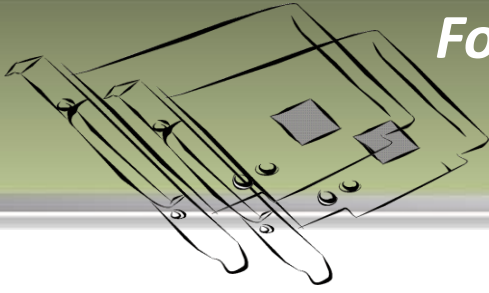# I/O CARD QUICK START GUIDE

For PCI-P16POR16U PEX-P8POR8i/P16POR16i

English/Jun. 2015/Version 1.1

1 Check the Supplied Items

The package includes the following items:

One PEX-PxPORxi/PCI-PxPORxU Series Card, as follows:	
PEX-P8POR8i	PCI-P16POR16U PEX-P16POR16i
One Software Utility CD (V6.2 or later)	
One Quick Start Guide (This Document)	
-	One CA-4037B Cable
One CA-4002 D-Sub connector	Two CA-4002 D-Sub connectors

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WebSite: http:// www.icpdas.com.tw   E-Mail: service@icpdas.com , service.icpdas@gmail.com

Installing the Windows Driver

Step 1: Setup the Windows driver. The driver is located at:

☑ **The UniDAQ driver supports 32-/64-bit Windows 2K/XP/2003/Vista/7/8; it is recommended to install this driver for new user:**
CD: \NAPDOS\PCI\UniDAQ\DLL\Driver
http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/pci/unidaq/dll/driver/

☐ The PISO-DIO Series classic driver supports Windows 98/NT/2K and 32-bit XP/2003/ Vista/7/8. Recommended to install this driver for have been used PISO-DIO series boards of regular user, please refer to :
http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/pci/piso-dio/manual/quickstart/classic/

Step 2: Click the **"Next>"** button to start the installation.

Step 3: Check your DAQ Card is or not on supported list, then click the **"Next>"** button.

Step 4: Select the installed folder, the default path is **C:\ICPDAS\UniDAQ**, confirm and click the **"Next>"** button.

Step 5: Check your DAQ Card on list, then click the **"Next>"** button.

**Step 6:** Click the **"Next>"** button on the Select Additional Tasks window.

Step 7: Click the **"Next>"** button on the Download Information window.

Step 8: Select **"No, I will restart my computer later"** and then click the **"Finish"** button.

For detailed information about the driver installation, please refer to Chapter 2.1 "Getting the UniDAQ Driver DLL Installer package" of the UniDAQ SDK user manual.
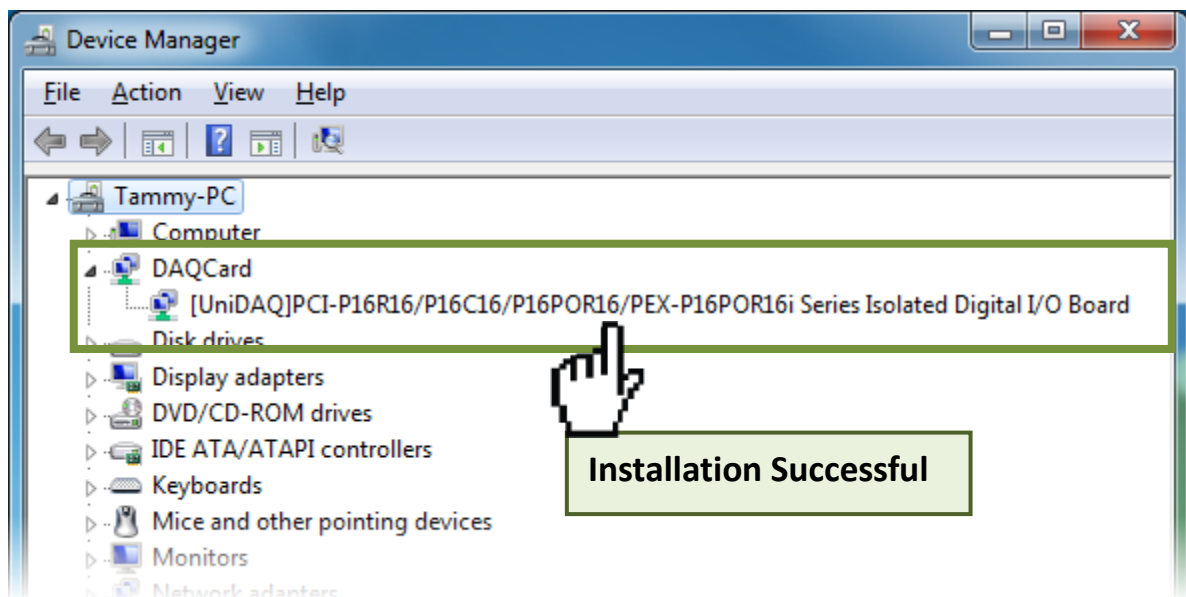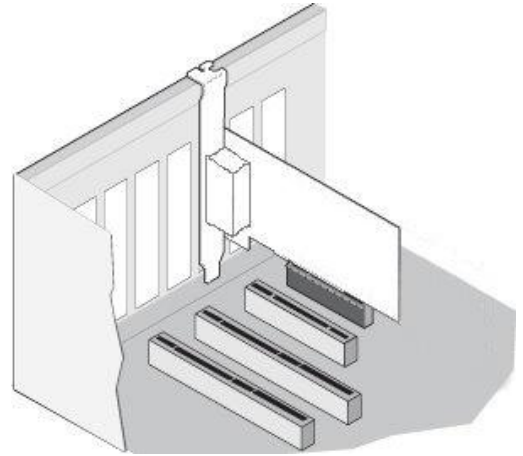
3 Jumper Setting
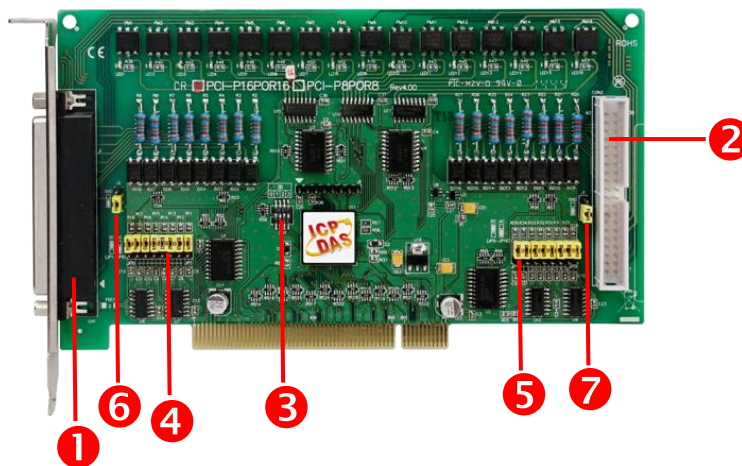
1. **CON1/CN1:**	The connector for DI/O channels 0-7. Refer to Section 5 Pin Assignments.
2. **CON2:**	The connector DI/O channel 8-15. Refer to Section 5 Pin Assignments.
3. **SW1:**	Card ID function. Refer to PCI-P16R16 Series User Manual.
4. **J1/JP1-JP8:**	Input AC or DC signals for DI 0-7. Refer to the table below.
5. **J2/JP9-JP16:**	Input AC or DC signals for DI 8-15. Refer to the table below.
6. **JP2/J2:**	Ground Isolated Protection Jumper. Refer to PCI-P16R16 Series User Manual.
7. **J1:**	Ground Isolated Protection Jumper for PCI-P16POR16U. Refer to PCI-P16R16 Series User Manual.

Please make sure input signal type jumper (J1, J2, JP1-JP8 and JP9-JP16) is kept in default setting before self-test, as follows:

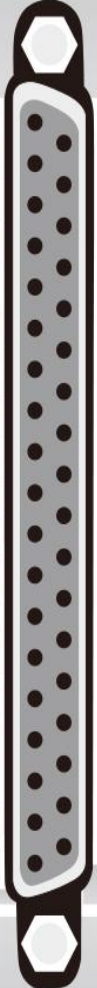| Jumper		☑ Without Filter for DC Signal (Default Settings)	Without AC Filter for AC Signal
PEX-P8POR8i PEX-P16POR16i	J1 J2		
PCI-P16POR16U	JP1 – JP8 JP9 – JP16		

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/PCI slot.

Step 4: Carefully insert your card into the PCI Express/PCI 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 PCI-PxPORxU/PEX-PxPORxi series card is listed correctly, as illustrated below.
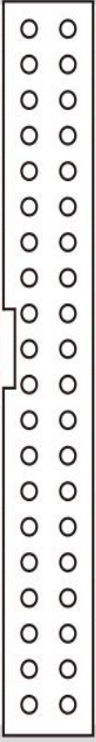

Installation Successful

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5 Pin Assignments

Pin Assign-ment CON2	Pin Assign-ment CON1/CN1	Terminal No.		Pin Assign-ment CON1/CN1	Pin Assign-ment CON2
NO_8	NO_0	01			
NO_9	NO_1	02	20	CM_0	CM_8
NO_10	NO_2	03	21	CM_1	CM_9
NO_11	NO_3	04	22	CM_2	CM_10
NO_12	NO_4	05	23	CM_3	CM_11
NO_13	NO_5	06	24	CM_4	CM_12
NO_14	NO_6	07	25	CM_5	CM_13
NO_15	NO_7	08	26	CM_6	CM_14
N/A	N/A	09	27	CM_7	CM_15
N/A	N/A	10	28	N/A	N/A
N/A	N/A	11	29	GND	GND
DIA_8	DIA_0	12	30	DIB_0	DIB_8
DIA_9	DIA_1	13	31	DIB_1	DIB_9
DIA_10	DIA_2	14	32	DIB_2	DIB_10
DIA_11	DIA_3	15	33	DIB_3	DIB_11
DIA_12	DIA_4	16	34	DIB_4	DIB_12
DIA_13	DIA_5	17	35	DIB_5	DIB_13
DIA_14	DIA_6	18	36	DIB_6	DIB_14
DIA_15	DIA_7	19	37	DIB_7	DIB_15

CON1/CN1 (Female DB-37)

Pin Assign-ment	Terminal No.			Pin Assign-ment
NO_8	01	O O	02	CM_8
NO_9	03	O O	04	CM_9
NO_10	05	O O	06	CM_10
NO_11	07	O O	08	CM_11
NO_12	09	O O	10	CM_12
NO_13	11	O O	12	CM_13
NO_14	13	O O	14	CM_14
NO_15	15	O O	16	CM_15
N/A	17	O O	18	N/A
N/A	19	O O	20	GND
N/A	21	O O	22	DIB_8
DIA_8	23	O O	24	DIB_9
DIA_9	25	O O	26	DIB_10
DIA_10	27	O O	28	DIB_11
DIA_11	29	O O	30	DIB_12
DIA_12	31	O O	32	DIB_13
DIA_13	33	O O	34	DIB_14
DIA_14	35	O O	36	DIB_15
DIA_15	37	O O	38	N/A
N/A	39	O O	40	N/A

CON2 (40-pin box header)
(PCI-P16POR16U/PEX-P16POR16i only)

Extension Cable (CA-4037B):
DB-40-Pin conversion DB-37-Pin

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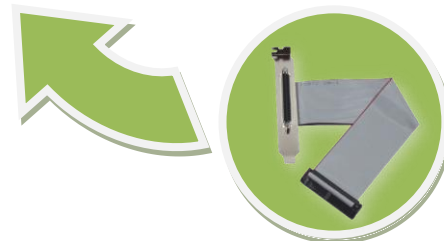
6 Self-Test

> **Prepare for device:**
> - ☑ One CA-3710 Cable (optional).
> - ☑ DN-37 (optional) wiring terminal board.
> - ☑ Exterior power supply device. For example: DP-665 (optional)

> **Self-test wiring as follows:**

Step 1: Connect the **DN-37 to the CON1/CN1** connector on board using the **CA-3710** cable.

Step 2: Connect the **NO(0-7) pins to the DIA(0-7) pins**.

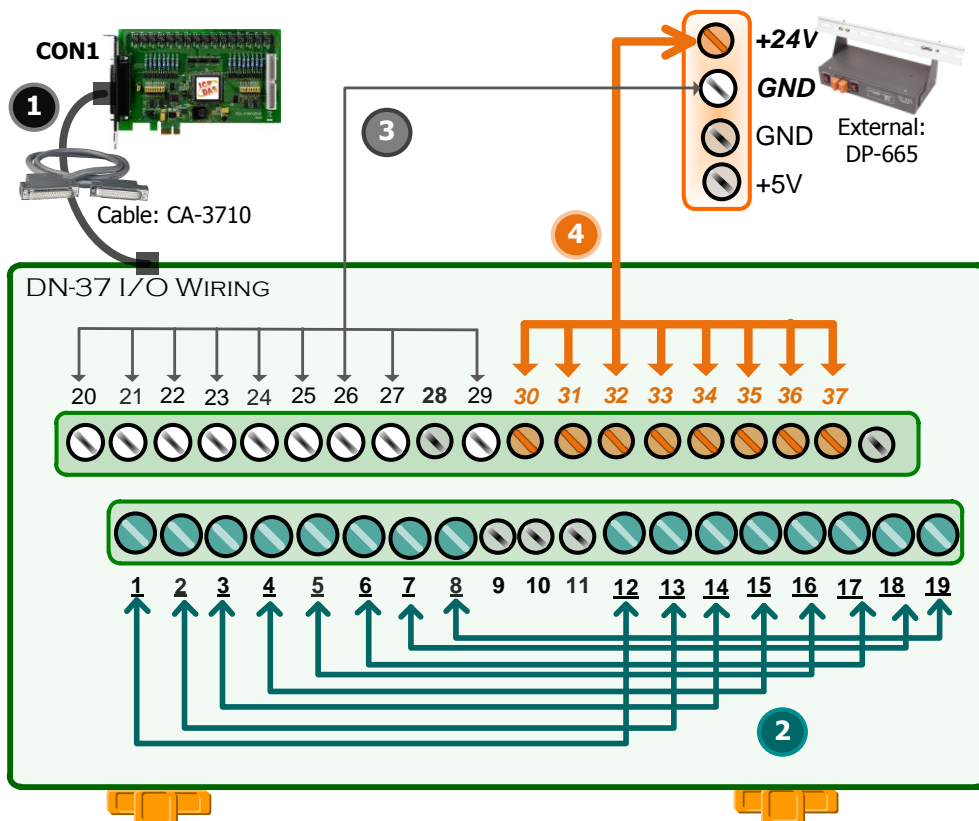(i.e., connect the Pin1/2/3/4/5/6/7/8 to Pin12/13/14/15/16/17/18/19)

Step 3: Connect the **External Power Supply GND** to the **CM0...CM7 pins**.

Connect the **External Power Supply GND** to the **GND pin**.

(i.e., connect the Power Supply GND to Pin20/21/22/23/24/25/26/27/29)

Step 4: Connect the **External Power Supply (+24 V)** to the **DIB0...DIB7 pins.**

(i.e., connect the Power Supply +24V to Pin30/31/32/33/34/35/36/37)

Step 5: Execute the UniDAQ Utility Program.

1. 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.

2. Confirm that PCI-P16R16 Series card has been successfully installed in the Host system. **Note that the device numbers start from 0.**

3. Click the **"TEST"** button to start the test.
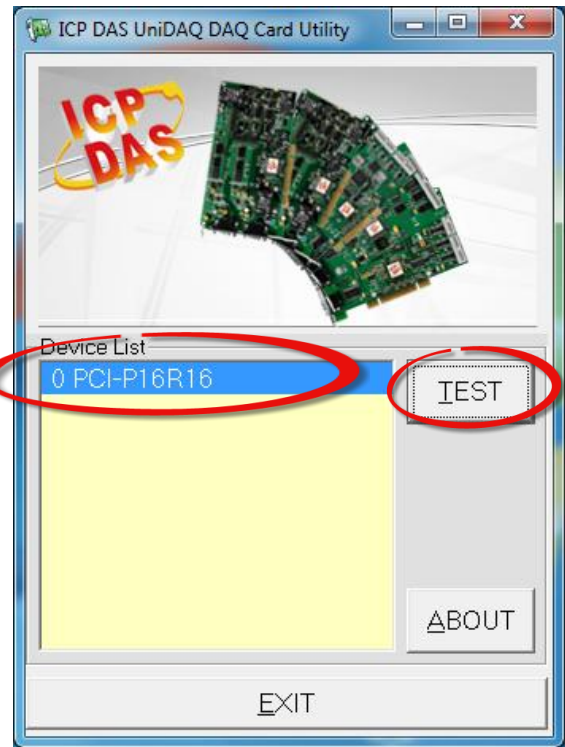
Step 6: Check the results of the DIO function test.
1. Click the **"Digital Output"** tab.
2. Select **"Port0"** from the **"Port Number"** drop-down menu.
3. Check the checkboxes for **channels 0, 2, 4 and 6**.
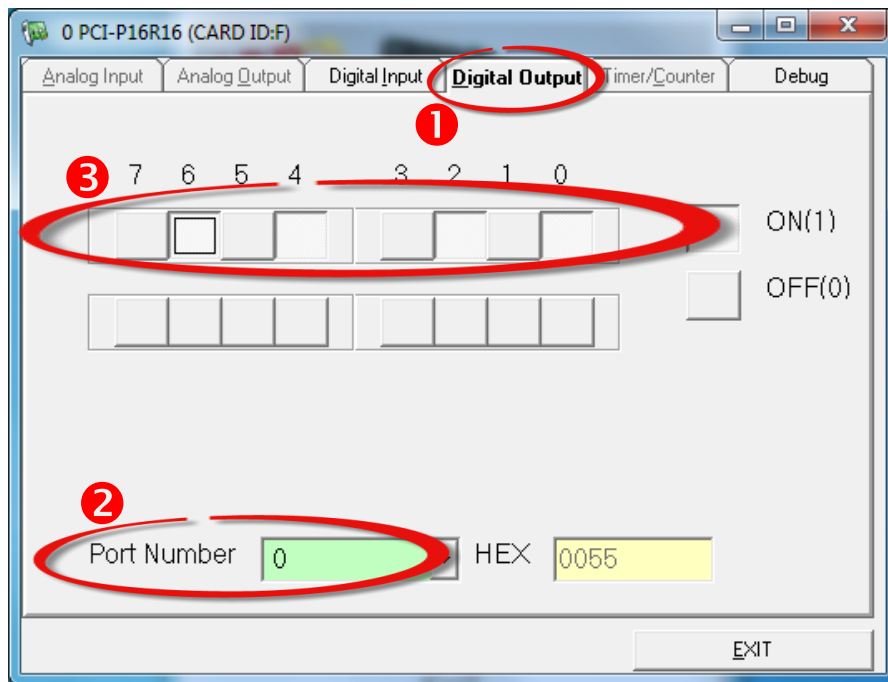
4. Click the **"Digital Input"** tab.
5. Select **"Port0"** from the **"Port Number"** drop-down menu.
6. The DI indicators will turn **red** when the corresponding DO channels 0, 2, 4 and 6 are **ON**.
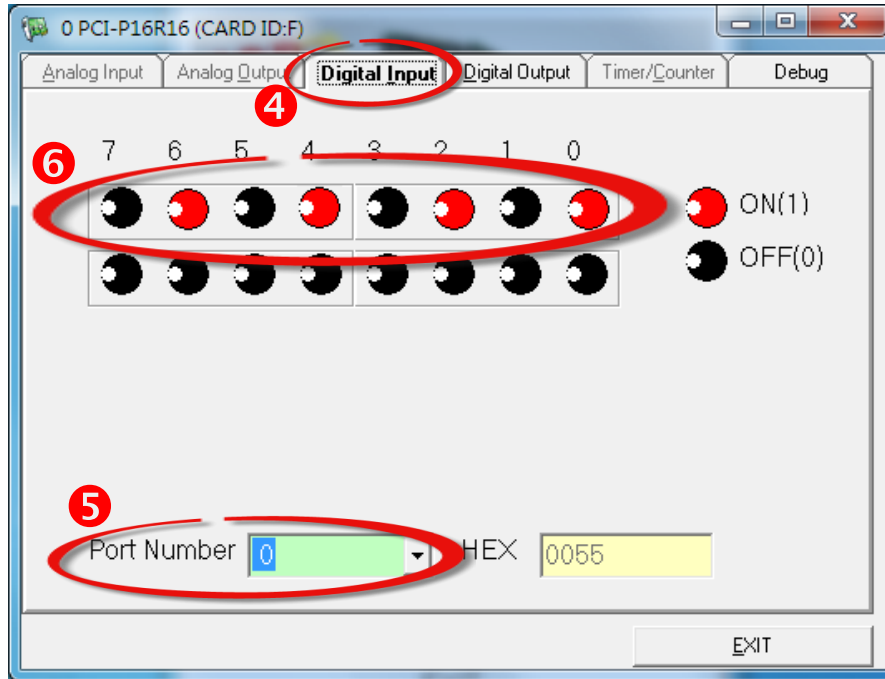
Related Information

➢ PEX-P8POR8i/P16POR16i and PCI- P16POR16U Series Card Product Page:
http://www.icpdas.com/root/product/solutions/pc_based_io_board/pci/pci-p16por16.html

➢ DN-37, CA-3710 and DP-665 page (optional):
http://www.icpdas.com/products/DAQ/screw_terminal/dn_37.htm
http://www.icpdas.com/products/Accessories/power_supply/dp-665.htm
http://www.icpdas.com/products/Accessories/cable/cable_selection.htm

➢ Documentation and Software:
CD:\NAPDOS\PCI\UniDAQ\
http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/pci/unidaq/

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