



I/O CARD QUICK START GUIDE

for

DIO-24

Language
Version
Update

English
V1.3
Jan.2009

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What's on your package?

- One DIO-24 series card
- One companion ISA CD (V2.1 or later)
- One Quick Start Guide(this document)

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Installing Windows Driver

Follow those steps:

1. Setup the Windows driver.




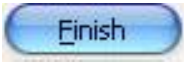
You can get the driver from:

CD:\NAPDOS\ISA\DIO\DLL\

<http://ftp.icpdas.com/pub/cd/iocard/isa/napdos/isa/dio/dll/>



Windows driver only support windows 98/NT/2000 and XP/2003/vista 32-bit versions.

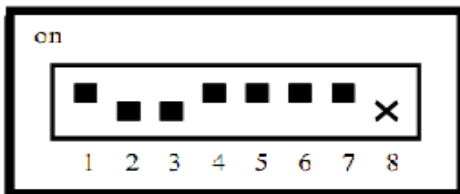
2. Click  button to start installation.
3. Click  button to install driver into the default folder.
4. Click  button to continue installation.
5. Select **“NO, I will restart my computer later”** and then click  button.

3 I/O Base Address/Interrupt Setting

➤ The base address is set from SW1 DIP switch on board:

SW1:BASE ADDRESS

BASE ADDRESS VALUE TABLE (*) = Default Setting 1/0 = On/Off

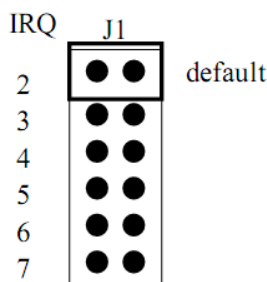


A8 A7 A6 A5 A4 A3 A2

Default base Address: 2C0

I/O address (Hex)	1 A8	2 A7	3 A6	4 A5	5 A4	6 A3	7 A2	8
200-203	0	0	0	0	0	0	0	X
204-207	0	0	0	0	0	0	1	X
.....	X
2C0-2C3 (*)	0	1	1	0	0	0	0	X
2C4-2C7	0	1	1	0	0	0	1	X
2C8-2CB	0	1	1	0	0	1	0	X
.....								X
3F8-3FB	1	1	1	1	1	1	0	X
3FC-3FF	1	1	1	1	1	1	1	X

➤ The Interrupt Level Setting



4 Installing Hardware on PC

Follow those steps:

1. Shut down and power off your computer
2. Remove all covers from the computer
3. Select an empty ISA slot
4. Carefully insert your I/O card into the ISA slot
5. Replace the PC covers
6. Power on the computer

After powering-on the computer, continue next process.

5 Adding Hardware



Adding hardware is used on Windows 2000/XP/2003/Vista 32 only. Windows 9X/Me/NT users can skip it.

7. Add Hardware

- 7-1 Open the **“Control Panel”** by click the item **“Start / Settings / Control Panel”**.
- 7-2 Double-click the item **“Add/Remove Hardware”** and Click the **“Next >”** button.
- 7-3 Select the item **“Add/Troubleshoot a device”** and click the **“Next >”** button.
- 7-4 Select the item **“Add a new device”** and click the **“Next >”** button.

- 7-5 Select the item **“No, I want to select the hardware from a list”** and click the **“Next >”** button.
- 7-6 Select the item **“Other device”** and click the **“Next >”** button.
- 7-7 Click the **“Have Disk...”** button.
- 7-8 Clicks the **“Browse...”** button to select the **Inf** file default path is C:\DAQPRO\DIO_Win2K\Inf and clicks the **“OK”** button.
- 7-9 Select the correct device from the **“Models:”** listbox and Click the **“Next >”** button.
- 7-10 The windows show to dialog box and Click the **“OK”** button to enter the device’s properties settings.

8. Modify the device properties

The image shows a sequence of four windows from the Windows Device Manager. The main window is 'ICPDAS A-822 Analog/Digital Card Properties' with the 'Resources' tab selected. It shows resource settings for 'Input/Output Range' (0220 - 022F) and 'Interrupt Request' (07). A 'Change Setting...' button is visible. Two callout boxes point to this button: '1. Select Input/Output Range' and '3. Select Interrupt Request'. To the right, two smaller dialog boxes are shown. The top one is 'Edit Input/Output Range' with a 'Value' field set to '0220 - 022F' and a 'Conflict information' box stating 'No devices are conflicting'. A callout box points to the 'Change Setting...' button in the main window with the text: '2. Click “Change Setting” to change I/O Range (Depend on I/O Base Address)'. The bottom dialog box is 'Edit Interrupt Request' with a 'Value' field set to '07' and a 'Conflict information' box stating 'No devices are conflicting'. A callout box points to the 'Change Setting...' button in the main window with the text: '4. Click “Change Setting” to change Interrupt Request. (Depend on Interrupt Level setting)'.

9. Reboot the PC

The detail “add hardware” information. Please refer to
 CD:\NAPDOS\ISA\Manual\PCI_ISA_PnP_Driver_Installation_in_Win9x_2K_XP.pdf

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Pin Assignments

CN1:50-pin header

Pin	Description	Pin	Description
1	PC7	2	GND
3	PC6	4	GND
5	PC5	6	GND
7	PC4	8	GND
9	PC3	10	GND
11	PC2	12	GND
13	PC1	14	GND
15	PC0	16	GND
17	PB7	18	GND
19	PB6	20	GND
21	PB5	22	GND
23	PB4	24	GND
25	PB3	26	GND
27	PB2	28	GND
29	PB1	30	GND
31	PB0	32	GND
33	PA7	34	GND
35	PA6	36	GND
37	PA5	38	GND
39	PA4	40	GND
41	PA3	42	GND
43	PA2	44	GND
45	PA1	46	GND
47	PA0	48	GND
49	+5 V	50	GND

CN2:20-pin header

Pin	Description	Pin	Description
1	PA0	2	PA1
3	PA2	4	PA3
5	PA4	6	PA5
7	PA6	8	PA7
9	PB0	10	PB1
11	PB2	12	PB3
13	PB4	14	PB5
15	PB6	16	PB7
17	GND	18	GND
19	5 V	20	12 V

CN3:20-pin header

Pin	Description	Pin	Description
1	PC0	2	PC1
3	PC2	4	PC3
5	PC4	6	PC5
7	PC6	8	PC7
9	NC	10	NC
11	NC	12	NC
13	NC	14	NC
15	NC	16	NC
17	GND	18	GND
19	5 V	20	12 V



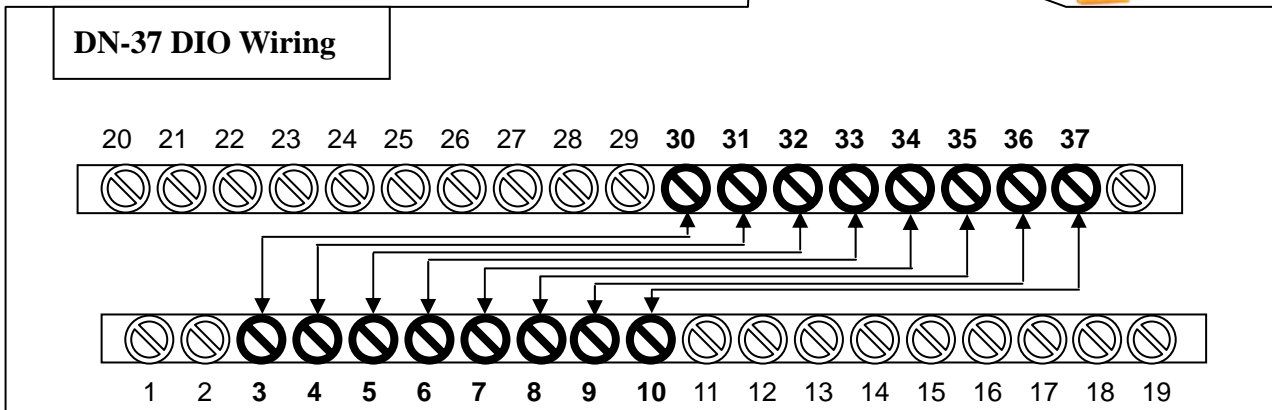
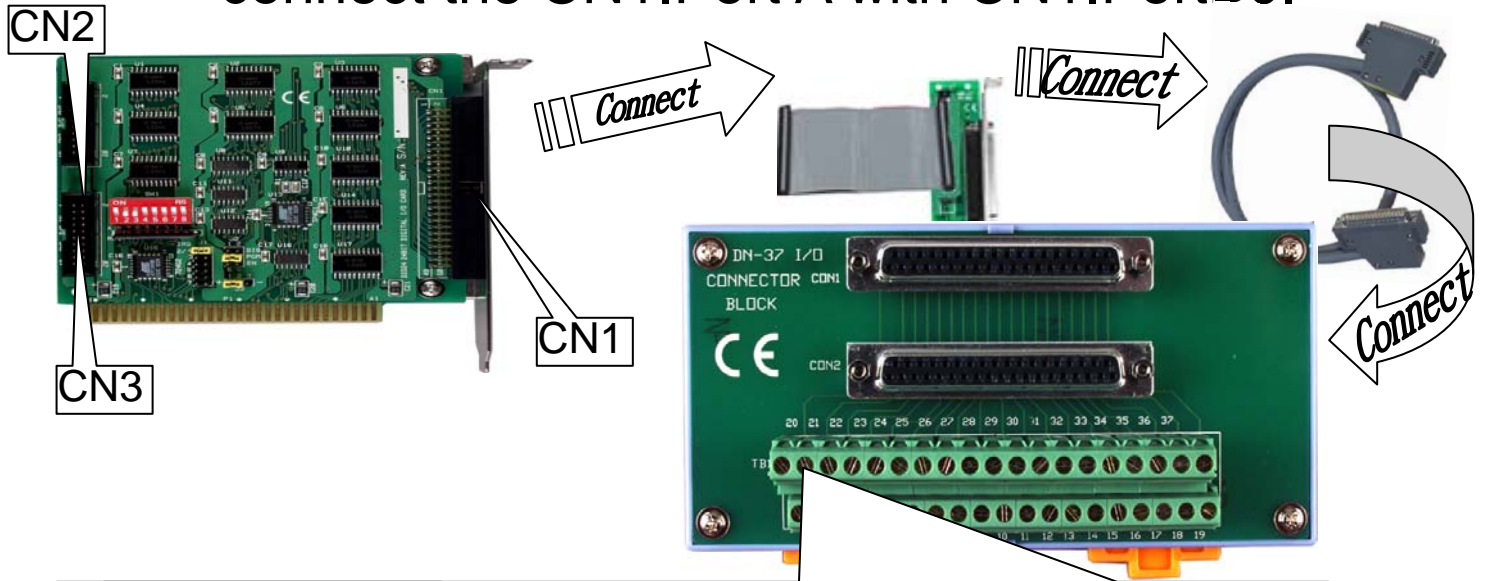
All signals are TTL compatible

TTL High(1)	2.4 V ~5.0 V (Voltages over 5.0 V will damage the device)
None Defined	2.4 V~0.8 V
TTL Low(0)	Under 0.8 V

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Self-Test

1. Use DN-37(Optional) and ADP-37(Optional) to connect the CN1.Port A with CN1.PortB0.



2. Run the DIO sample program(VC6).

Get the file from(default path):

C:\DAQPro\DIO_WinXXX\Demo\

3. Check number of the DIO-24, and test DIO function

Step1:
DIO-24 card had successfully installed to PC
The base address is 0x2C0

The Base-Address of I/O port is: 0x2c0
Press <Enter> key to test the interrupt,
or press <Ctrl> + <c> key to exit program.

Step2:
Press the "Enter"
key to do DIO
function test

4. Get DIO function test result

Output to the PortA : 0x1
Input from PortB is : 0x1

Output to the PortA : 0x2
Input from PortB is : 0x2

Output to the PortA : 0x4
Input from PortB is : 0x4

Output to the PortA : 0x8
Input from PortB is : 0x8

Output to the PortA : 0x10
Input from PortB is : 0x10

Output to the PortA : 0x20
Input from PortB is : 0x20

Output to the PortA : 0x40
Input from PortB is : 0x40

Output to the PortA : 0x80
Input from PortB is : 0x80

**Output to the Port A: X
Input from Port B is : Y
If X = Y =>Pass**

**Example:
Output to the Port A: 0x80
Input from Port B is : 0x80
If 0x80 = 0x80 =>Pass**



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Additional Information

✓ DIO-24 Series Card Product page:

http://www.icpdas.com/products/DAQ/pc_based/dio_24.htm

✓ DN-37(Optional) page:

http://www.icpdas.com/products/DAQ/screw_terminal/dn_37.htm

✓ ADP-37(Optional) page:

http://www.icpdas.com/products/DAQ/screw_terminal/adp_xx.htm

✓ Documents:

CD:\NAPDOS\ISA\DIO>manual

CD:\NAPDOS\ISA\Manual

<http://ftp.icpdas.com/pub/cd/iocard/isa/napdos/isa/DIO/manual/>

✓ Software:

CD:\ISA\NAPDOS\ISA\DIO

<http://www.icpdas.com/download/isa/dio/index.htm>

The ICP DAS Web Site

<http://www.icpdas.com>



- Technical support
- Supplies and ordering information
- Ways to enhance your device
- FAQ
- Application story

Contact Us

Service@icpdas.com

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