PIO-D96/PEX-D96S Series Quick Start

v1.2, Apr. 2025

Packing List

In addition to this guide, the package includes the following items:

PIO-D96U/PIO-D96SU/PEX-D96S

Technical Support

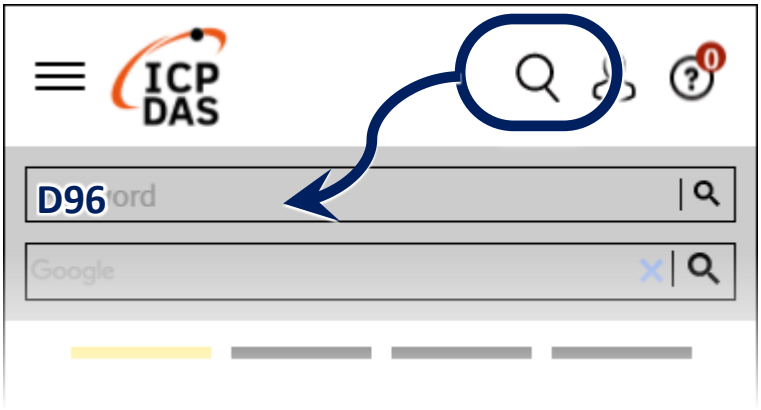
service@icpdas.com

www.icpdas.com

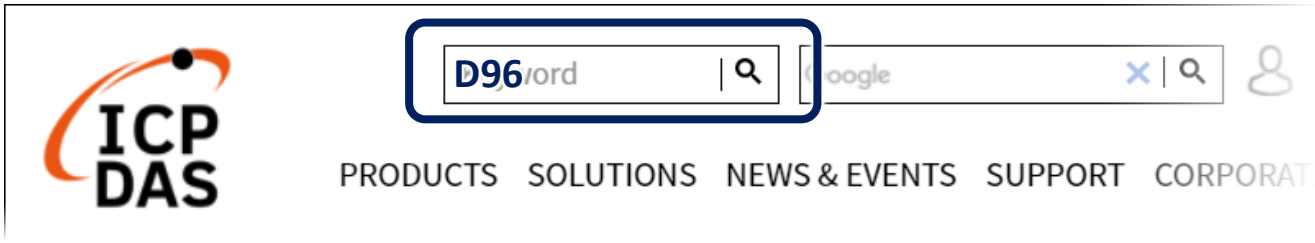
Resources

How to search for drivers, manuals and spec information on ICP DAS website.

- For Mobile Web



- For Desktop Web



Related Information

For more detailed information related to the software manual, hardware manual, PIO-D96 Series Driver & SDK and sample program:

http://www.icpdas.com/en/download/index.php?model=PIO-D96SU

1 Installing Windows Driver

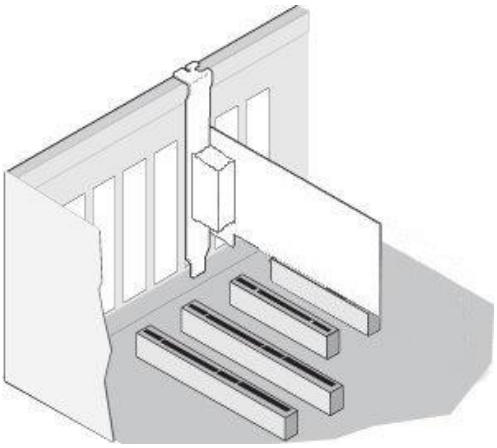
1) Download or locate the Windows driver.

☑ The UniDAQ **driver** supports 32-/64-bit Windows 10/11, which can be found in the
https://www.icpdas.com/en/download/index.php?kw=UniDAQ

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.

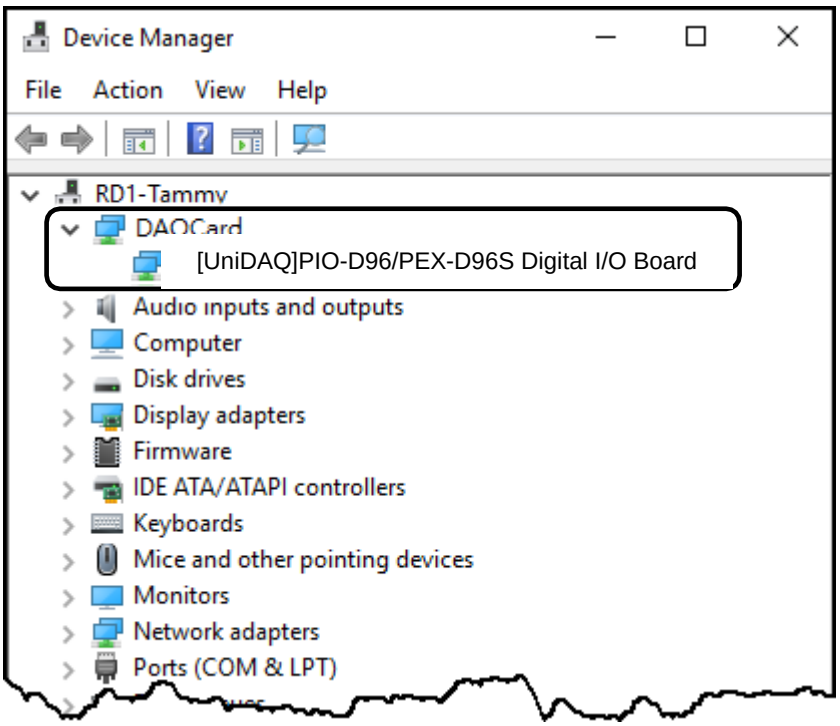
NOTE:
For more detailed information related to driver installation, refer to Chapter 2 “Starting” in the UniDAQ SDK user manual.

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 Device name has been correctly installed and is in the Device Manager, as illustrated on below.



3 Pin Assignments and Jumper

PIO-D96SU/PEX-D96S:

PA00-07: Port0; PB00-07: Port1; PC00-07: Port2
PA10-17: Port3; PB10-17: Port4; PC10-17: Port5
PA20-27: Port6; PB20-27: Port7; PC20-27: Port8
PA30-37: Port9; PB30-37: Port10; PC30-37:Port11

PIO-D96U:

CON1: PA0-7(Port0); PB0-7(Port1); PC0-7(Port2)
CN1: PA0-7(Port3); PB0-7(Port4); PC0-7(Port5)
CN2: PA0-7(Port6); PB0-7(Port7); PC0-7(Port8)
CN3: PA0-7(Port9); PB0-7(Port10); PC0-7(Port11)

Pin Assign-ment	Terminal No.		Pin Assign-ment
N.C	01	20	+5V
N.C.	02	21	GND
PB_7	03	22	PC_7
PB_6	04	23	PC_6
PB_5	05	24	PC_5
PB_4	06	25	PC_4
PB_3	07	26	PC_3
PB_2	08	27	PC_2
PB_1	09	28	PC_1
PB_0	10	29	PC_0
GND	11	30	PA_7
N.C.	12	31	PA_6
GND	13	32	PA_5
N.C.	14	33	PA_4
GND	15	34	PA_3
N.C.	16	35	PA_2
GND	17	36	PA_1
+5V	18	37	PA_0
GND	19		

Female DB37 (CON1)

Pin Assign-ment	Terminal No.		Pin Assign-ment
PC_7	01	02	GND
PC_6	03	04	GND
PC_5	05	06	GND
PC_4	07	08	GND
PC_3	09	10	GND
PC_2	11	12	GND
PC_1	13	14	GND
PC_0	15	16	GND
PB_7	17	18	GND
PB_6	19	20	GND
PB_5	21	22	GND
PB_4	23	24	GND
PB_3	25	26	GND
PB_2	27	28	GND
PB_1	29	30	GND
PB_0	31	32	GND
PA_7	33	34	GND
PA_6	35	36	GND
PA_5	37	38	GND
PA_4	39	40	GND
PA_3	41	42	GND
PA_2	43	44	GND
PA_1	45	46	GND
PA_0	47	48	GND
+5V	49	50	GND

50-pin box header
(CN1/CN2/CN3)

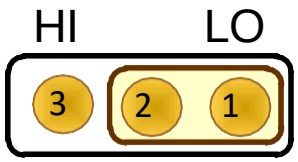
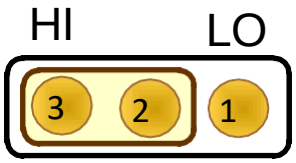
Pin Assign-ment	Terminal No.		Pin Assign-ment
PA_00	01	51	PA_10
PA_01	02	52	PA_11
PA_02	03	53	PA_12
PA_03	04	54	PA_13
PA_04	05	55	PA_14
PA_05	06	56	PA_15
PA_06	07	57	PA_16
PA_07	08	58	PA_17
PB_00	09	59	PB_10
PB_01	10	60	PB_11
PB_02	11	61	PB_12
PB_03	12	62	PB_13
PB_04	13	63	PB_14
PB_05	14	64	PB_15
PB_06	15	65	PB_16
PB_07	16	66	PB_17
PC_00	17	67	PC_10
PC_01	18	68	PC_11
PC_02	19	69	PC_12
PC_03	20	70	PC_13
PC_04	21	71	PC_14
PC_05	22	72	PC_15
PC_06	23	73	PC_16
PC_07	24	74	PC_17
GND	25	75	GND
PA_20	26	76	PA_30
PA_21	27	77	PA_31
PA_22	28	78	PA_32
PA_23	29	79	PA_33
PA_24	30	80	PA_34
PA_25	31	81	PA_35
PA_26	32	82	PA_36
PA_27	33	83	PA_37
PB_20	34	84	PB_30
PB_21	35	85	PB_31
PB_22	36	86	PB_32
PB_23	37	87	PB_33
PB_24	38	88	PB_34
PB_25	39	89	PB_35
PB_26	40	90	PB_36
PB_27	41	91	PB_37
PC_20	42	92	PC_30
PC_21	43	93	PC_31
PC_22	44	94	PC_32
PC_23	45	95	PC_33
PC_24	46	96	PC_34
PC_25	47	97	PC_35
PC_26	48	98	PC_36
PC_27	49	99	PC_37
+5V	50	100	+5V

Female SCSI 100-pin (CON1)

➢ **DI Pull-high/low Jumper**

Jumpers JP2 to JP13 are used to specify whether the Digital Input is either Pull-high or Pull-low.

<u>NOTE:</u> Ensure that Jumpers JP2 to JP13 are in the default position before performing a self-test.

☑ Pull-Low (Default)	Pull- High
	

4 Testing Board

➢ **Prepare for device**

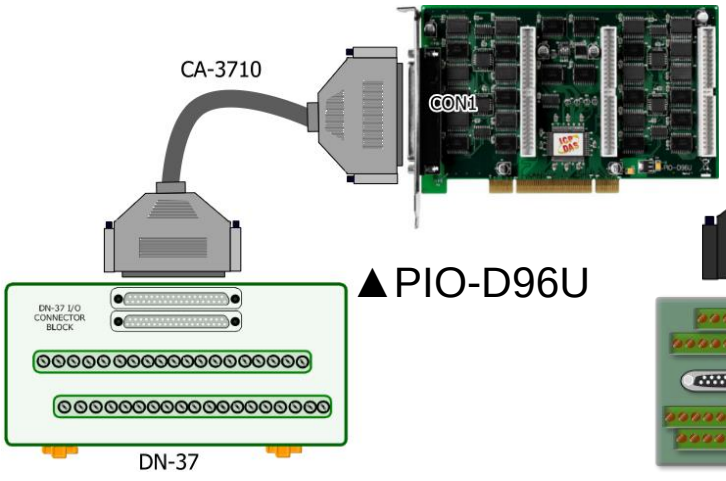
☑ Optional CA-3710 and DN-37 for PIO-D96U

☑ Optional CA-SCSI100-15 and DN-100 for PIO-D96SU/PEX-D96S

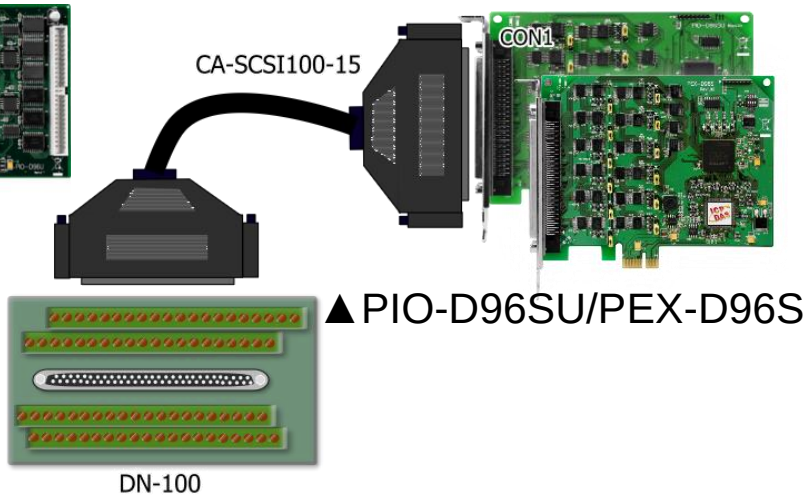
1) Verify that Jumpers **DI Pull-high/low (JP2 ~ JP13)** on the Device are set to the **"Pull-Low (default)"** position.

   NOTE: Refer to Chapter 3 "Pin Assignments and Jumpers" above (P5).

2) Connect the **CON1** to daughter board using the cable.

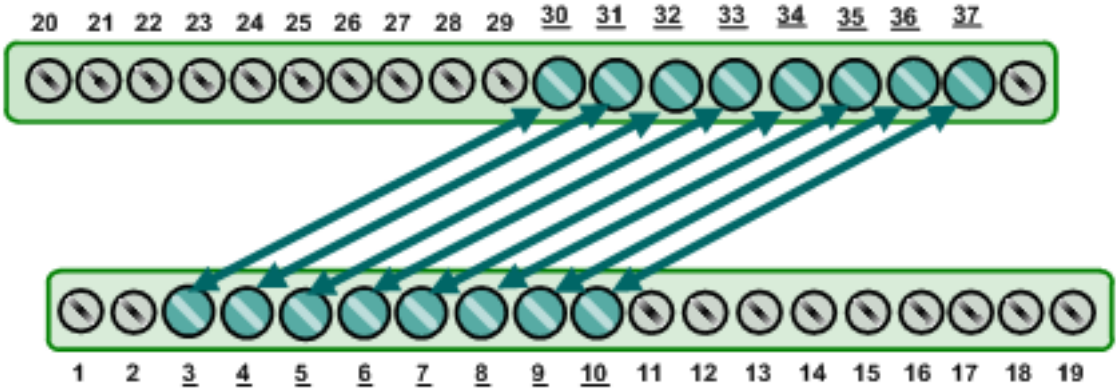


▲PIO-D96U

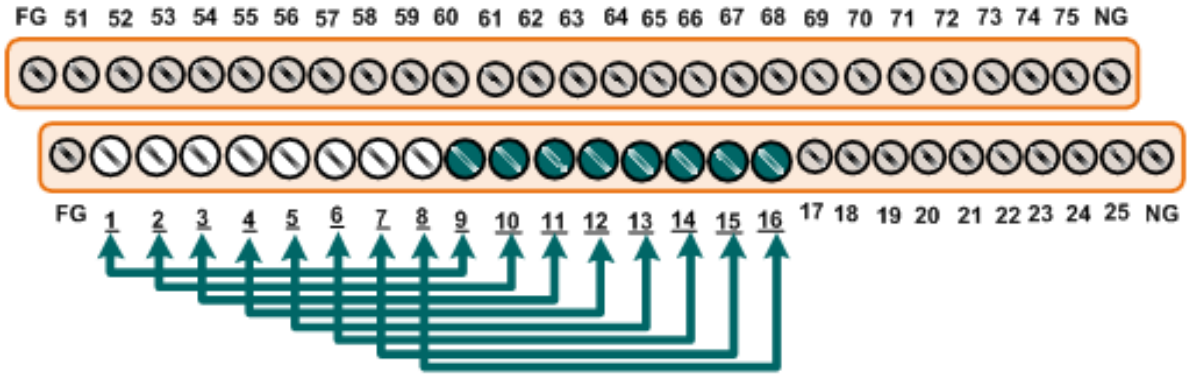


▲PIO-D96SU/PEX-D96S

3) Connect the Port0 (PA0~PA7) with Port1 (PB0~PB7).

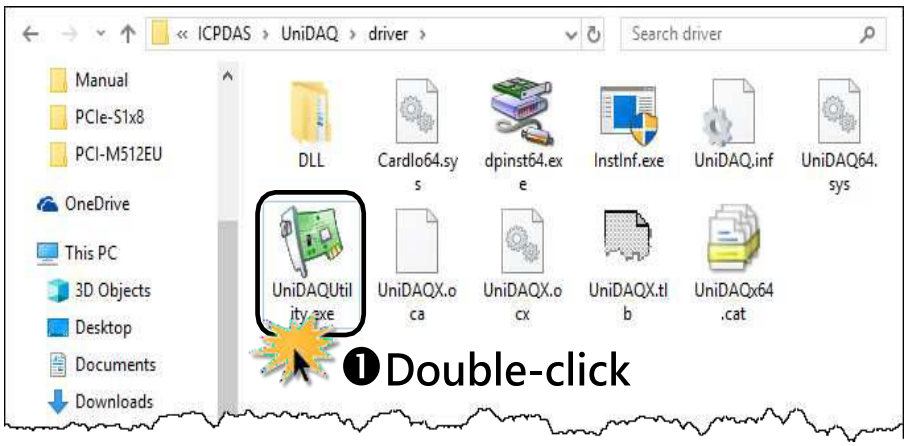


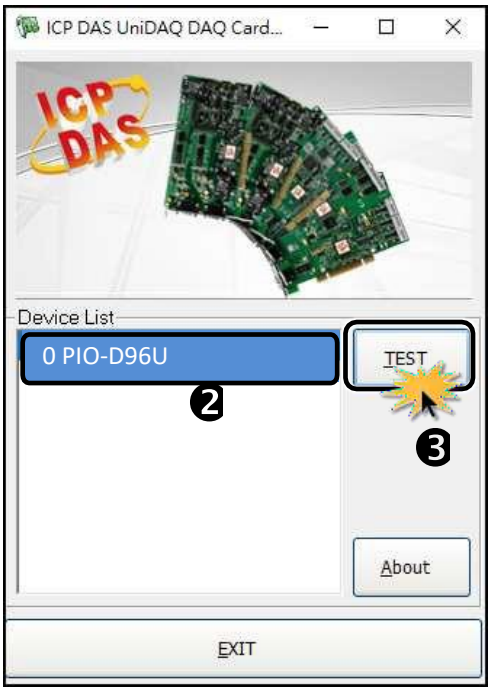
▲PIO-D96U



▲PIO-D96SU/PEX-D96S

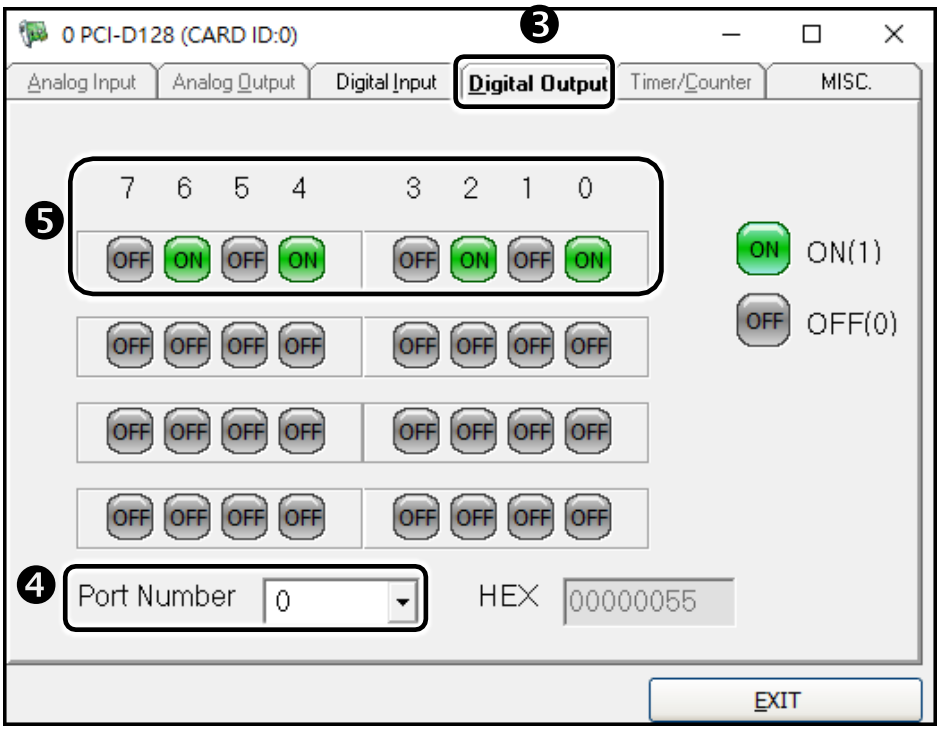
4) Launch the UniDAQ Utility program, it was installed in the default it was installed in the default:
“C:\ICPDAS\UniDAQ\Driver”





5) Confirm that the device has been successfully installed in the Host system.
NOTE: The device numbers **start from 0**.

6) Click the **“TEST”** button to start the test.
Click the **“Digital Output”** tab. Select **“Port0”** from the **“Port Number”** drop-down options. Click the DO channels 0, 2, 4 and 6 buttons.



7) Click the **“Digital Input”** tab. Select **“Port1”** from the **“Port Number”** drop-down options. The DI indicators will turn red when the corresponding DO channels 0, 2, 4 and 6 are ON.