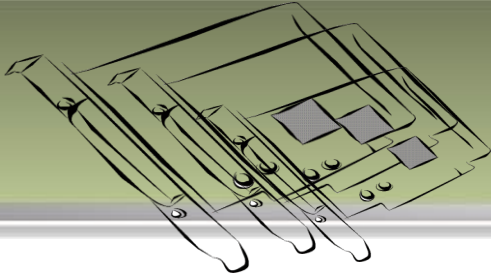


# I/O CARD QUICK START GUIDE

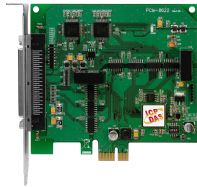
## For PCIe-8622

English/May 2015/Version 1.0



## 1 Check the Supplied Items

The shipping package includes the following items:



PCIe-8622



Software Utility CD  
(V6.2 or later)



Quick Start Guide  
(This Document)

## 2 Installing the Windows Driver

The UniDAQ driver supports Windows 2000 and 32/64-bit versions of Windows XP/2003/2008/7/8. The driver installation package for PCIe-8622 board can be found on the companion CD-ROM, or can be obtained from the ICP DAS FTP web site. The driver is located at:

CD: \NAPDOS\PCI\UniDAQ\DLL\Driver

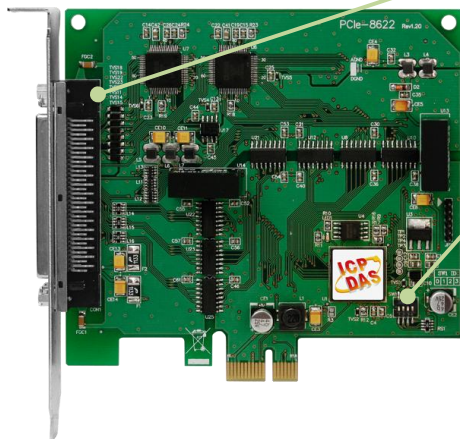
<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/pci/unidag/dll/driver/>

To install the UniDAQ driver, follow the procedure described below.

- Step 1:** Double-click the **UniDAQ\_Win\_Setupxxx.exe** icon to begin the installation process.
- Step 2:** When the “Welcome to the ICP DAS UniDAQ Driver Setup Wizard” screen is displayed, click the “**N**ext>” button to start the installation.
- Step 3:** On the “Information” screen, verify that the DAQ card is included in the list of supported devices, then click the “**N**ext>” button.
- Step 4:** On the “Select Destination Location” screen, click the “**N**ext>” button to install the software in the default folder, **C:\ICPDAS\UniDAQ**.
- Step 5:** On the “Select Components” screen, verify that the DAQ Card is in the list of device, and then click the “**N**ext>” button to continue.
- Step 6:** On the “Select Additional Tasks” screen, click the “**N**ext>” button.
- Step 7:** On the “Download Information” screen, click the “**N**ext>” button
- Step 8:** Once the installation has completed, click “**No, I will restart my computer later**”, and then click the “**F**inish” button.

For detailed information about the driver installation, refer to Chapter 2 “Install UniDAQ Driver DLL” of the UniDAQ SDK User Manual.

## 3 Board Layout

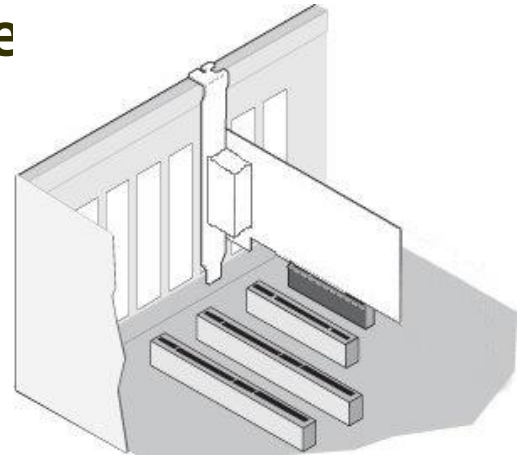


**CON1 Connector**  
(See Section 5 Pin Assignments)

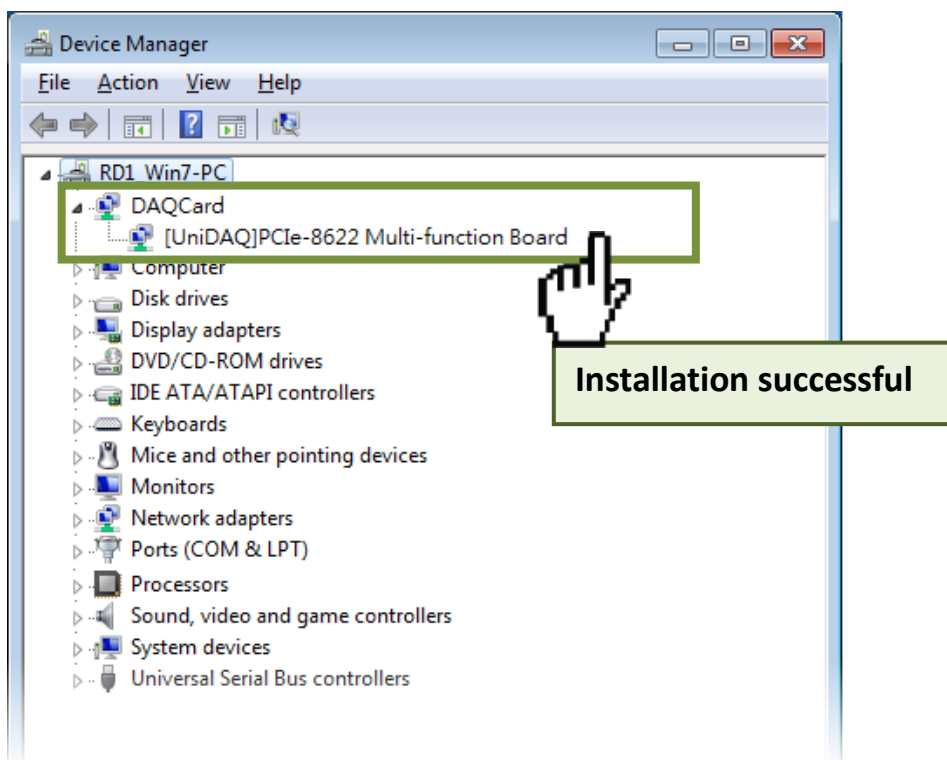
**Card ID Switch (SW1)**  
The default Card ID is 0x0.  
For more details regarding the SW1 Card ID settings, refer to the Section 2.2 “Card ID Switch” of the PCIe-862x Series Board User Manual.

# 4 Installing the Hardware

- Step 1:** Shut down and power off the computer.
- Step 2:** Remove all the covers from the computer.
- Step 3:** Select an unused PCI Express slot.
- Step 4:** Carefully insert the PCIe-8622 board into the PCI Express slot and secure the board in place.



- Step 5:** Replace the covers on the computer.
- Step 6:** Reconnect the power supply and power on the computer.
- Step 7:** Once the computer reboots, follow any messages that may be displayed to complete the Plug and Play installation procedure.
- Step 8:** Open the “**Device Manager**” in the Control Panel and verify that the PCIe-8622 board is listed correctly, as illustrated below.



# 5

## Pin Assignments

| Pin Assignment | Terminal No. | Terminal No. | Pin Assignment |
|----------------|--------------|--------------|----------------|
| Output +5 V    | 01           | 35           | Output +15 V   |
| CNT1_GATE      | 02           | 36           | CNT0_GATE      |
| CNT1_OUT       | 03           | 37           | CNT0_OUT       |
| CNT1_CLK       | 04           | 38           | CNT0_CLK       |
| D_GND          | 05           | 39           | D_GND          |
| DO11           | 06           | 40           | DO10           |
| DO9            | 07           | 41           | DO8            |
| DO7            | 08           | 42           | DO6            |
| DO5            | 09           | 43           | DO4            |
| DO3            | 10           | 44           | DO2            |
| DO1            | 11           | 45           | DO0            |
| DI11           | 12           | 46           | DI10           |
| DI9            | 13           | 47           | DI8            |
| D_GND          | 14           | 48           | D_GND          |
| DI7            | 15           | 49           | DI6            |
| DI5            | 16           | 50           | DI4            |
| DI3            | 17           | 51           | DI2            |
| DI1            | 18           | 52           | DI0            |
| N.C.           | 19           | 53           | N.C.           |
| AI_CONV        | 20           | 54           | N.C.           |
| DTRG1          | 21           | 55           | DTRG0          |
| A_GND          | 22           | 56           | A_GND          |
| A_GND          | 23           | 57           | A_GND          |
| AO1            | 24           | 58           | AO0            |
| A_GND          | 25           | 59           | A_GND          |
| A_GND          | 26           | 60           | A_GND          |
| AI15           | 27           | 61           | AI14           |
| AI13           | 28           | 62           | AI12           |
| AI11           | 29           | 63           | AI10           |
| AI9            | 30           | 64           | AI8            |
| AI7            | 31           | 65           | AI6            |
| AI5            | 32           | 66           | AI4            |
| AI3            | 33           | 67           | AI2            |
| AI1            | 34           | 68           | AI0            |

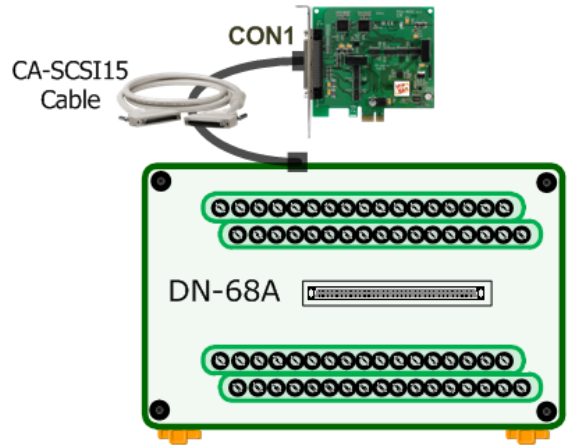
PCIe-8622 (CON1)

# 6 Self-Test

➤ **Preparation:**

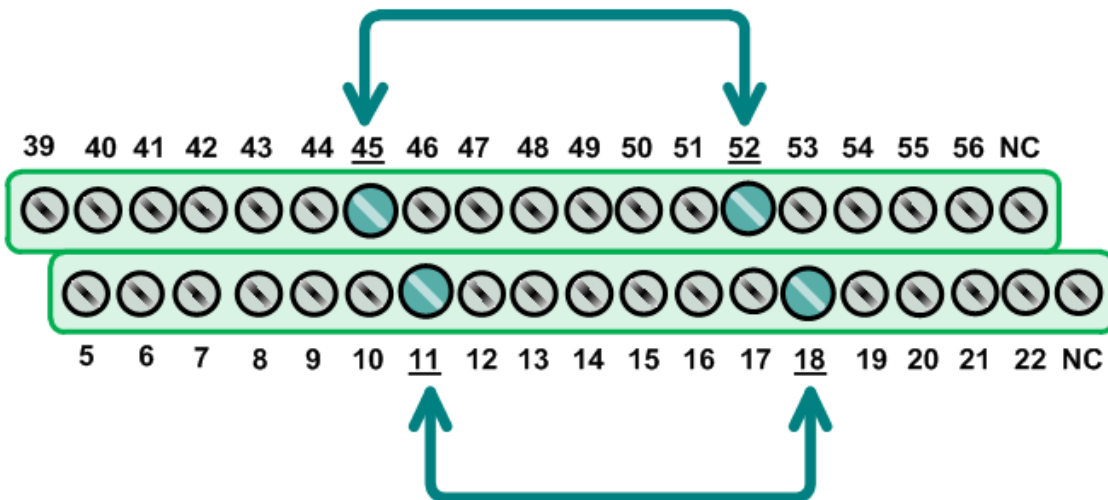
- ☑ A stable signal source. (For example, a dry cell battery)
- ☑ One DN-68A wiring terminal board.
- ☑ One CA-SCSI15-H cable.

**Step 1:** Connect the **DN-68A terminal board** to the **CON1** connector on the **PCIe-8622** board using the **CA-SCSI15-H** cable.



➤ **Wiring for the Digital Input/Output Test:**

**Step 2:** Connect the **DI0 pin (Pin52)** on the terminal board to **DO0 pin (Pin45)** and connect the **DI1 pin (Pin18)** on the terminal board to **DO1 pin (Pin11)**.

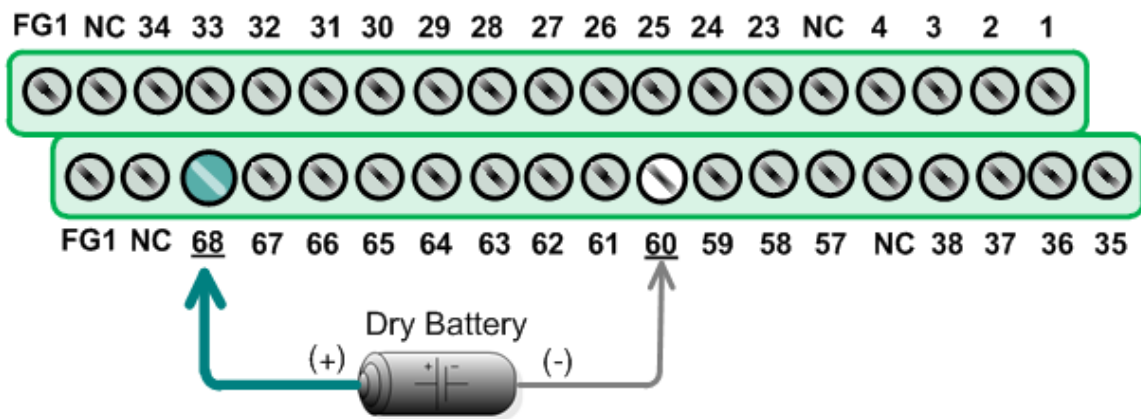




### ➤ Wiring for the Analog Input Test:

**Step 3:** Connect the signal source to AI channel 0, and connect the signals as follows.

1. Connect the **AI0 pin (Pin68)** on the terminal board to **positive signal terminal (+)**
2. Connect the **A\_GND pin (Pin60)** on the terminal board to **negative signal terminal (-)**

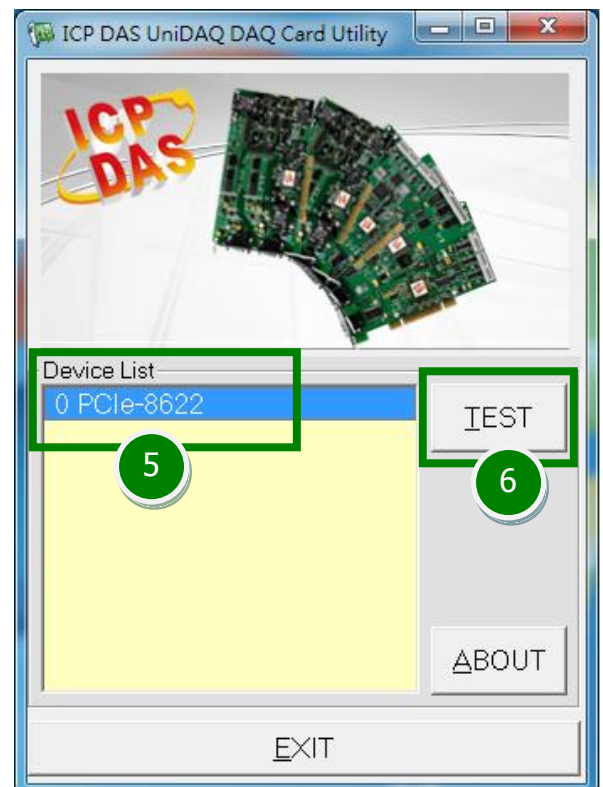


### ➤ Execute the UniDAQ Utility Program:

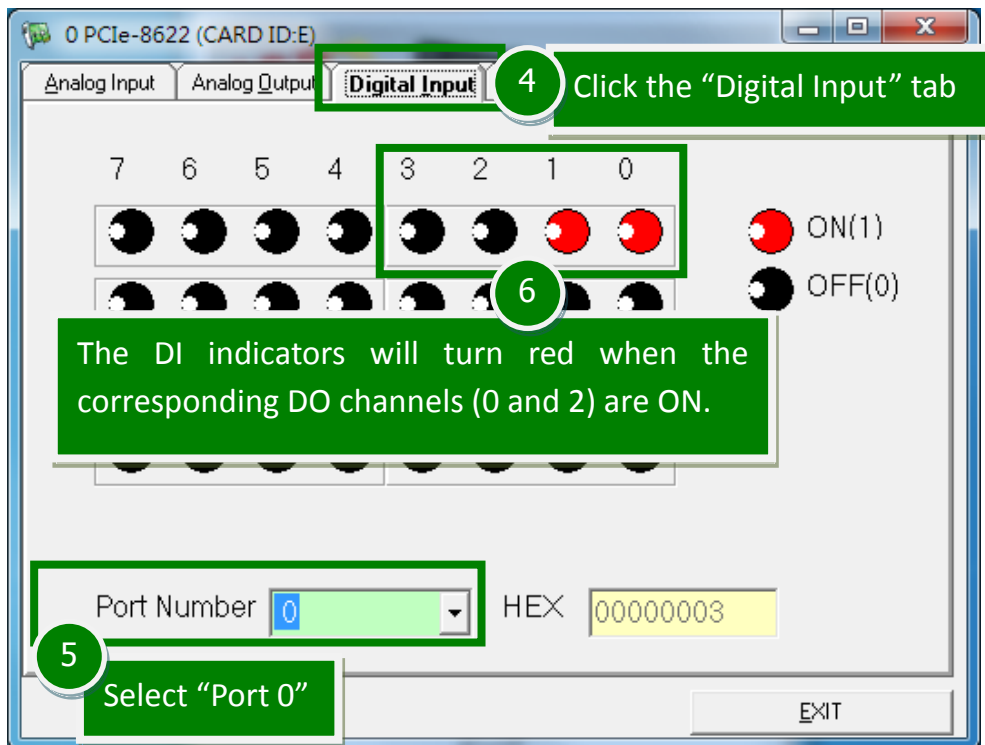
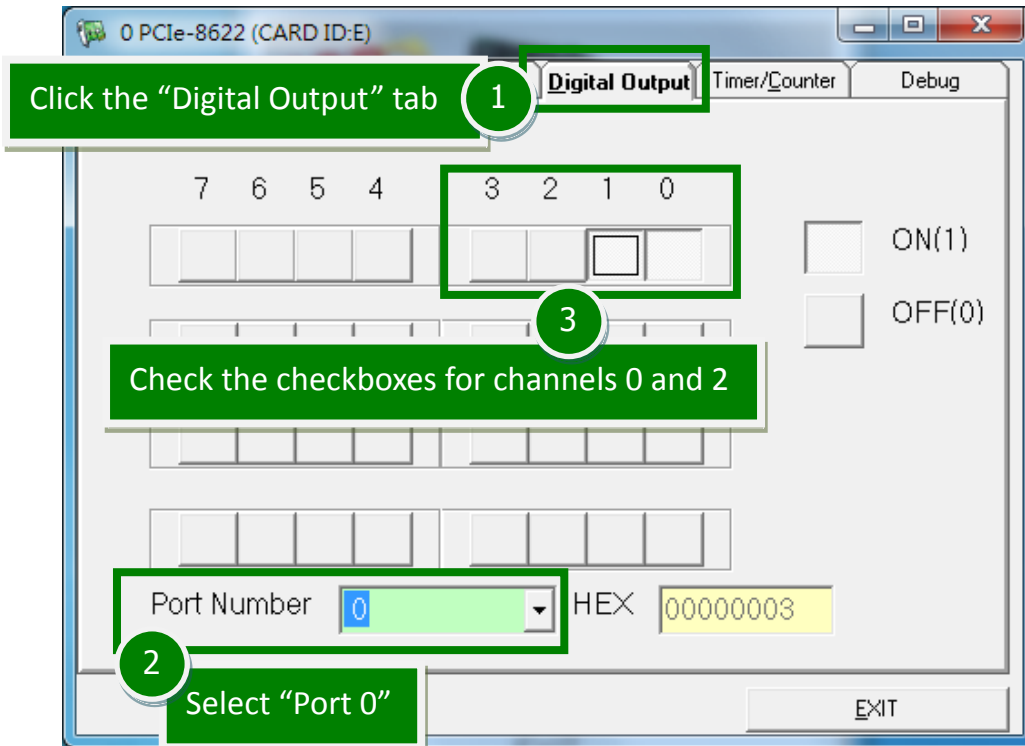
**Step 4:** In Windows 7, click the “Start” button, point to “All Programs”, and then click the “ICPDAS” folder. Point to “UniDAQ Development Kits” and then click the “UniDAQ Utility” to execute the UniDAQ Utility Program.

**Step 5:** Confirm that the PCIe-8622 board has been successfully installed in the Host system. Note that the device numbers start from 0.

**Step 6:** Click the “TEST” button to start the test.



**Step 7:** Check the results of the **Digital Input/Output** functions test.



**Step 8:** Check the results of the **Analog Input** functions test.

0 PCIe-8622 (CARD ID-E)

**Analog Input** 7 Click "Analog Input" tab

| Ch | Voltage[V] | Ch | Voltage[V] |
|----|------------|----|------------|
| 0  | 1.44393    | 10 | 2.19041    |
| 1  | 2.18948    | 11 |            |
| 2  | 2.19288    | 12 |            |
| 3  | 2.18979    | 13 | 2.18887    |
| 4  | 2.18671    | 14 | 2.18301    |
| 5  | 2.1827     | 15 | 2.18363    |
| 6  | 2.19349    |    |            |
| 7  | 2.19072    |    |            |

10 Check the Analog Input value for Channel 0. The values for other channels will be a floating number.

**PASS**

Setting  
Gain Type 0:Low(JPx=20V) Gain  HEX  
Range 00:Bipolar +/- 10V Sampling Rate 100 Hz

8 Confirm the configuration settings

9 Click the "Start" button to start the test

## 7 Related Information

- PCIe-8622 Series Board Product Page:  
[http://www.icpdas.com/root/product/solutions/pc\\_based\\_io\\_board/pci/pcie-862x.html](http://www.icpdas.com/root/product/solutions/pc_based_io_board/pci/pcie-862x.html)
- DN-68A and CA-SCSI15-H Product Pages (optional):  
[http://www.icpdas.com/root/product/solutions/pc\\_based\\_io\\_board/daughter\\_boards/dn-68a.html](http://www.icpdas.com/root/product/solutions/pc_based_io_board/daughter_boards/dn-68a.html)  
[http://www.icpdas.com/products/Accessories/cable/cable\\_selection.htm](http://www.icpdas.com/products/Accessories/cable/cable_selection.htm)
- UniDAQ Documentation and Software:  
CD:\NAPDOS\PCI\UniDAQ\  
<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/pci/unidag/>