



PIO-D64U/PEX-D64 Quick Start

v1.2, Oct. 2019

What's in the box?

The package includes the following items:



PIO-D64U/PEX-D64 x1



Quick Start x 1
(This Document)

Related Information

- For more detailed information related to the user manual and software for UniDAQ Driver & SDK:
<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/pci/unidaq/>
- For more detailed information related to the hardware settings for PIO-D64 Series Card:
<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/pci/pio-dio/manual/>
- CA-2002 Product Page (optional):
http://www.icpdas.com/products/Accessories/cable/cable_selection.htm

1 Installing Windows Driver

1) Download or locate the Windows driver.

The **UniDAQ driver** supports 32-/64-bit Windows XP/2003/2008/7/8/10. It is recommended that new users install this driver, which can be found in the

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

PIO-DIO Series Classic Driver supports Windows 98/NT/2K and 32-bit Windows XP/2003/2008/7. It is recommended this driver is installed by customers who have previously installed a PIO-D64 series card and are regular users. For more details, refer to:

<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/pci/pio-dio/manual/quickstart/classic/>

2) Click the “**Next>**” button to start the installation.

3) Check your DAQ Card is or not on supported list, then click the “**Next>**” button.

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

5) Check your DAQ Card on list, then click the “**Next>**” button.

6) Click the “**Next>**” button on the Select Additional Tasks window.

7) Click the “**Next>**” button on the Download Information window.

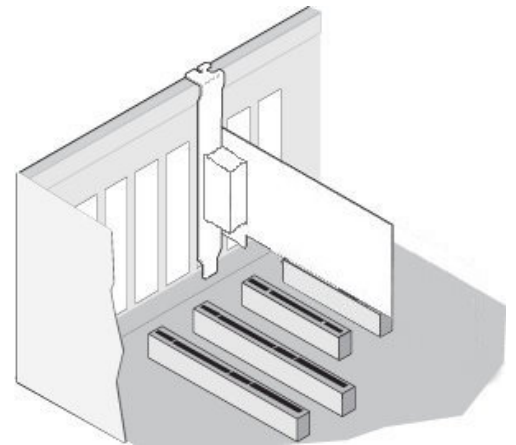
8) Select “**No, I will restart my computer later**” and then click the “**Finish**” button.

NOTE:

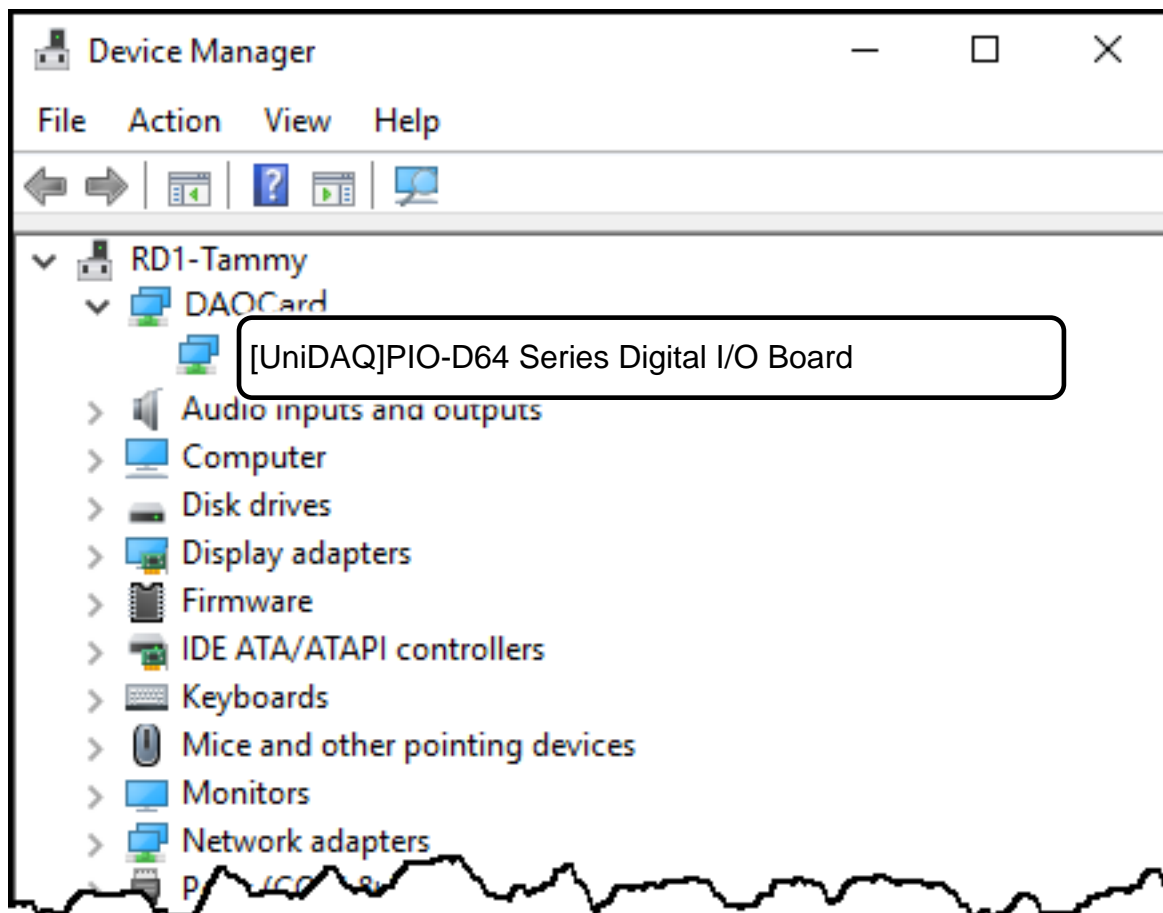
For more detailed information related to driver installation, refer to Chapter 2 “Starting” in the UniDAQ SDK user manual.

2 Installing Hardware on PC

- 1) Power off the Computer.
- 2) Remove all covers from the Computer.
- 3) Select an unused PCI /PCI Express slot.
- 4) Carefully insert the Card into PCI/PCI Express slot.
- 5) Replace the Computer Covers.
- 6) Power on the Computer.
- 7) The operating system will automatically detect the new hardware and install the necessary drivers after reboot the PC.



- 8) Open the “**Device Manager**” to verify that the PIO-D64 Series Card has been correctly installed and is in the Device Manager, as illustrated on below.



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Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
DO 0	01	○ ○	DO 1	02	DO 1
DO 2	03	○ ○	DO 3	04	DO 3
DO 4	05	○ ○	DO 5	06	DO 5
DO 6	07	○ ○	DO 7	08	DO 7
DO 8	09	○ ○	DO 9	10	DO 9
DO 10	10	○ ○	DO 11	12	DO 11
DO 12	12	○ ○	DO 13	14	DO 13
DO 14	14	○ ○	DO 15	16	DO 15
GND	16	○ ○	GND	18	GND
+5V	18	○ ○	+12V	20	+12V
CN1					

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
DI 0	01	○ ○	DI 1	02	DI 1
DI 2	03	○ ○	DI 3	04	DI 3
DI 4	05	○ ○	DI 5	06	DI 5
DI 6	07	○ ○	DI 7	08	DI 7
DI 8	09	○ ○	DI 9	10	DI 9
DI 10	11	○ ○	DI 11	12	DI 11
DI 12	13	○ ○	DI 13	14	DI 13
DI 14	15	○ ○	DI 15	16	DI 15
GND	17	○ ○	GND	18	GND
+5V	19	○ ○	STROBE1	20	STROBE1
CN2					

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
DO 16	01	○ ○	DO 17	02	DO 17
DO 18	03	○ ○	DO 19	04	DO 19
DO 20	05	○ ○	DO 21	06	DO 21
DO 22	07	○ ○	DO 23	08	DO 23
DO 24	09	○ ○	DO 25	10	DO 25
DO 26	10	○ ○	DO 27	12	DO 27
DO 28	12	○ ○	DO 29	14	DO 29
DO 30	14	○ ○	DO 31	16	DO 31
GND	16	○ ○	GND	18	GND
+5V	18	○ ○	+12V	20	+12V
CN3					

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
DI 16	01	○ ○	DI 17	02	DI 17
DI 18	03	○ ○	DI 19	04	DI 19
DI 20	05	○ ○	DI 21	06	DI 21
DI 22	07	○ ○	DI 23	08	DI 23
DI 24	09	○ ○	DI 25	10	DI 25
DI 26	11	○ ○	DI 27	12	DI 27
DI 28	13	○ ○	DI 29	14	DI 29
DI 30	15	○ ○	DI 31	16	DI 31
GND	17	○ ○	GND	18	GND
+5V	19	○ ○	STROBE2	20	STROBE2
CN4					

Pin Assignment	Terminal No.	Pin Assignment	Pin Assignment	Terminal No.	Pin Assignment
CLK 2	01	○ ○	CLK 1	02	CLK 1
OUT 2	03	○ ○	OUT 1	04	OUT 1
GATE 2	05	○ ○	GATE 1	06	GATE 1
CLK 3	07	○ ○	CLK 0	08	CLK 0
OUT 3	09	○ ○	OUT 0	10	OUT 0
GATE 3	10	○ ○	GATE 0	12	GATE 0
GATE 4	12	○ ○	CLK 4	14	CLK 4
	14	○ ○	OUT 4	16	OUT 4
GND	16	○ ○	GND	18	GND
+5V	18	○ ○		20	
CN5					

NOTES:

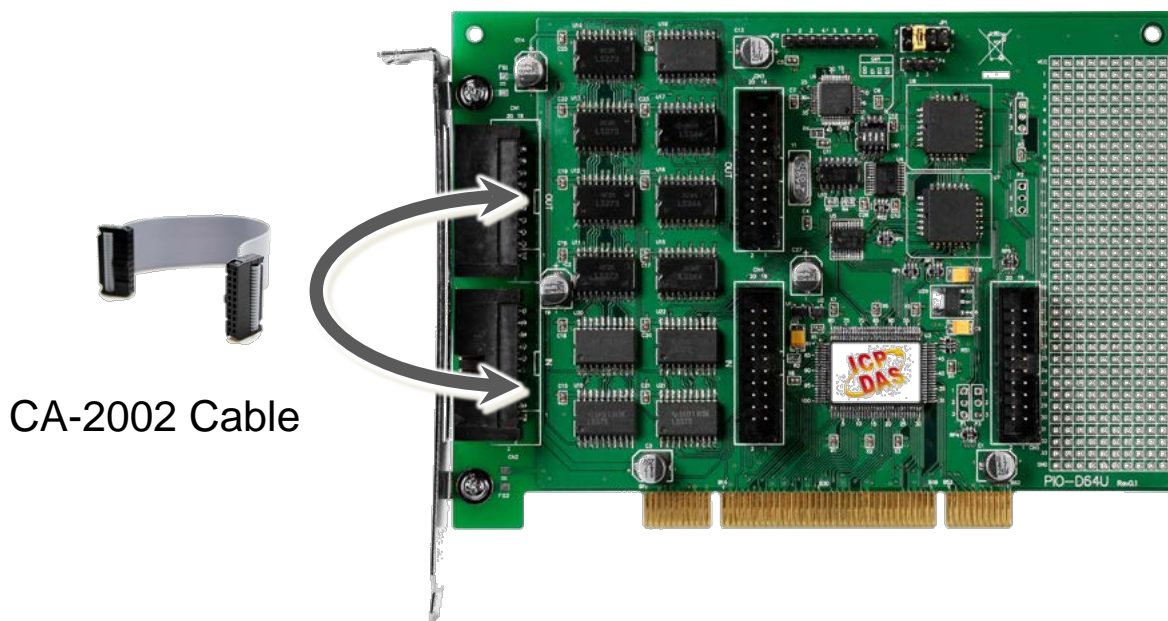
1. **CLK_n**: External clock source for Counter n
2. **GATE_n**: External gate control signal for Counter n
3. **OUT_n**: Output of Timer/Counter n
4. All signals are TTL compatible

4 Testing Board

➤ **Prepare for device**

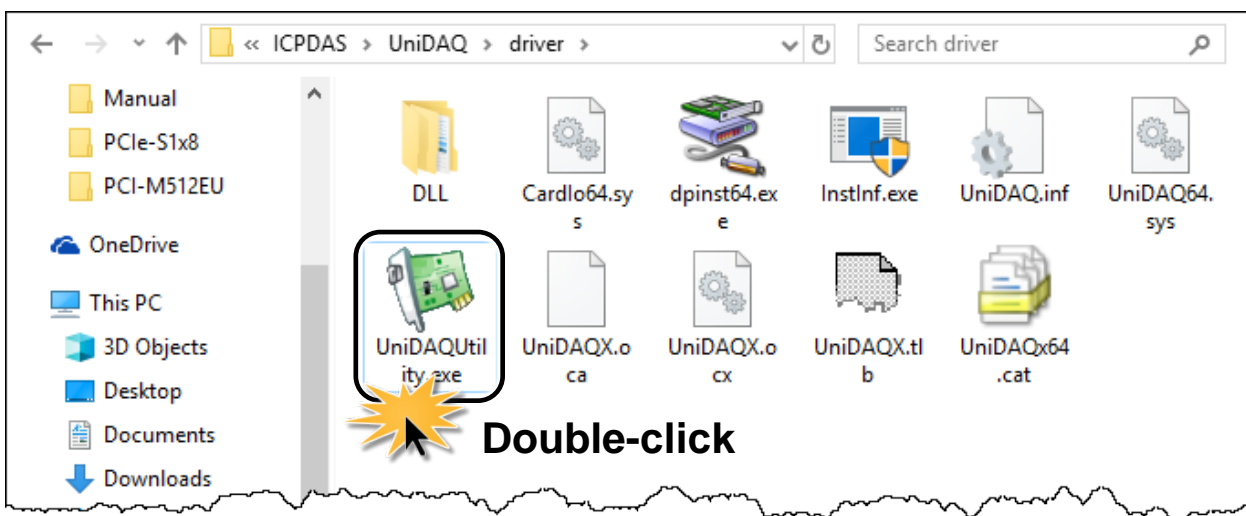
- ☑ CA-2002 (optional) cable

1) Connect the **CON1** to **CON2** on board using the **CA-2002** cable.



2) Launch the **UniDAQ Utility** software.

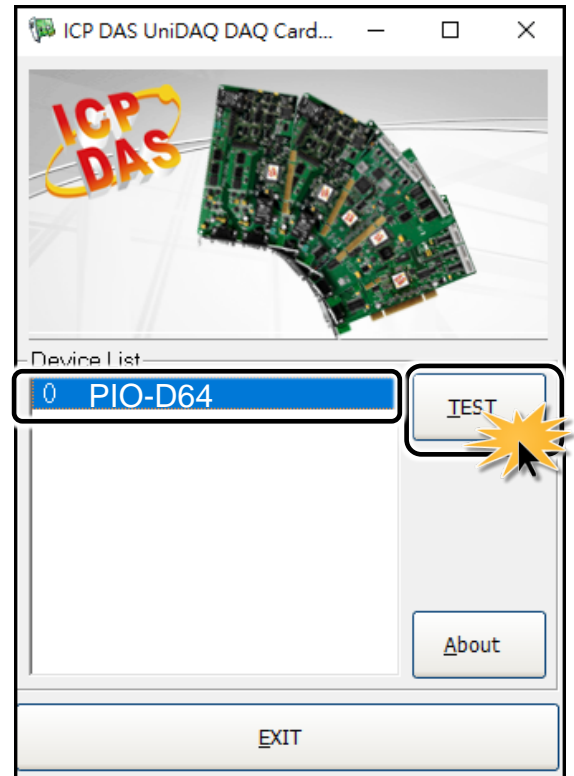
If the UniDAQ Utility was installed in the default folder, it will be located at “**C:\ICPDAS\UniDAQ\Driver**”.



3) Confirm that the PIO-D64 Series Card has been successfully installed in the Host system.

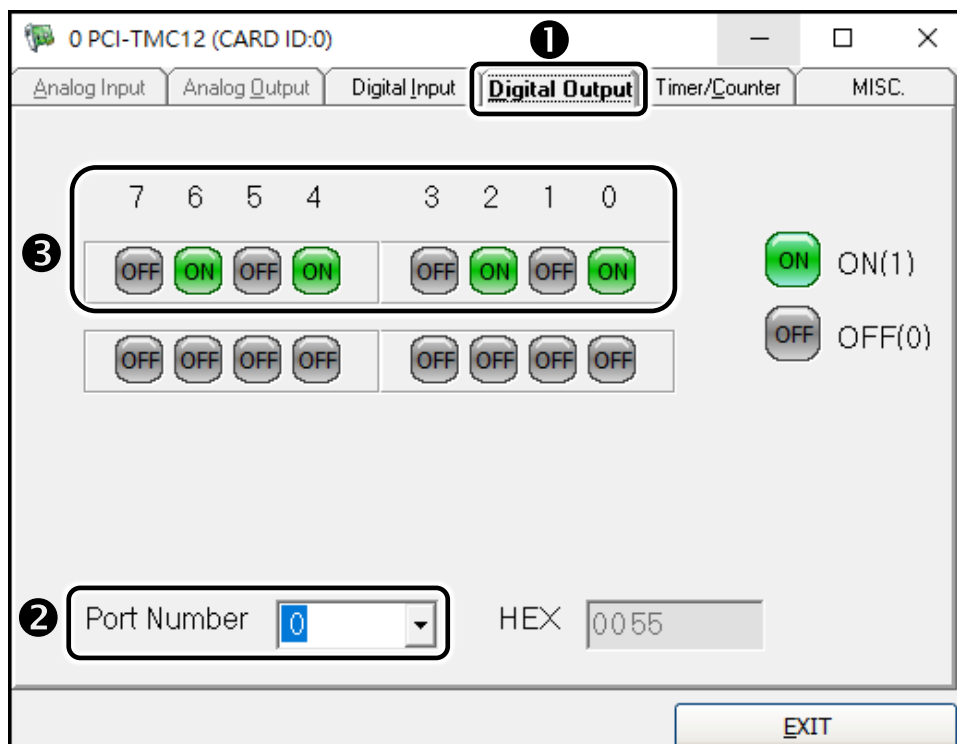
NOTE: The device numbers start from 0.

4) Click the “**TEST**” button to start the test.



5) Check the results of the **Digital Input and Digital Output** functions test.

- ❶ Click the “**Digital Output**” tab.
- ❷ Select “**Port0**” from the “**Port Number**” drop-down options.
- ❸ Click the **DO channels 0, 2, 4 and 6** buttons.



- ④ Click the “**Digital Input**” tab.
- ⑤ Select “**Port0**” from the “**Port Number**” drop-down options.
- ⑥ The DI indicators will turn **black** when the corresponding **DO channels 0, 2, 4 and 6 are ON.**

