



## Quick Start Manual

Revision 1.1

Last Update: October 16, 2008



14120 Parke Long Court, Suite 113  
Chantilly, VA 20151

Web: <http://www.acqlog.com>

E-mail: [support@acqlog.com](mailto:support@acqlog.com)

## **Table of Contents**

Quick Start Manual .....	1
Table of Contents .....	2
Quick Start Procedure .....	3
Installing the AL.NET API and Drivers .....	4
Inserting the A/D Board in Your System.....	9
32-bit PCI Connector .....	9
64-bit PCI Connector .....	10
PCI-Express (PCIe).....	11
Selecting the Drivers.....	11
Making Connections .....	13
Connection Details.....	13
AL12200/8200 Family.....	14
AL12250/8250 Family.....	15
AL4108 .....	15
AL81G .....	16
AL8xGT Family.....	16
AL8xGTe Family.....	17
Run Scope3 .....	19
Contact Information .....	20

## ***Quick Start Procedure***

This procedure describes a quick method for getting your Acquisition Logic A/D board installed in a system running the Windows OS. For other operating systems, please contact Acquisition Logic for the latest information.

The basic steps are as follows:

- 1) Install the AL.NET API and drivers
- 2) Insert the board in the system and let Windows find appropriate drivers
- 3) Make the physical connections to a signal generator or other input source
- 4) Run the Acquisition Logic Scope3 program.

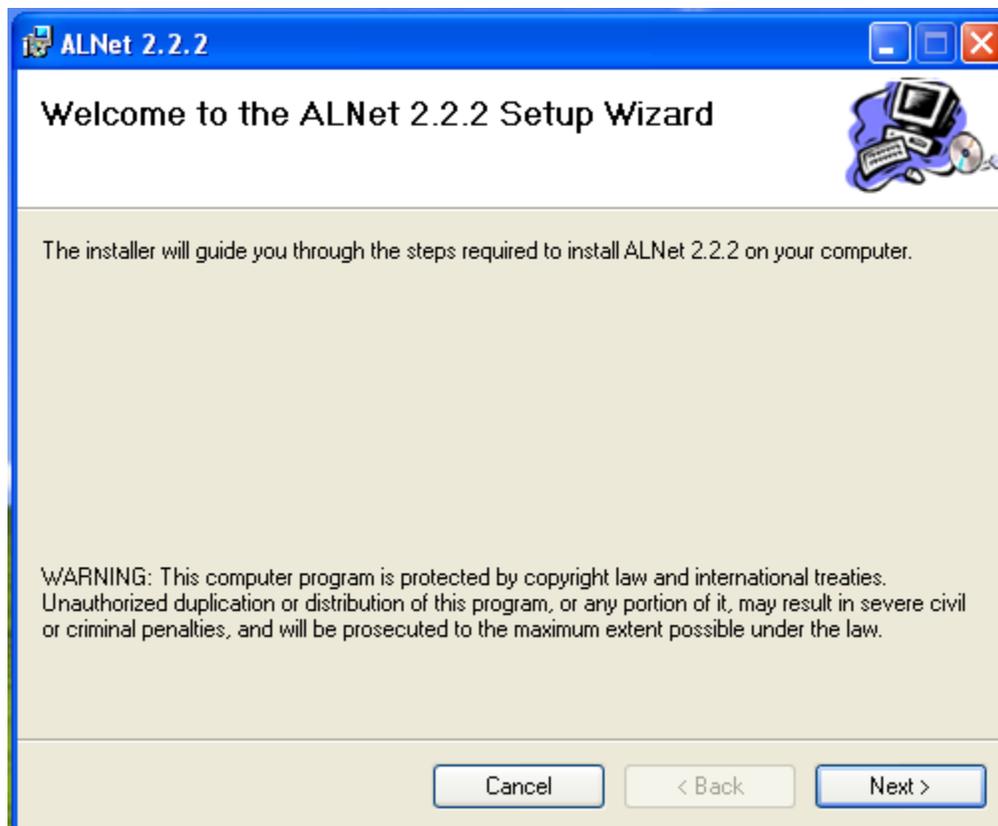
The following pages will describe each step in turn.

## ***Installing the AL.NET API and Drivers***

Acquisition logic drivers must be present before attempting any interaction with the A/D boards. Be sure to install the driver software **before** installing any A/D board in your computer. If the board is placed in before the drivers, then after the drivers are installed, use control panel to install a “new driver” for the unknown board in the system.

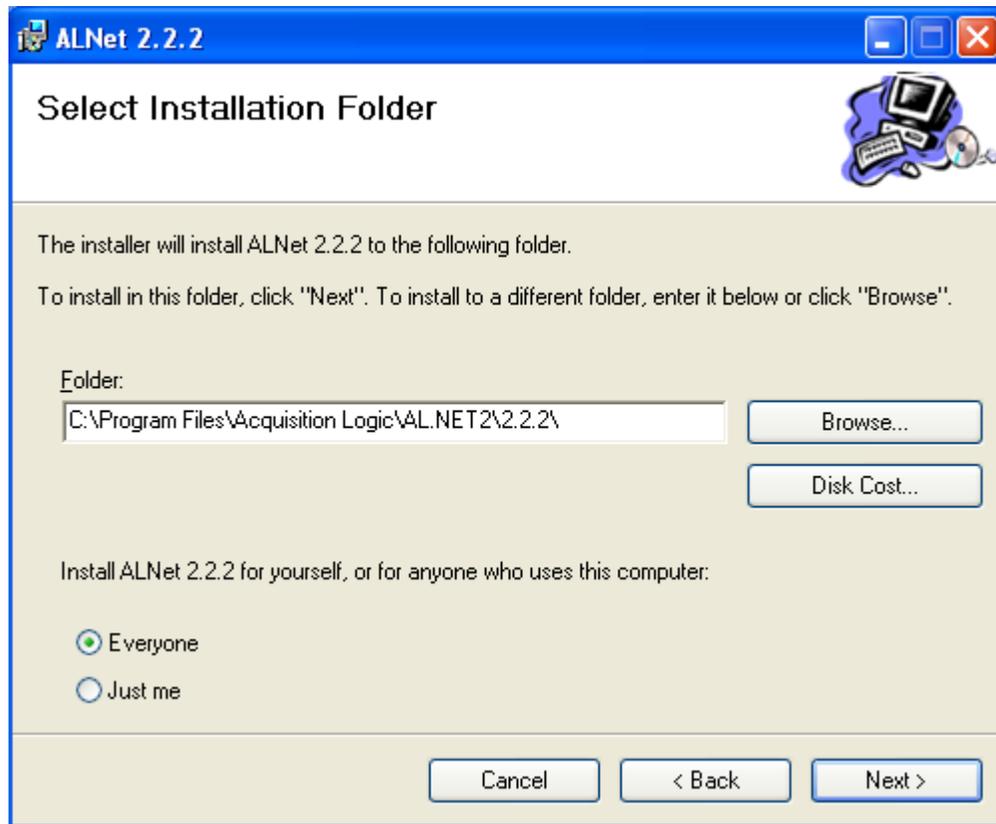
Follow these steps to install AL.NET drivers and API, configure and use the A/D boards.

- Insert the Acquisition Logic software CD in the CD drive or locate the Install file
- Double Click on the *ALNET2\_2\_x\_x.msi* file on the CD.
- Follow the default instructions in the AL.NET setup wizard (shown below):



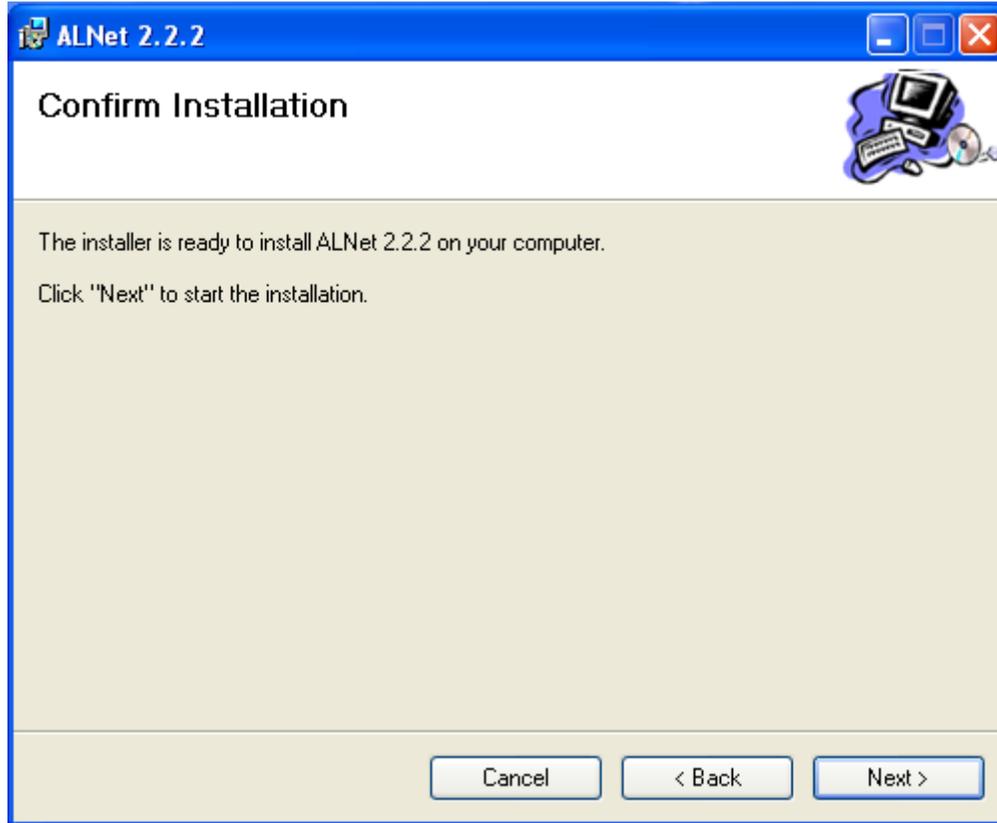
**Figure 1: AL.NET Setup Wizard**

The installation wizard will automatically select the directory “C:\Program Files\Acquisition Logic\AL.NET2\<version #>” in which to install the files. It is recommended that you use this directory setting.



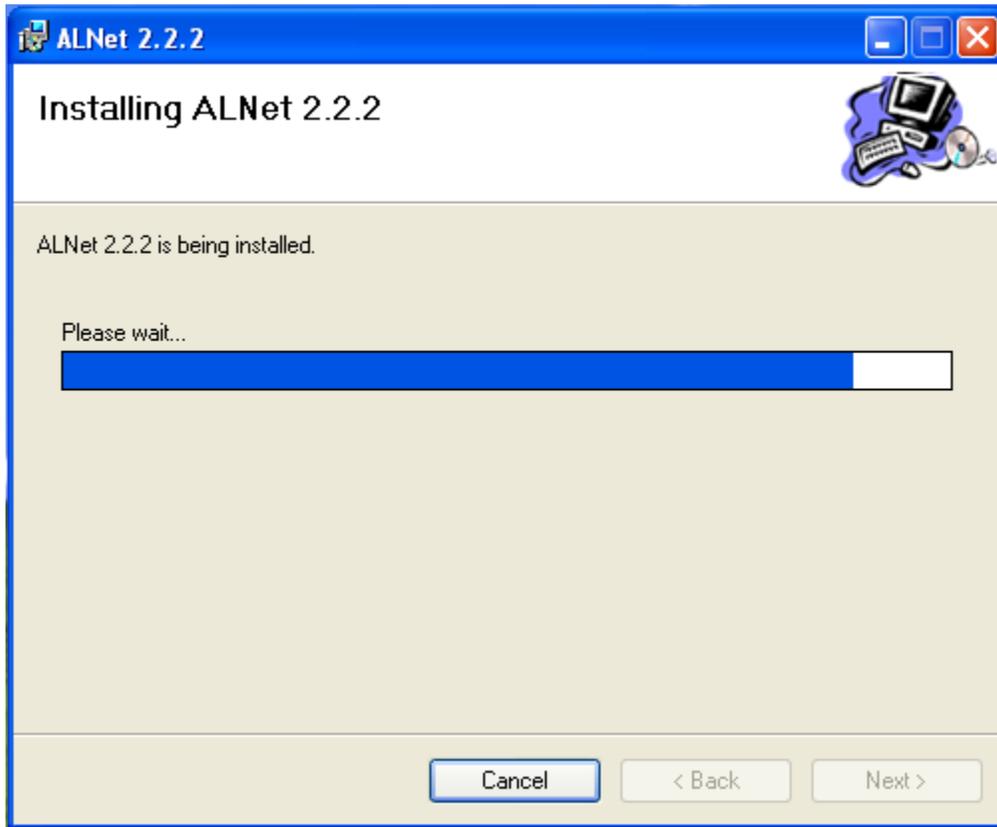
**Figure 2: Selecting the folder in which to install the drivers.**

Once the installation directory is set, confirm your settings and continue.

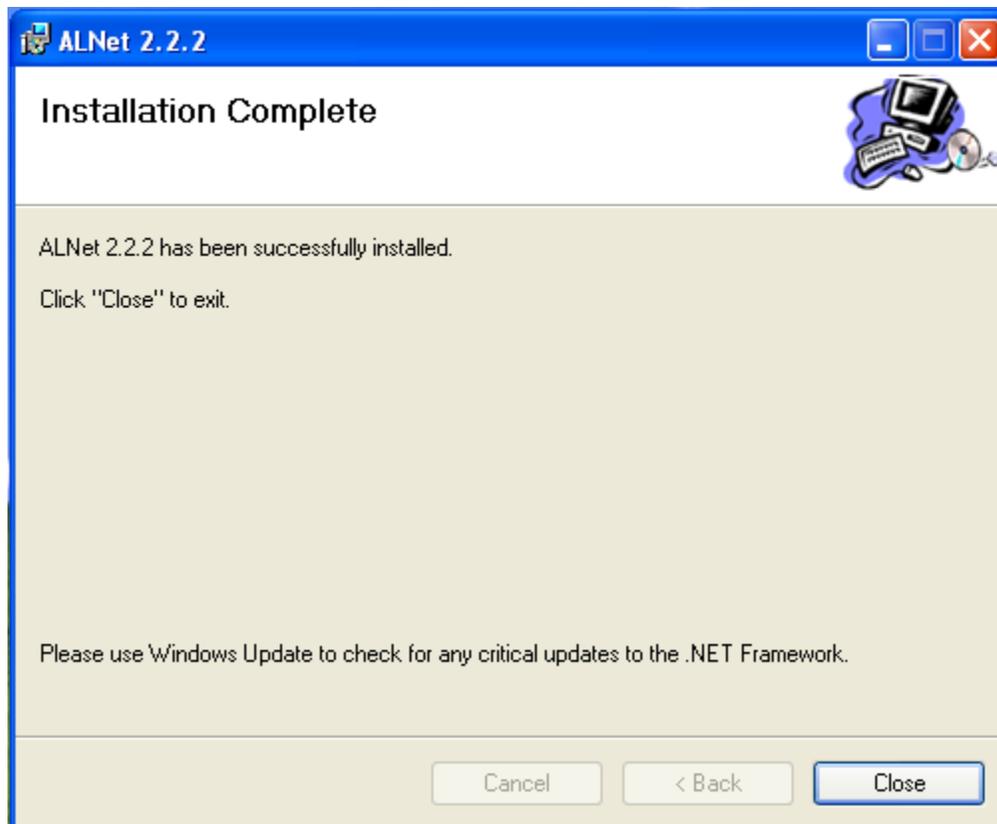


**Figure 3: Confirming installation.**

Installation could take up to a minute: the wizard will inform the user when installation is complete.



**Figure 4: Installation in progress**



**Figure 5: Successful installation**

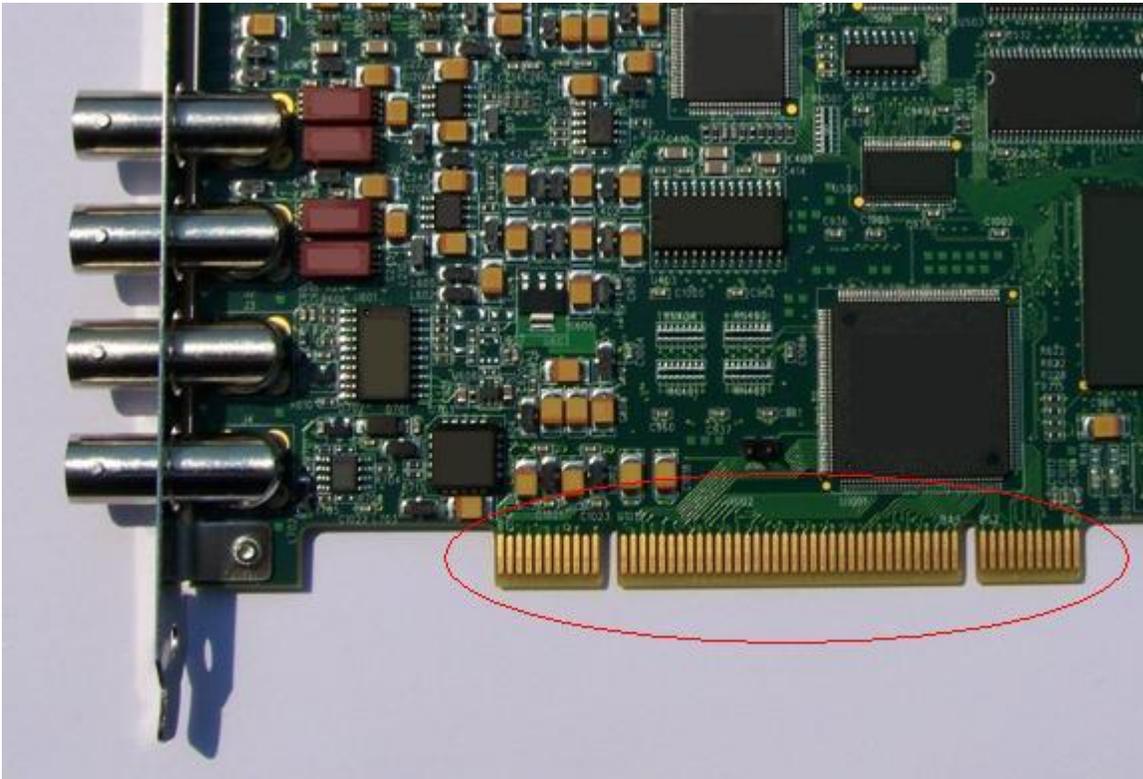
Once Installation is complete, you can install the A/D board.

## ***Inserting the A/D Board in Your System***

To insert the board, first shut down your computer. Install the board in an available PCI slot. The type of PCI slot to be used depends on the type of A/D board.

### **32-bit PCI Connector**

*Used by: AL1G, AL12200/8200 Family, AL12250/8250 Family*



**Figure 6: 32-bit PCI connector**

PCI-32 base boards can be inserted in either a 32 or 64 bit PCI slot.

## 64-bit PCI Connector

Used by: AL4108, AL8xGT Family

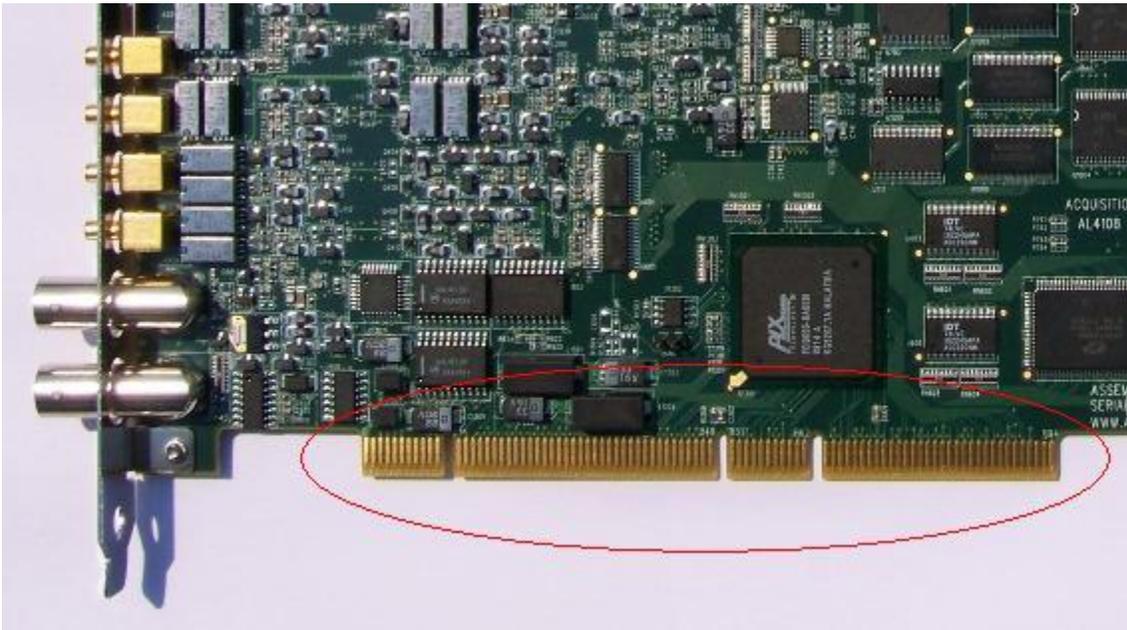


Figure 7: 64-bit PCI connector

Boards with a 64-bit connector based boards can also be inserted in either a 32 or 64 bit PCI slot. Using a 64-bit slot will take advantage of the wider PCI bus.

**IMPORTANT NOTE:** When inserting board with a 64-bit connector into a 32-bit slot, it is vital to make sure that the unused connection lines do not touch any metal pins or connectors on the board: otherwise a short may occur that would damage or destroy both your motherboard and the A/D Board.

## PCI-Express (PCIe)

Used by: AL8xGTe Family

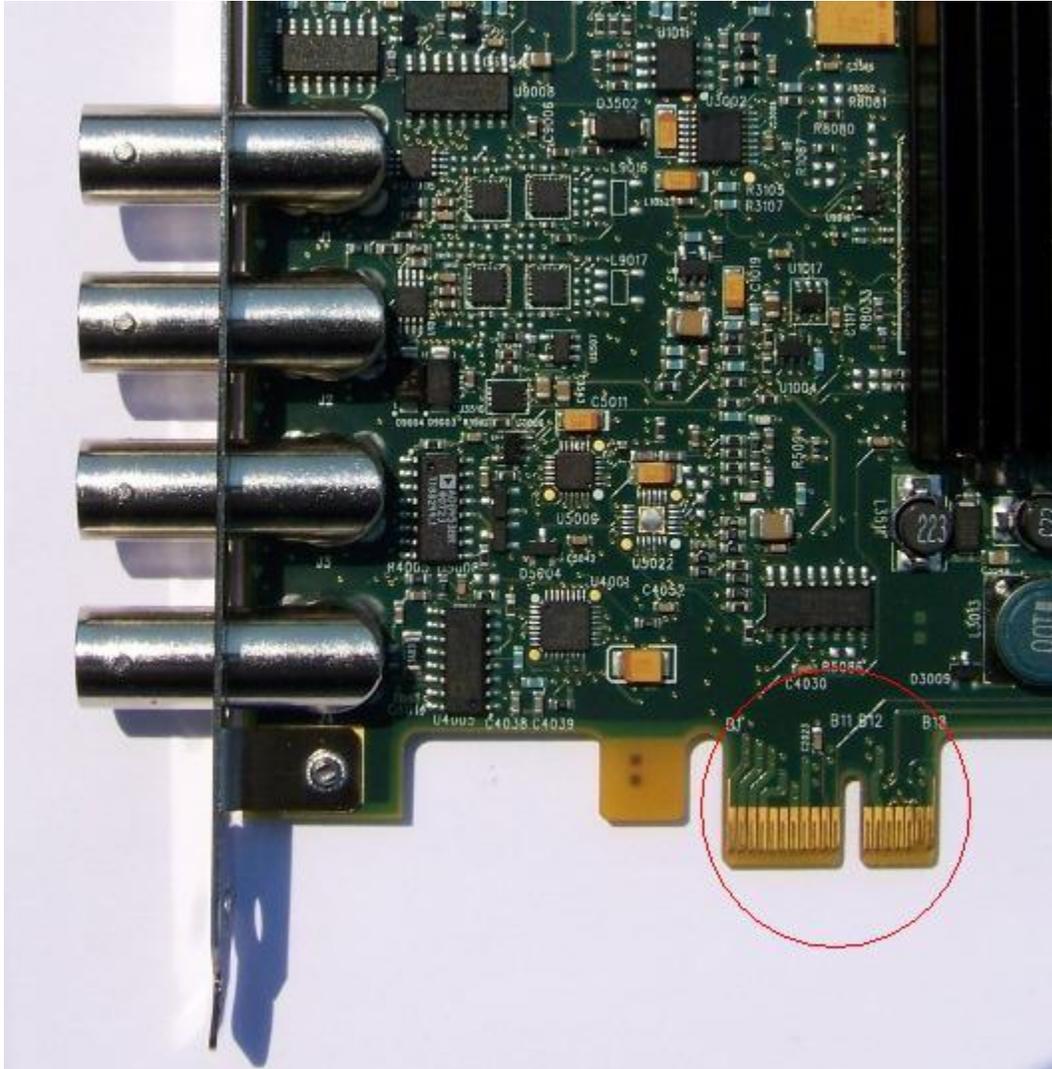


Figure 8: x1 PCIe Connector

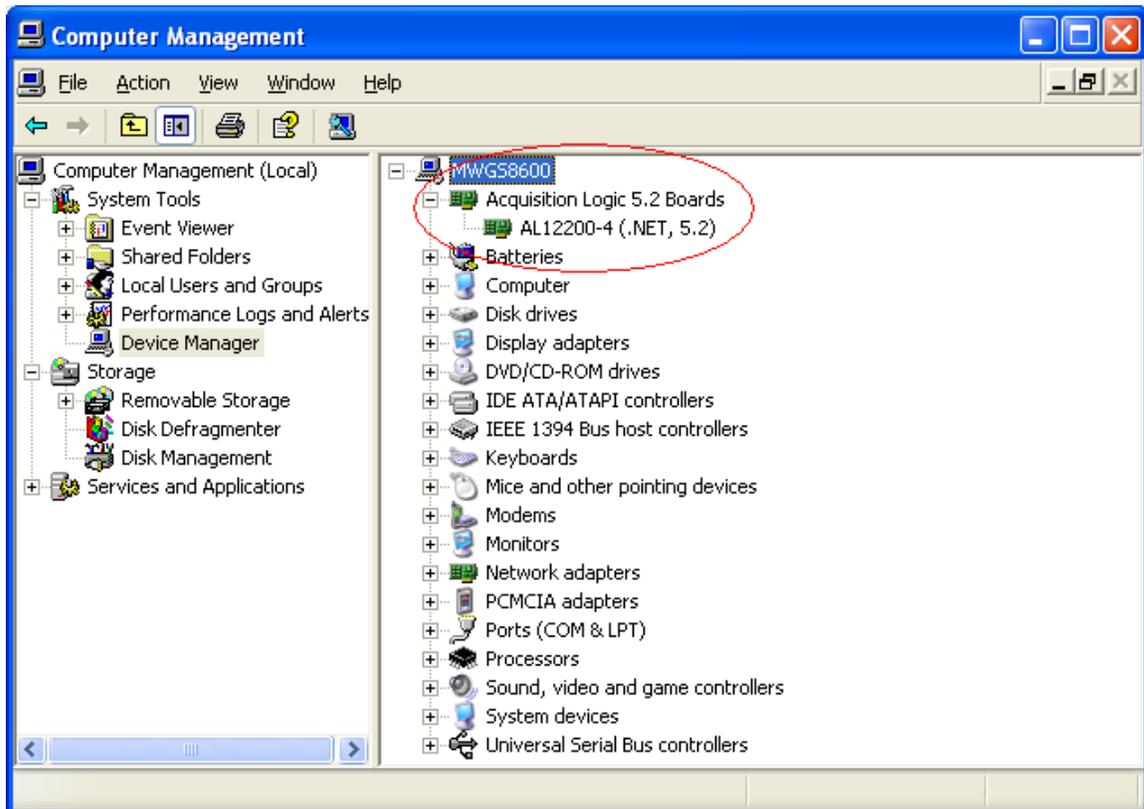
Boards with the x1 PCIe Connector can be placed in any available x1, x4, x8 or x16 PCIe slot.

**IMPORTANT NOTE:** Make sure the PCIe-based boards are firmly inserted, and that the bracket is screwed into the computer before operation. Otherwise, the board may be damaged or not function properly when the system is turned on.

## Selecting the Drivers

When you restart your computer, Windows should automatically detect the added Acquisition Logic A/D board and install the appropriate board driver for you.

Once the driver installation process is complete you can check that your system has successfully installed the drivers by checking in the Windows Device Manager. To access the Manager, right-click on your “My Computer” icon and select “Manage” from the drop-down menu. Click on “Device Manager” to see your list of installed devices.



**Figure 9: System with Acquisition Logic board successfully installed.**

## ***Making Connections***

With your board installed and the drivers running, you can now make the connections to your pulser-receiver, signal generator, or other signal source.

Acquisition Logic A/D boards have external connectors for signal (Ch A, Ch B, etc.), clock (Clk), and trigger outputs (Trig). There are also connections on the board for triggering using encoder position (Encoder Trigger) and from other source (Internal Trigger)

At minimum, you will need to connect your input source to Ch A of your board. If you wish allow the A/D board to trigger your device you will also need to connect the devices' external trigger input to the Trig connector.

Finally, if you wish to let the A/D board read encoder positions, you will need to make a connection to the Encoder Trigger. Plug in your encoder input to the appropriate Encoder Trigger connection (usually a 34-pin connector) on your A/D board. The AL8xGT and AL8xGTe families have a 10-pin connector for simplified encoder input.

***IMPORTANT NOTE:*** *Connectors on the board that are not otherwise labeled below are for INTERNAL USE ONLY. Attempting to connect an encoder or other input to these lines may damage your board.*

## **Connection Details**

The following pictures show the location(s) of the inputs, outputs, and triggers for each board family.

## AL12200/8200 Family

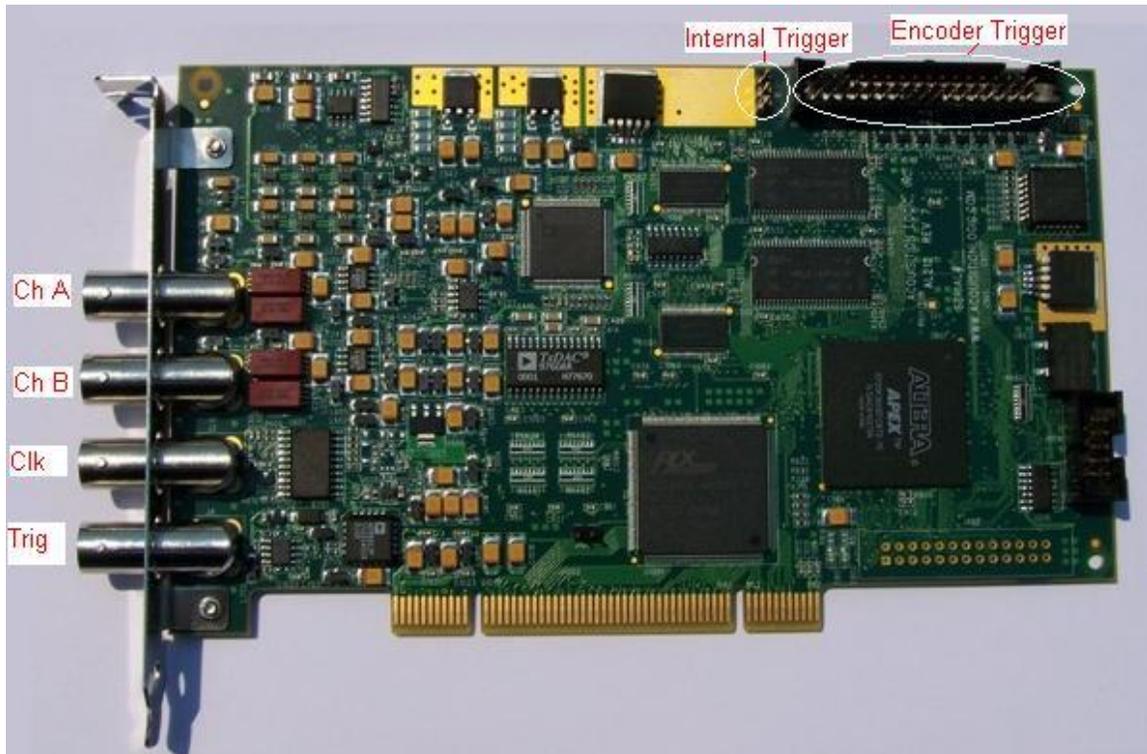


Figure 10: AL12200 with labeled connectors



## AL81G



Figure 13: AL81G with labeled connectors

## AL8xGT Family



Figure 14: AL8xGT with labeled connectors (front)

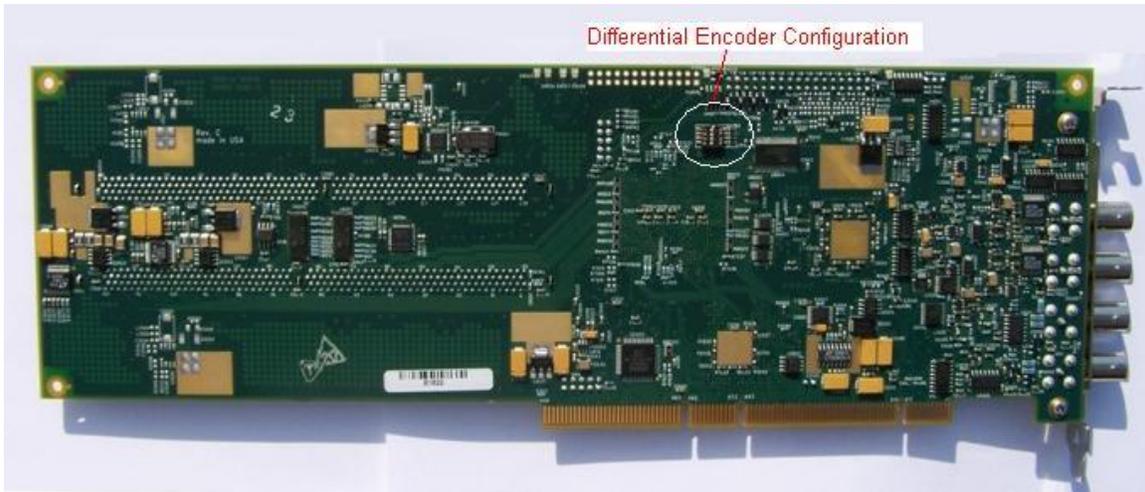
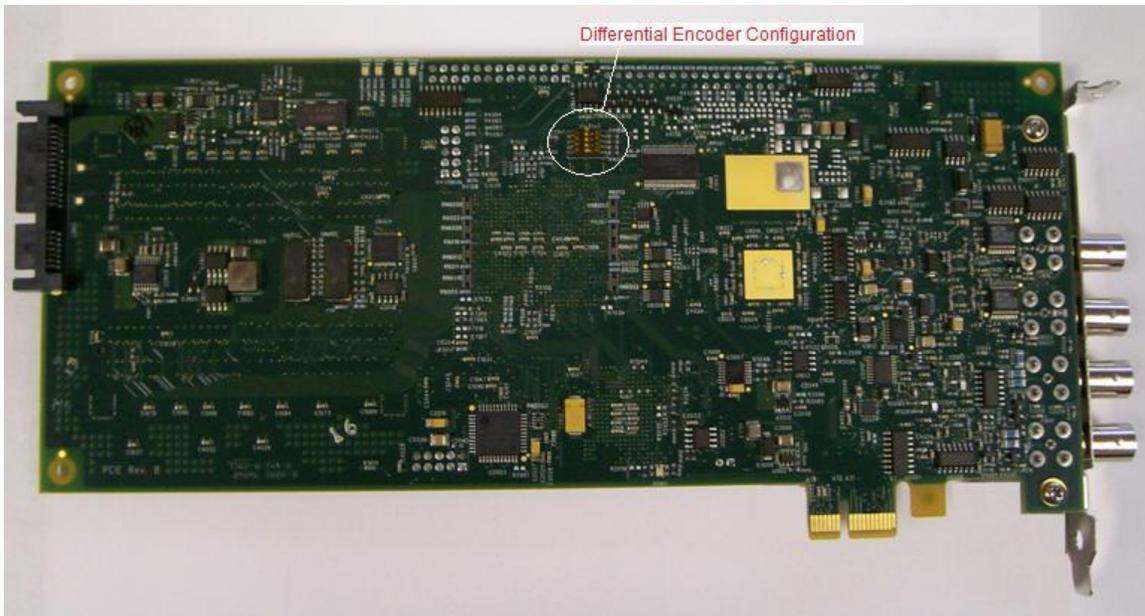


Figure 15: AL8xGT with switches (back) (Rev C and above only)

## AL8xGTe Family



Figure 16: AL8xGT-Express with labeled connectors (front)



**Figure 17: AL8xGT-Express with switches (back)**

For more detail on the encoder trigger connections (including pinouts) see the Hardware Manual for your board.

After making all your connections, you are ready to run the Scope3 program.

## Run Scope3

The Scope3 program is located in the directory where you installed the drivers (“C:\Program Files\Acquisition Logic\AL.NET2\<version #>”). Launch the program. Assuming that you have made the correct connections and depending on the type of signal you are sending to the board, you should see something like the following:

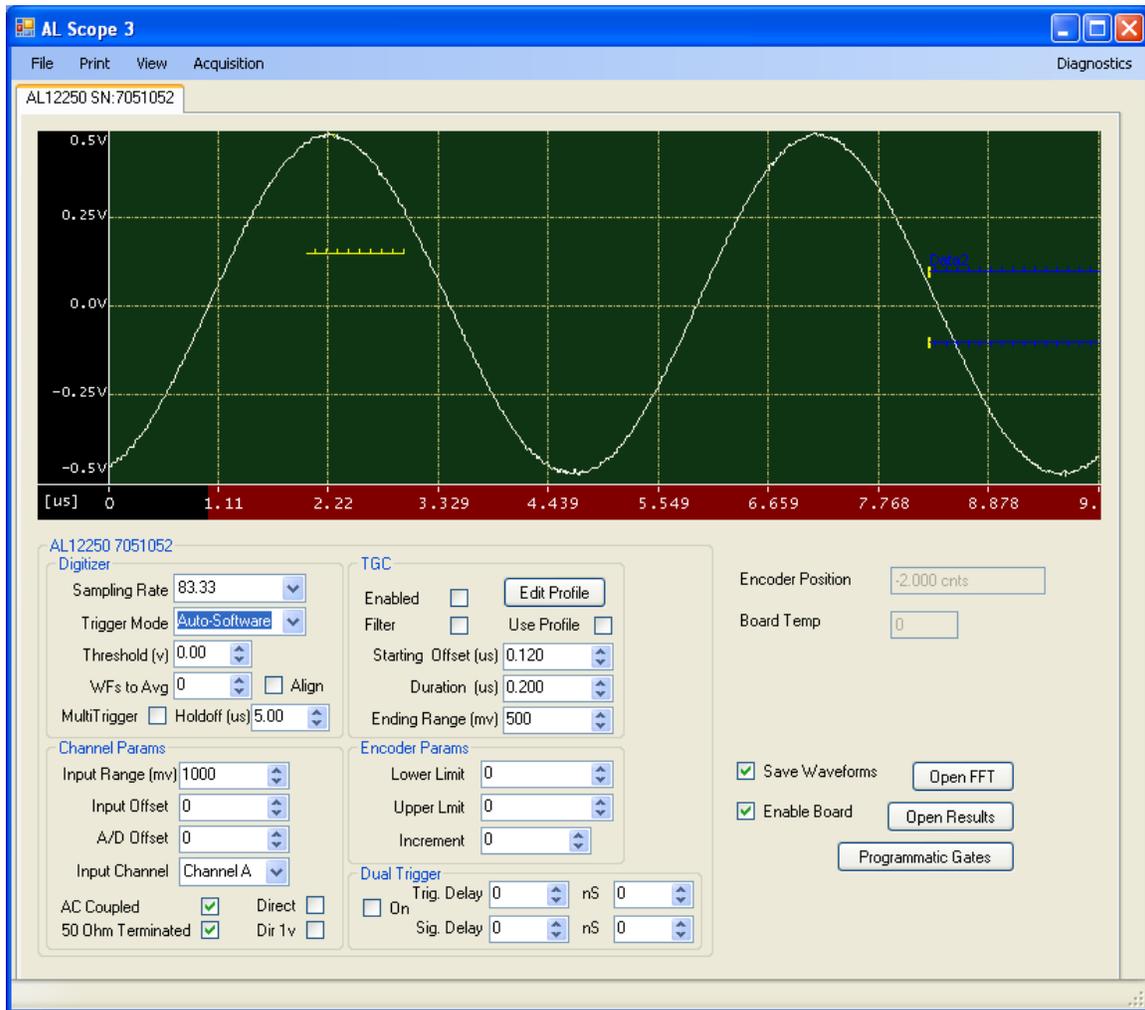


Figure 18: Typical Scope3 View

Congratulations, your A/D board is installed and working correctly!

## **Contact Information**

If you have problems or questions, you can contact us via e-mail, phone, fax, or U.S. Mail:

Acquisition Logic  
14120 Parke Long Court, Suite 113  
Chantilly, VA 20151  
Email: [support@acqlog.com](mailto:support@acqlog.com)  
Web: <http://www.acqlog.com>  
Phone: 703.227.8400  
Fax: 703.488.9930