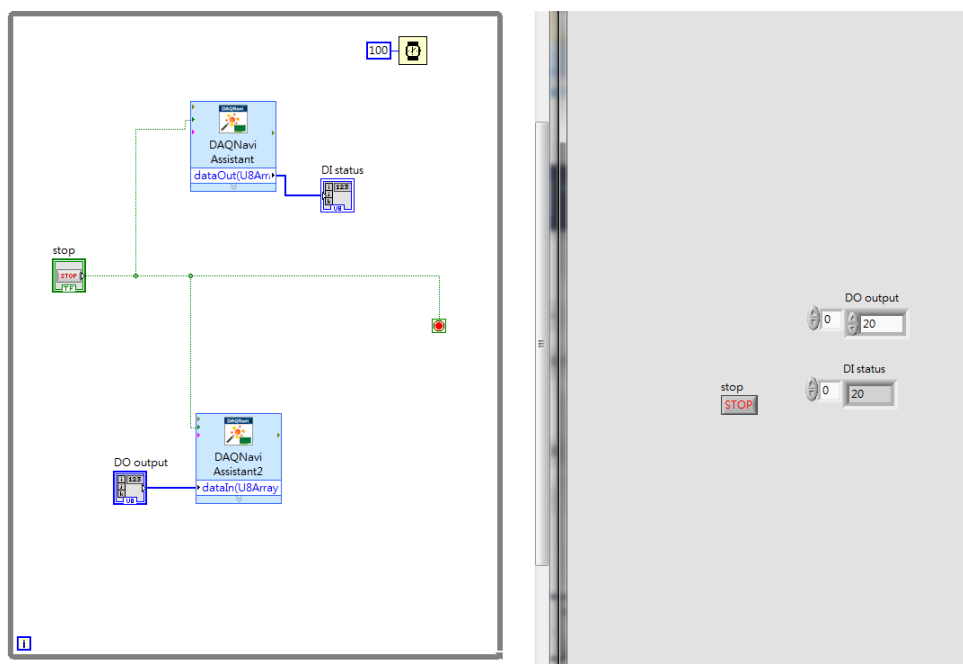


## Step2: Configure the system

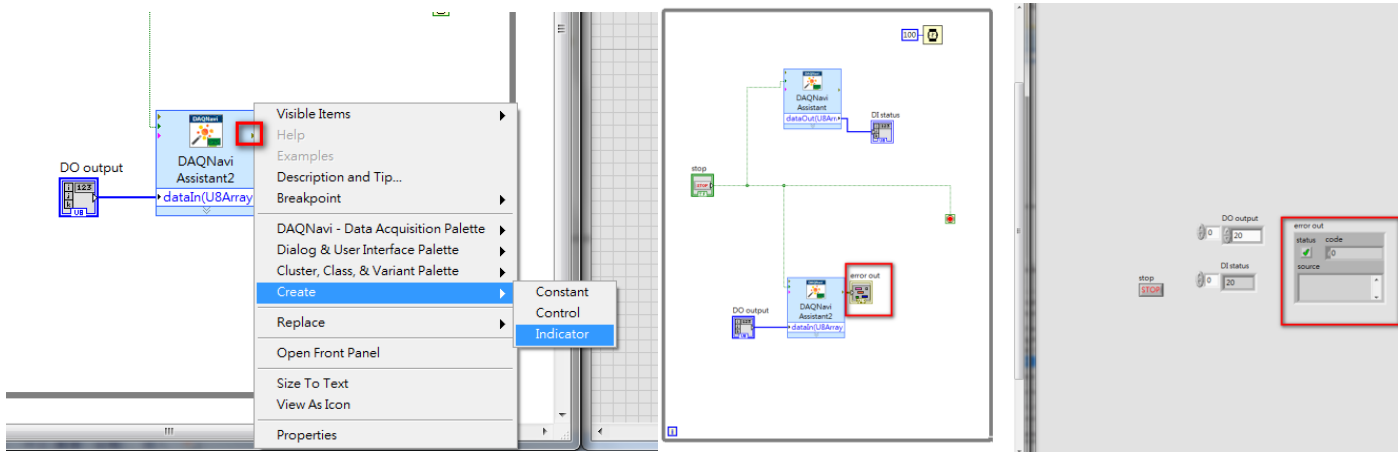
After the settings are finished, right click on the data-in pin to create a control component which allows us to control DO output from front panel.



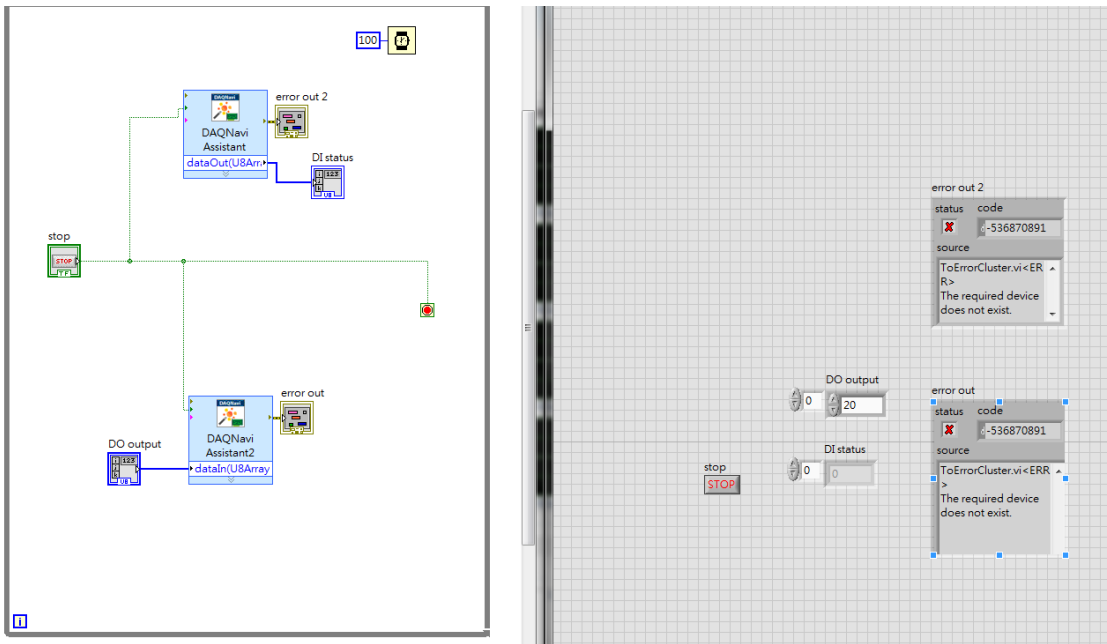
Here port1 to port2 are connected together physically so you can see that when DO output is changed, DI status should also be changed.



We also provide an error output pin to show the error code when there's any problem.



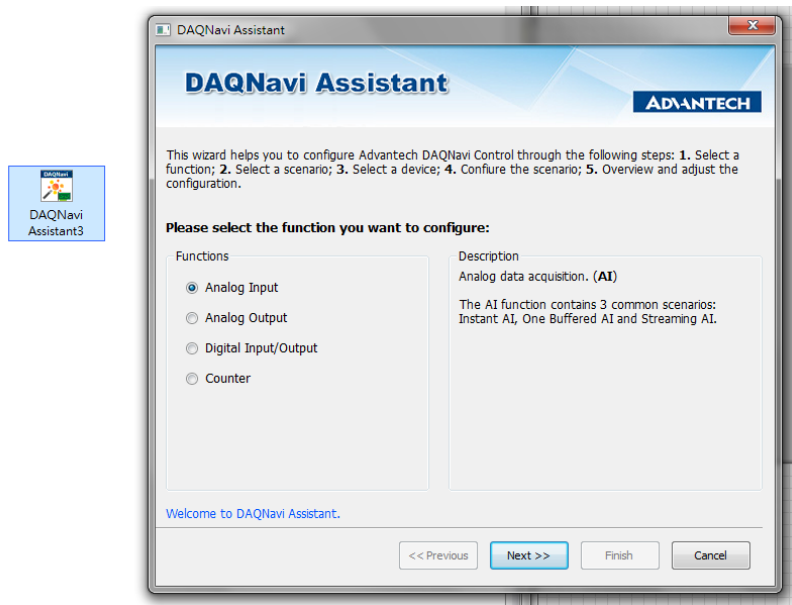
For example, if there is no device in your PC, you will receive a error code like below picture.



## • Analogue Input

### Step1: Configure the VI

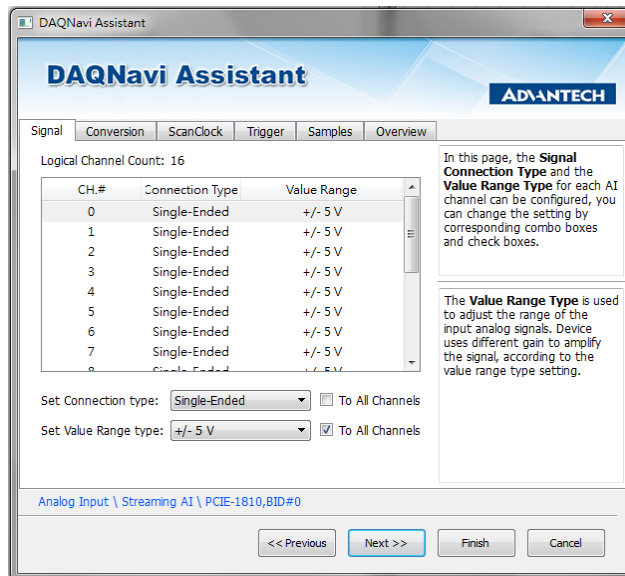
Create a DAQNav Assistant VI and choose Analog Input function.



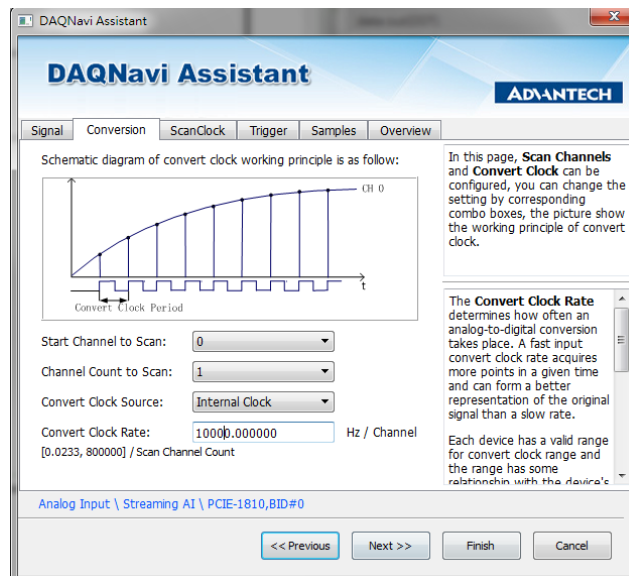
Choose your scenario.



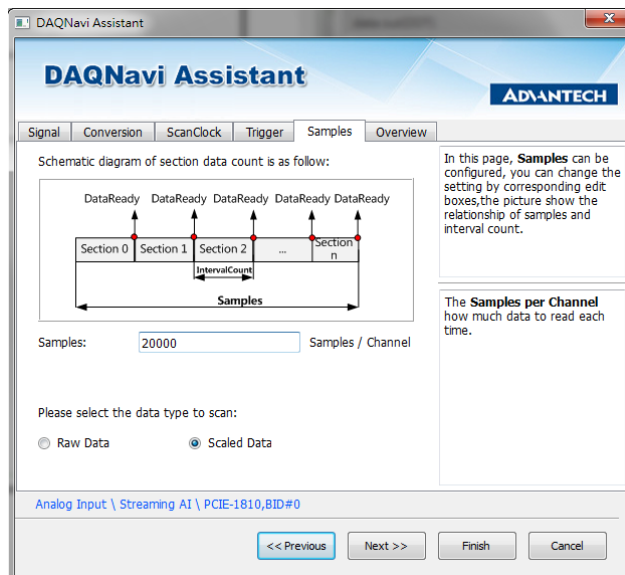
Set your connection type and value range type.



Set how many channel to be read from and sampling rate.



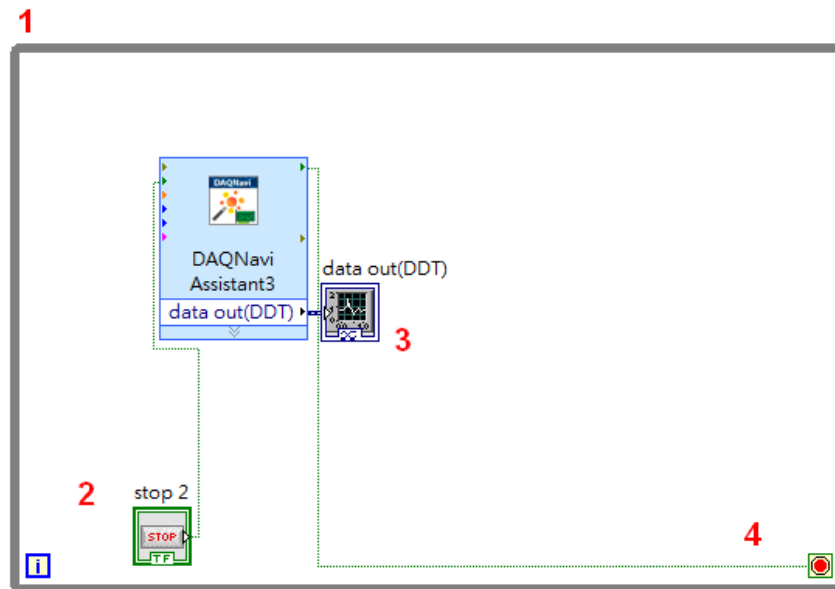
Set the data-ready event to be generated after how many samples are crabbd.



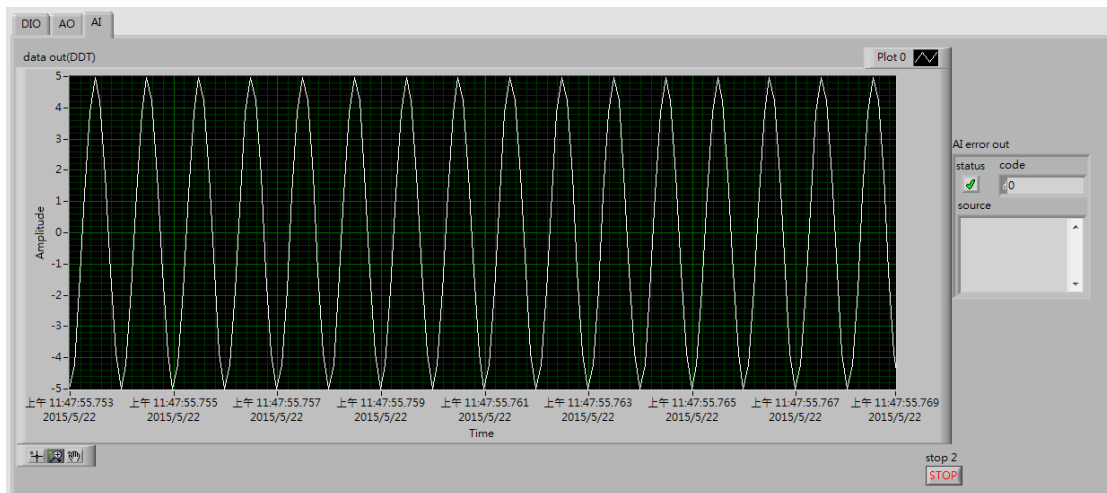


## Step2: Configure the system

1. Create a while loop.
2. Add a button to stop while loop.
3. Create a waveform graph to show the data.
4. Connect the stop-pin to the loop condition.



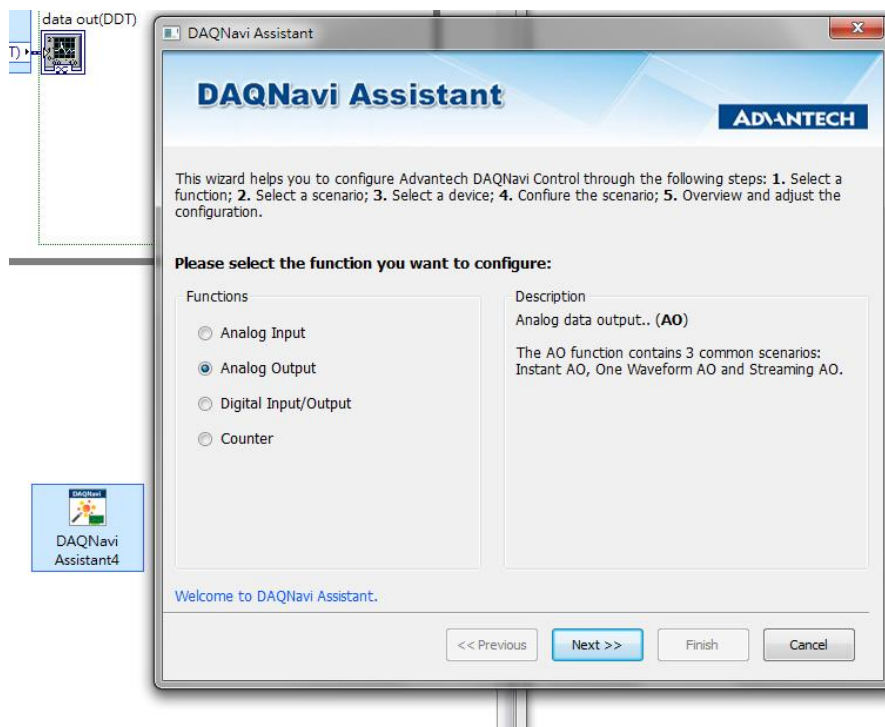
After that, you can see the data show in the graph.



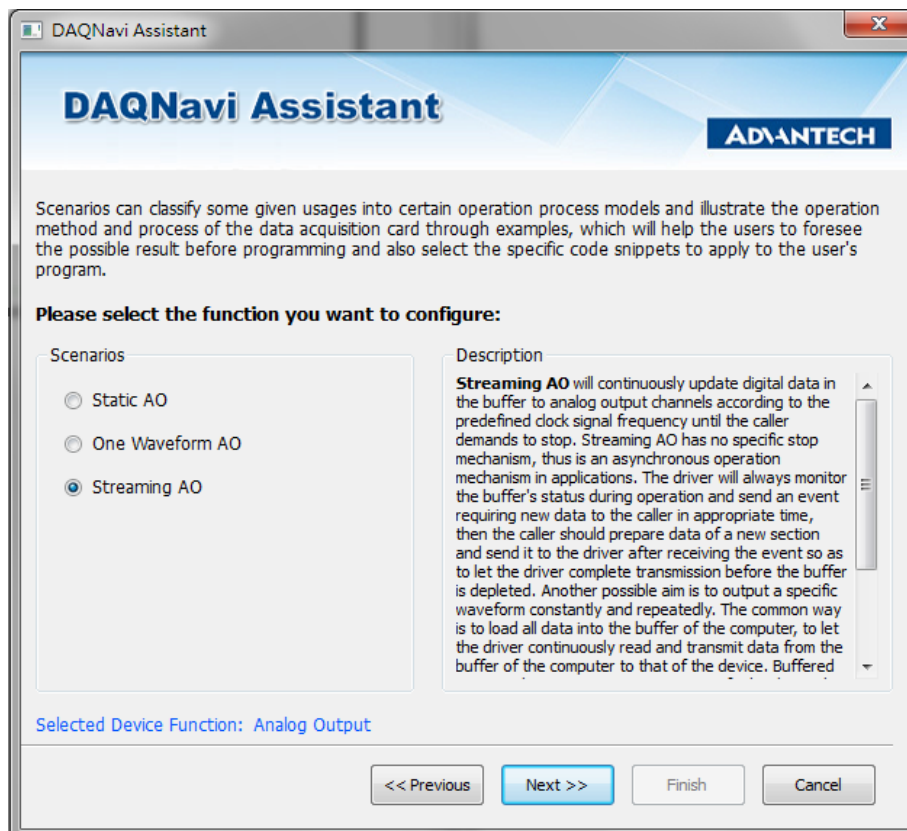
## • Analogue Output

### Step1: Configure the VI

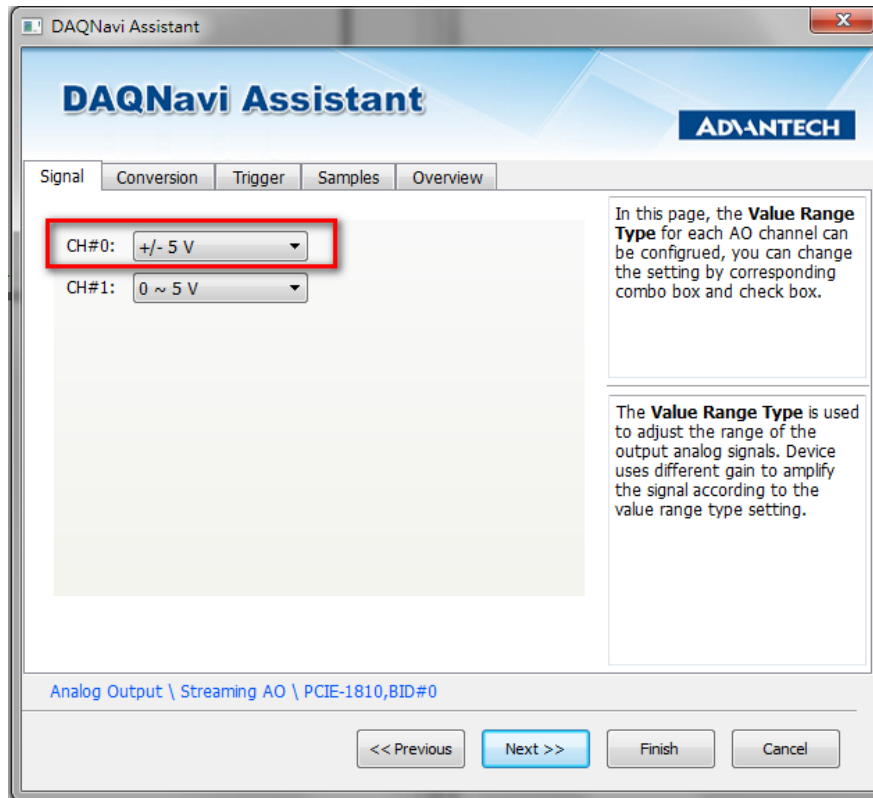
Create a DAQNav Assistant VI and choose Analog Output function.



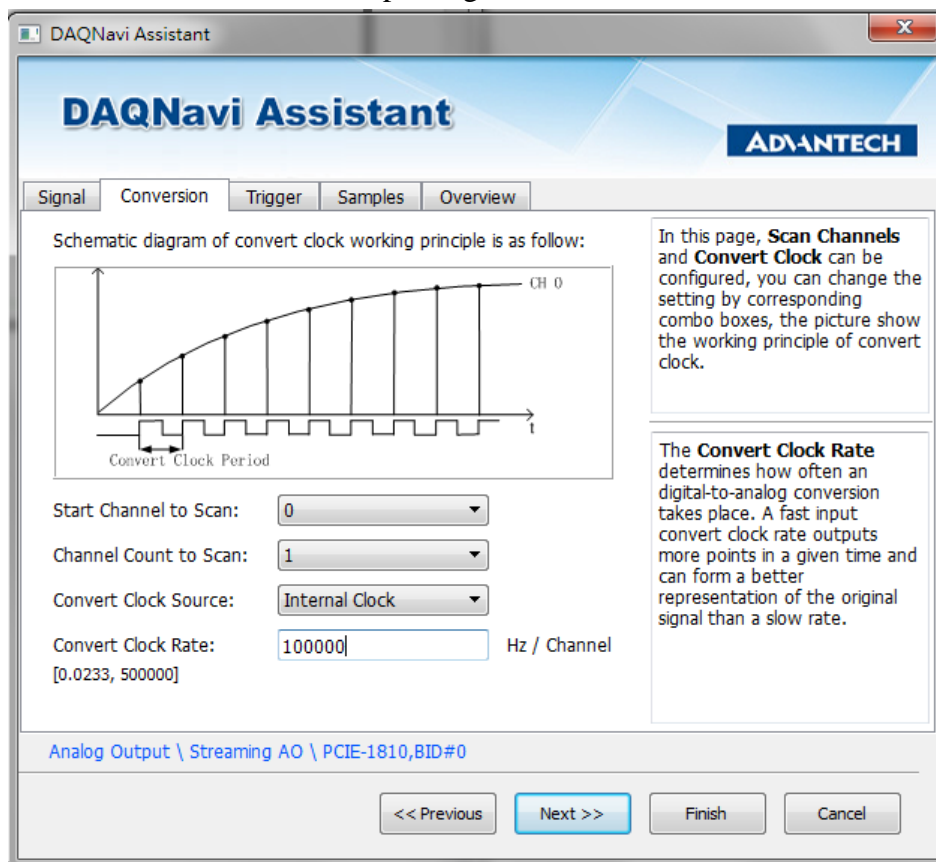
Choose your scenario as Streaming AO.



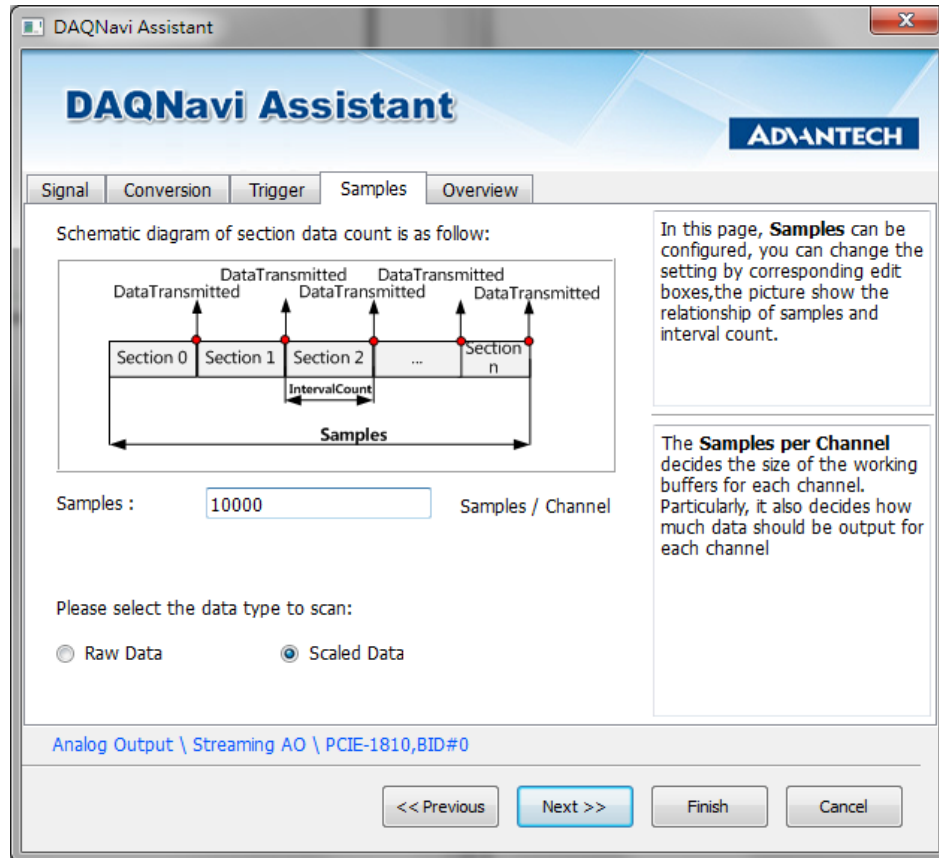
Set its value range.



Set how many channel to be controlled and the updating rate.

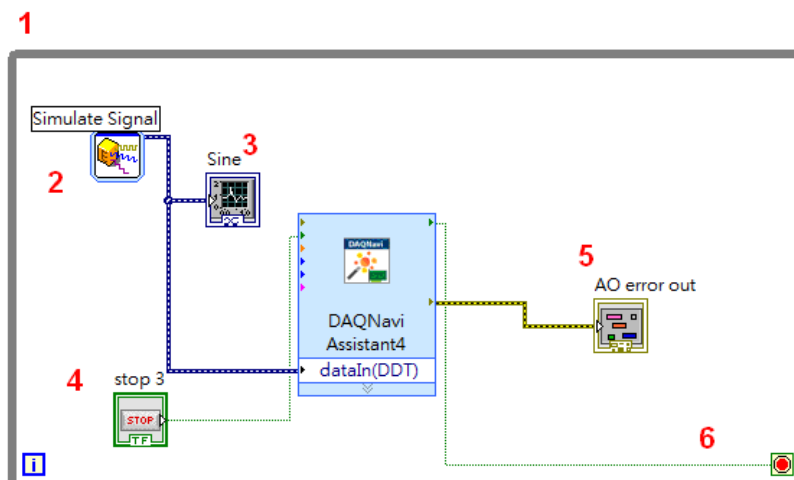


Set samples.

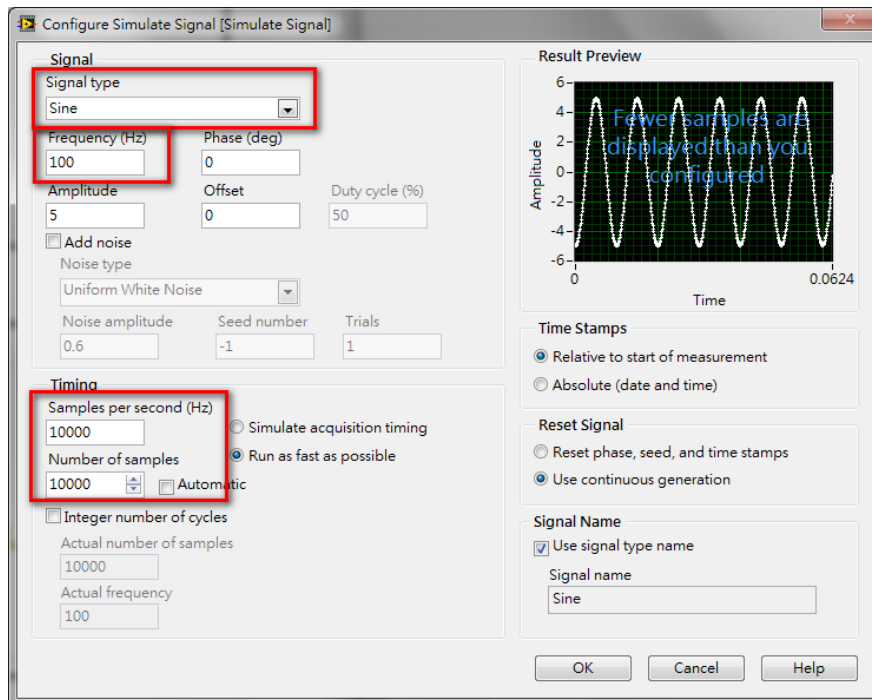


## Step2: Configure the system

1. Create a while loop.
2. Add a simulate signal VI to generate a wave which you want to send for.
3. Create a waveform graph to show the data from simulate signal VI.
4. Add a button to connect stop pin.
5. Add an indicator to monitor error out.
6. Connect the stop pin to the loop condition.



Double click on simulate signal VI, you can determine the wave parameters.



### **Reference:**

For more information, please launch the website:

Advantech Support Portal

[http://support.advantech.com.tw/support/new\\_default.aspx](http://support.advantech.com.tw/support/new_default.aspx)

Adam Forum

<http://forum.adamcommunity.com/forumdisplay.php?fid=279>