

# Use UniDAQ Boards in eLogger

Please make sure you have installed ICPDAS UniDAQ driver before use. You can download and install it from the following website:

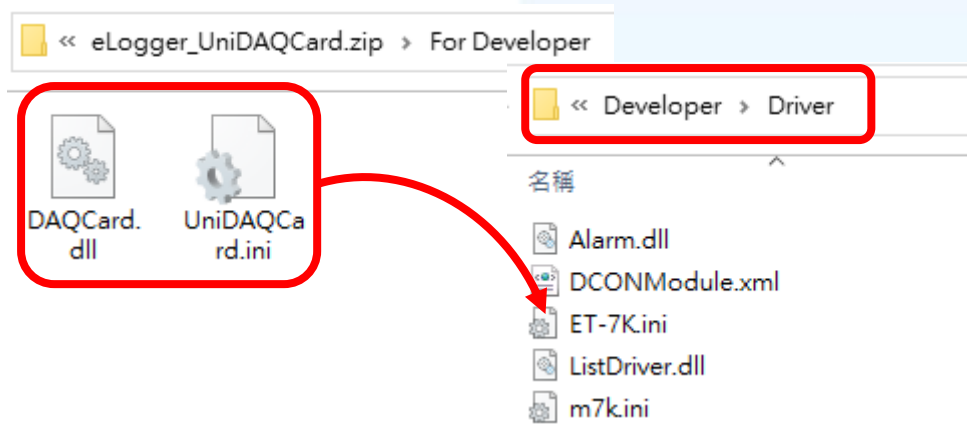
<https://www.icpdas.com/en/download/show.php?num=1012>

**Step1:** Put the files in the eLogger folder.

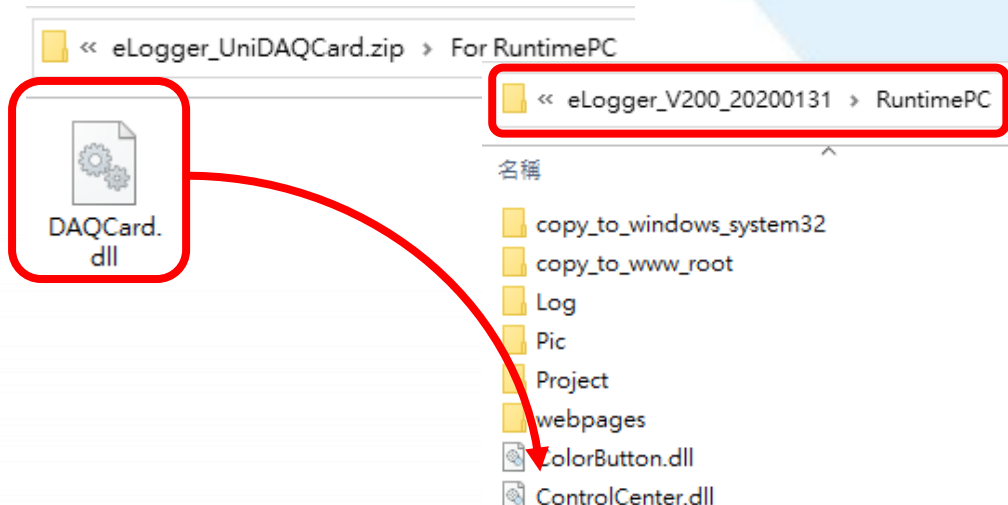
1. Please download the required files from the following website.  
(**eLogger\_UniDAQCard.zip**)

<https://www.icpdas.com/en/download/show.php?num=3210>

2. Unzip the downloaded file.
3. Place the **DAQCard.dll** and **UniDAQCard.ini** files in For Developer\_driver to the \eLogger\_Vxxx\_yyyymmdd \ Developer \ Driver.



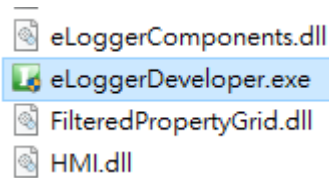
4. Place the **DAQCard.dll** files in For RuntimePC to the \eLogger\_Vxxx\_yyyymmdd \ RuntimePC.



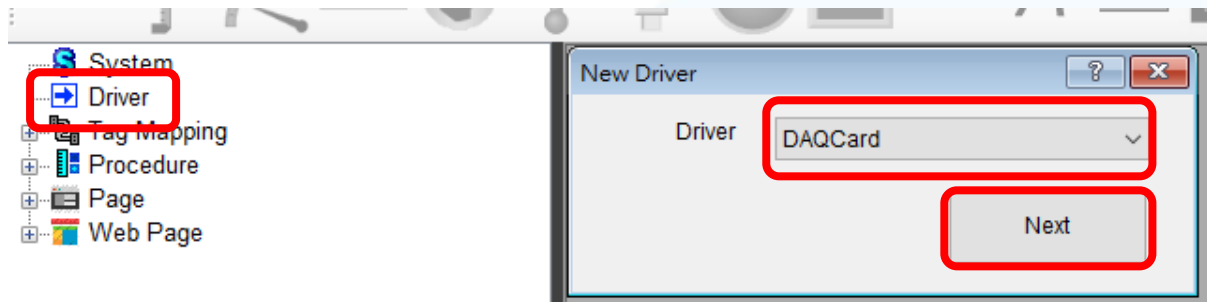
Note: The two DAQCard.dll files are not the same.

## Step2: Create a board in eLoggerDeveloper.

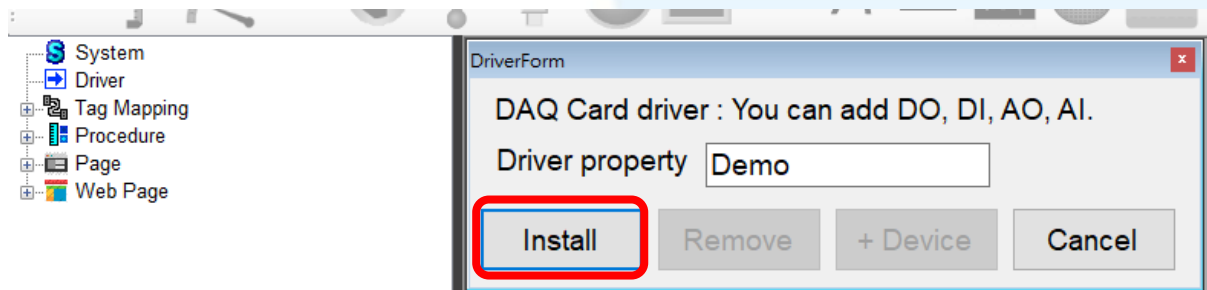
1. Execute **eLoggerDeveloper.exe**.



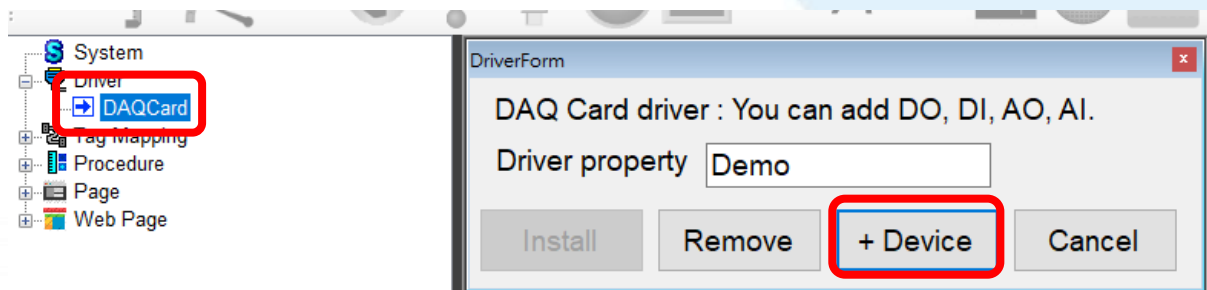
2. Click **Driver** on the left, select **DAQCard** and click **Next**.



3. Click **Install**.



4. Click **DAQCard** on the left, and then click **+Device**.



5. Select the board and make related settings.

The screenshot shows the 'DeviceForm' window with the following settings:

- ID: 0
- UniDAQ Card: Select UniDAQ Card
- DI Channel Number: 0
- DO Channel Number: 0
- AI Channel Number: 0
- AI Configuration Code: Select AI Config
- AO Channel Number: 0
- AO Configuration Code: Select AO Config
- ☐ Set DIO Ports (support bi-direction I/O ports)

Buttons at the bottom: Cancel, Remove, Modify, Add.

6. After setting, click **Add** (take PCI-822LU as an example) .

The screenshot shows the 'DeviceForm' window with the following settings:

- ID: 1
- UniDAQ Card: PCI-822
- DI Channel Number: 16
- DO Channel Number: 16
- AI Channel Number: 32
- AI Configuration Code: 00: +/-10.0000(V)
- AO Channel Number: 2
- AO Configuration Code: 3: +/- 10
- ☒ Set DIO Ports (support bi-direction I/O ports)

Below the 'Set DIO Ports' checkbox is a table for DO and DI port settings:

DO:check DI:unchecked							
0	1	2	3	4	5	6	7
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	9	10	11	12	13	14	15
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	17	18	19	20	21	22	23
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	25	26	27	28	29	30	31
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

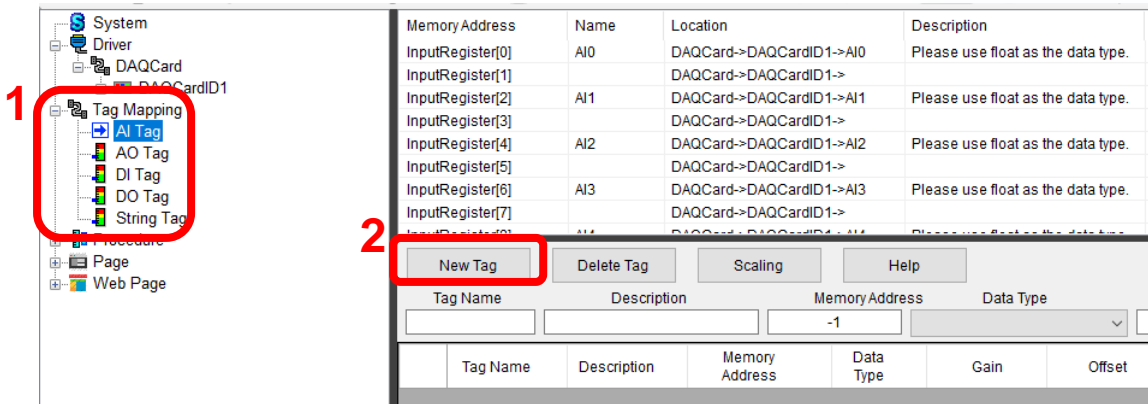
Buttons at the bottom: Cancel, Remove, Modify, Add.

*For boards with AI and AO channels, you need to select the configuration code.*

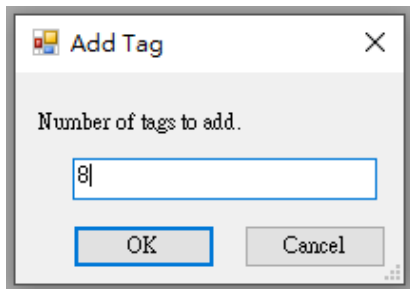
*Support the bi-direction I/O channel board, please check the DO port to be used.*

### Step3: Add corresponding tags in eLoggerDeveloper.

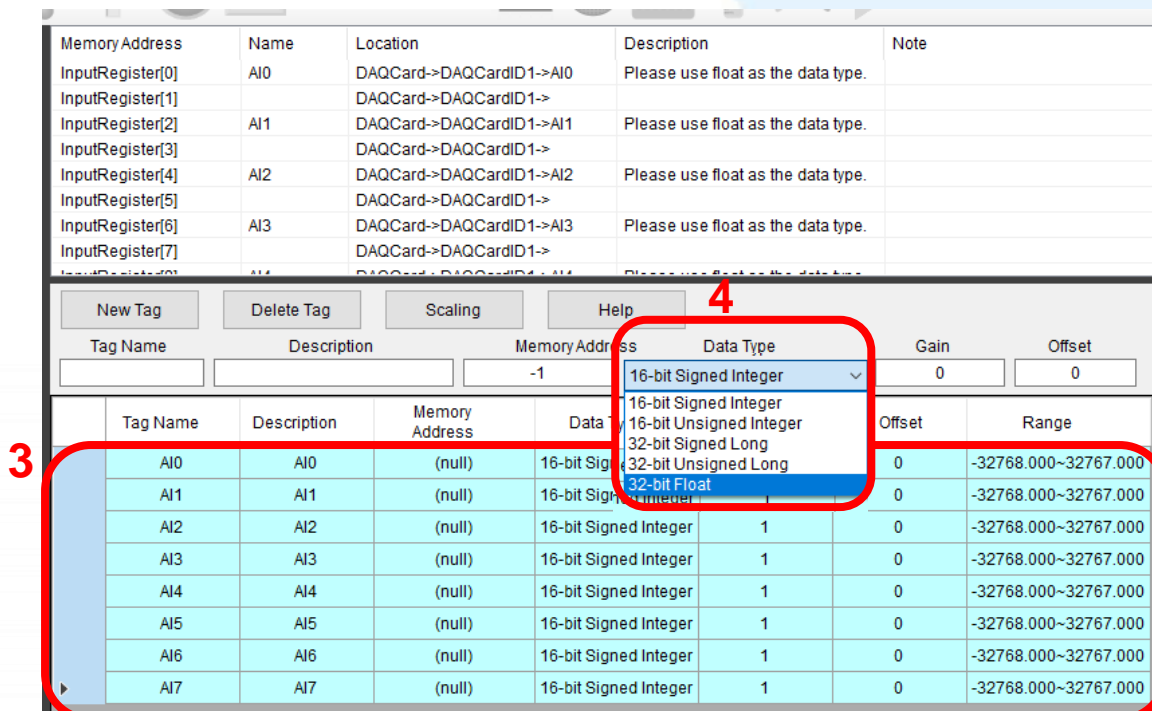
1. Double-click **Tag Mapping** on the left, and then select a tag (using AI as an example).



2. Click **New Tag**, enter the number of new tags, and click **OK**.



3. Select the added Tag (you can hold down the mouse button and drag the cursor to select multiple tags).
4. Change the Data Type to 32-bit Float.



5. Enter the start address in the Memory Address field (the rest of address will automatically be filled).

Memory Address	Name	Location	Description	Note
InputRegister[0]	AI0	DAQCard->DAQCardID1->AI0	Please use float as the data type.	
InputRegister[1]		DAQCard->DAQCardID1->		
InputRegister[2]	AI1	DAQCard->DAQCardID1->AI1	Please use float as the data type.	
InputRegister[3]		DAQCard->DAQCardID1->		
InputRegister[4]	AI2	DAQCard->DAQCardID1->AI2	Please use float as the data type.	
InputRegister[5]		DAQCard->DAQCardID1->		
InputRegister[6]	AI3	DAQCard->DAQCardID1->AI3	Please use float as the data type.	
InputRegister[7]		DAQCard->DAQCardID1->		
InputRegister[8]	AI4	DAQCard->DAQCardID1->AI4	Please use float as the data type.	

Tag Name	Description	Memory Address	Data Type	Gain	Offset
		0	32-bit Float	0	0

Tag Name	Description	Memory Address	Data Type	Gain	Offset	Range
AI0	AI0	0	32-bit Float	1	0	-9999999.000~9999999.000
AI1	AI1	2	32-bit Float	1	0	-9999999.000~9999999.000
AI2	AI2	4	32-bit Float	1	0	-9999999.000~9999999.000
AI3	AI3	6	32-bit Float	1	0	-9999999.000~9999999.000
AI4	AI4	8	32-bit Float	1	0	-9999999.000~9999999.000
AI5	AI5	10	32-bit Float	1	0	-9999999.000~9999999.000
AI6	AI6	12	32-bit Float	1	0	-9999999.000~9999999.000
AI7	AI7	14	32-bit Float	1	0	-9999999.000~9999999.000

6. The practice of AO, DI, DO, String is the same.

	Tag Name	Description	Memory Address	Data Type	Gain	Offset	Range
▶	AO0	AO0	0	32-bit Float	1	0	-9999999.000~9999999.000
	AO1	AO1	2	32-bit Float	1	0	-9999999.000~9999999.000

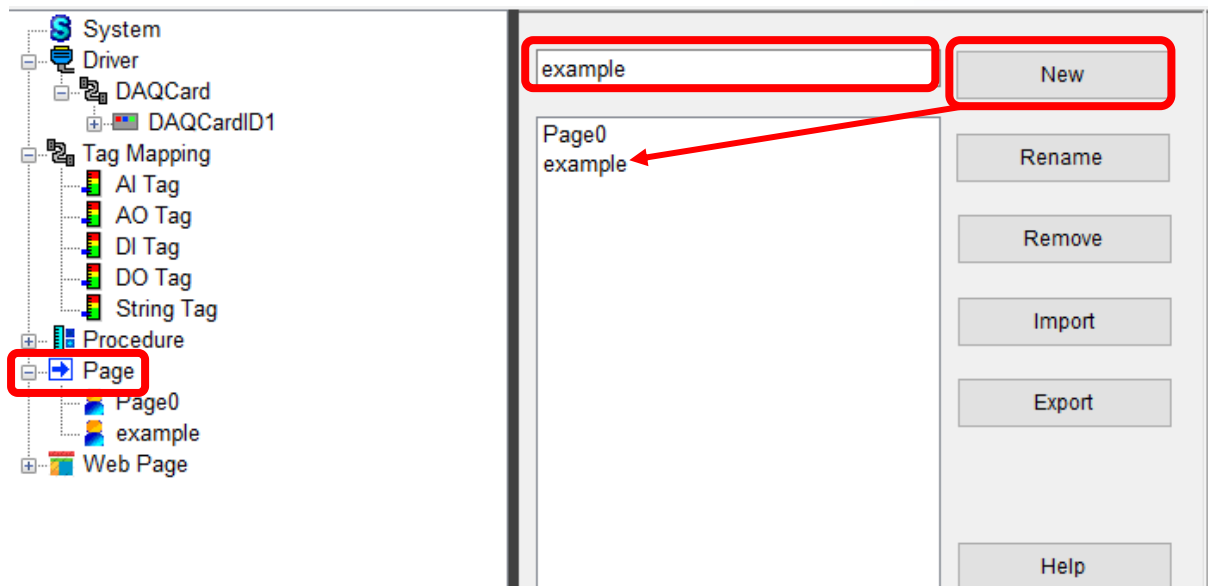
	Tag Name	Description	Memory Address
▶	DI0	DI0	0
	DI1	DI1	1
	DI2	DI2	2
	DI3	DI3	3
	DI4	DI4	4
	DI5	DI5	5
	DI6	DI6	6
	DI7	DI7	7

	Tag Name	Description	Memory Address
▶	DO0	DO0	0
	DO1	DO1	1
	DO2	DO2	2
	DO3	DO3	3
	DO4	DO4	4
	DO5	DO5	5
	DO6	DO6	6
	DO7	DO7	7

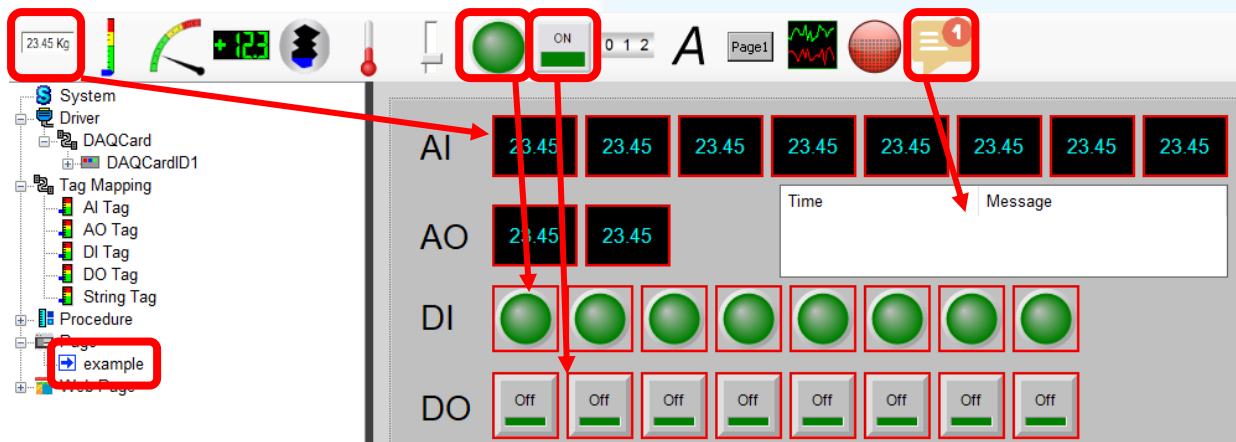
	Tag Name	Description	Memory Address
▶	String0	String0	0

**Step4:** Create HMI page in eLoggerDeveloper.

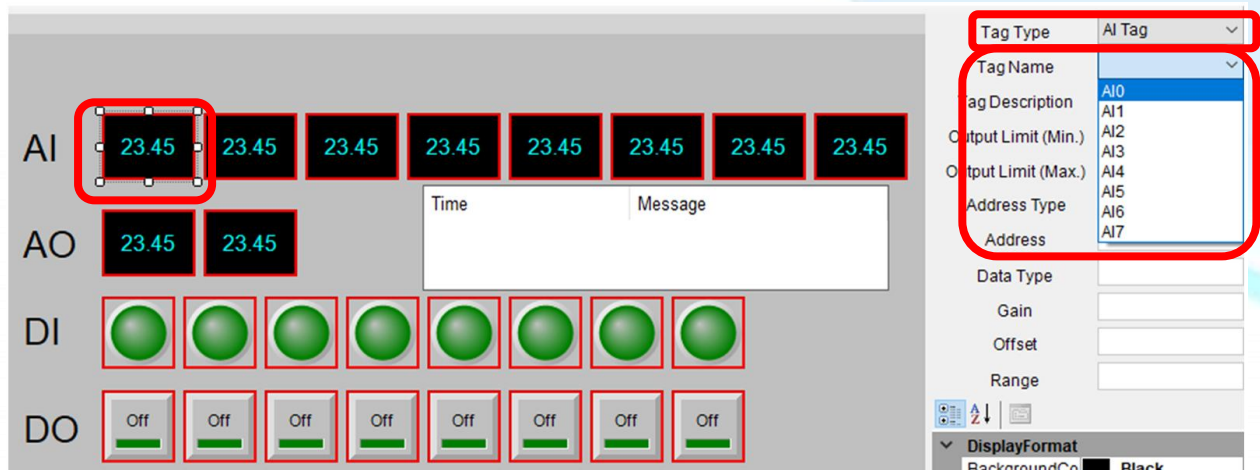
1. Double-click the **page** on the left, there is a default page 0, or you can enter a name and click **New** to create a new page.



2. Click the page you want to edit on the left (take **example** as an example). Click an object in the toolbar, and add it into the page with mouse click-drag-release.

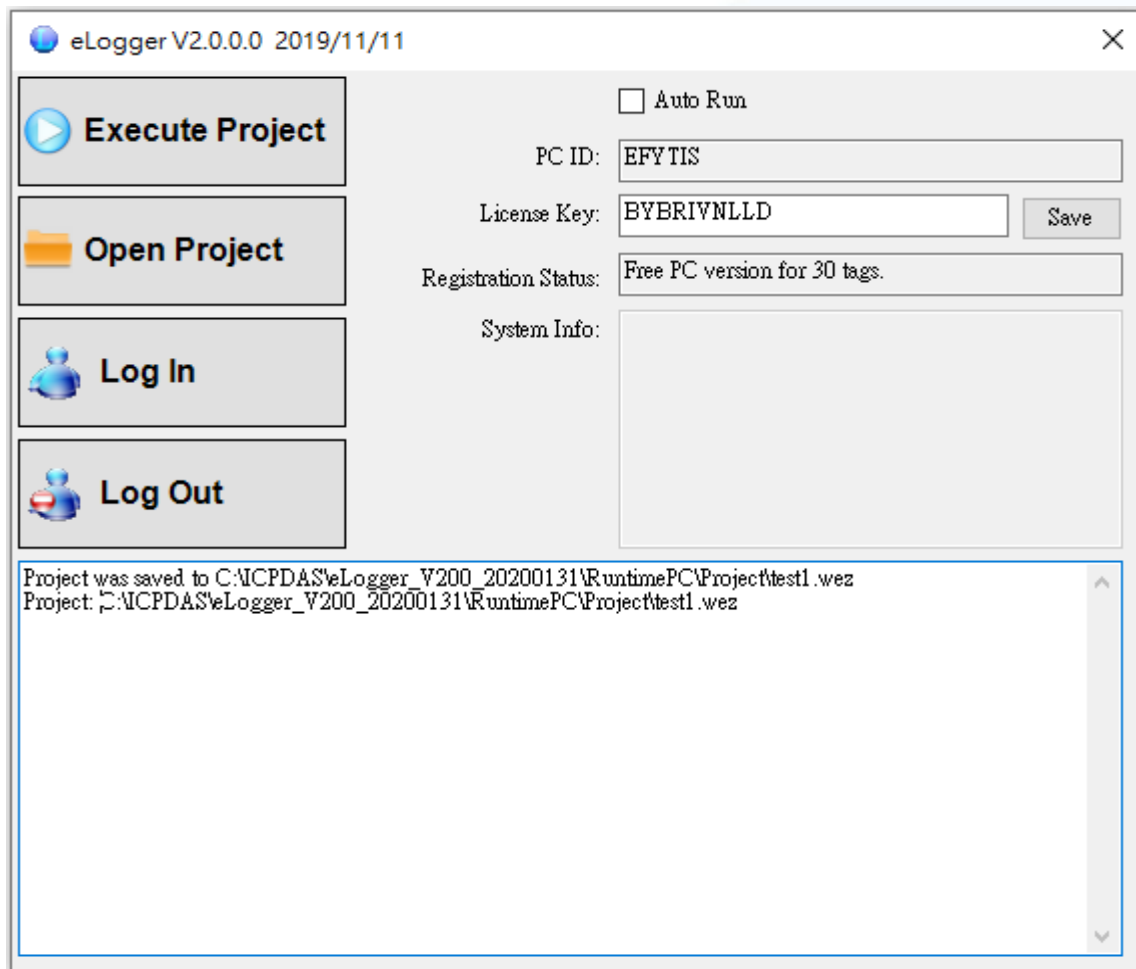
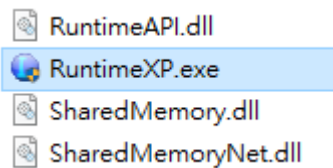


3. Select an object to display the property pane and then set parameters.

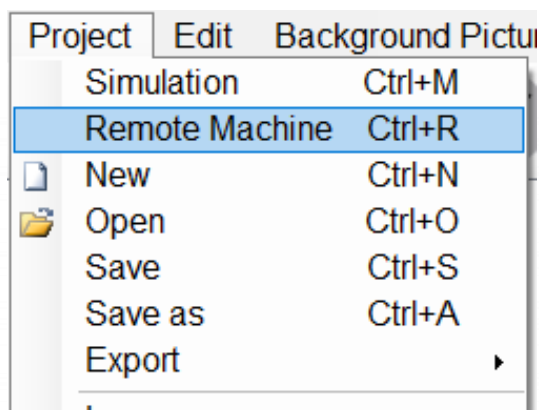


**Step5:** Upload the project and run.

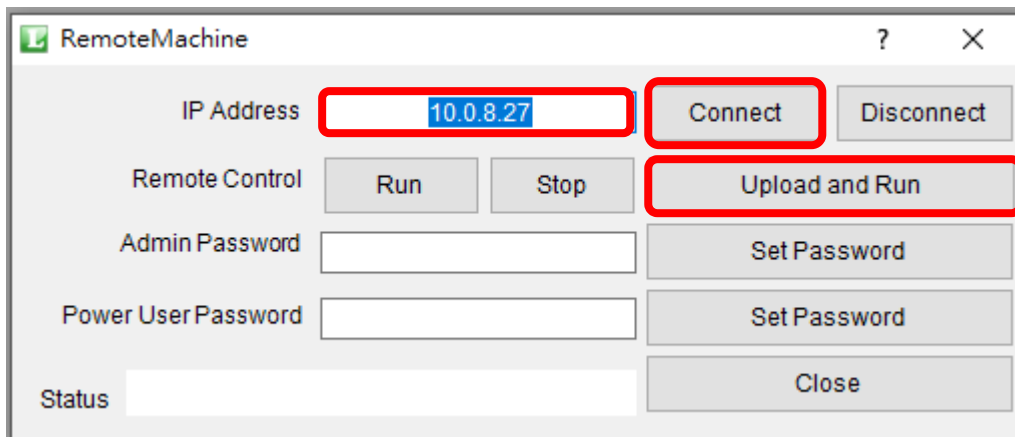
1. Execute **RuntimeXP.exe** in the RuntimePC folder on the PC with the installed DAQ board.



2. Back to eLogger Developer, click **Project >> Remote Machine** in the menu bar.



3. Enter the IP address of the PC running **RuntimeXP.exe**, click **Connect**, and then click **Upload and Run** to upload the project and run it.



RemoteMachine

IP Address: 10.0.8.27

Connect Disconnect

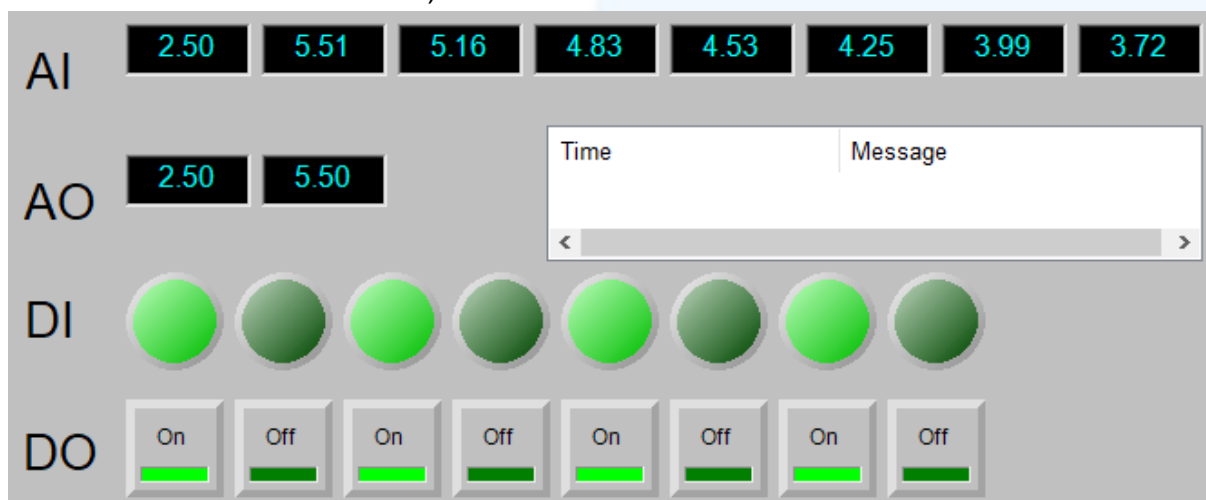
Remote Control: Run Stop Upload and Run

Admin Password: Set Password

Power User Password: Set Password

Status: Close

4. The execution result is shown in the figure. You can click AO, DO to control the DAQ board (hardware wiring AO0 is connected to AI0, AO1 is connected to AI1, and DO is connected to DI).



AI: 2.50 5.51 5.16 4.83 4.53 4.25 3.99 3.72

AO: 2.50 5.50

DI: 8 green circles

DO: On Off On Off On Off On Off

Time Message



## Supported ICPDAS Products:

Series	Model Name	
PEX	PEX-D24/D56	PEX-D48
	PEX-D64	PEX-D96S
	PEX-D144LS	PEX-P64/C64
	PEX-P32C32	PEX-P32A32
	PEX-P16R16i/P8R8i	PEX-P8POR8i/P16POR16i
	PEX-730/730A	PEX-DA4/DA8/DA16
	PEX-1002L/1002H	PEX-1202L/1202H
PIO	PIO-D24/D56/D24U/D56U	PIO-D48/D48U/D48SU
	PIO-D64/D64U	PIO-D96/D96U/D96SU
	PIO-D144/D144U/D144LU	PIO-D168/D168U
	PIO-821L/821H/821LU/821HU	PIO-DA4/DA8/DA16/DA4U/DA8U/DA16U
PISO	PISO-P32S32WU	PISO-P32A32/P32A32U/P32A32U-5V
	PISO-P32C32/P32C32U/1730U	PISO-P64/C64/A64/P64U/C64U/A64U
	PISO-P8SSR8AC	PISO-P8R8/P16R16/P8R8U/P16R16U
	PISO-725/725U	PISO-730/730/730U/730AU
	PISO-813/813U	PISO- DA2/DA2U/DA4U/DA8U/DA16U
PCI	PCI-D64HU	PCI-P8R8/P8R8U/P8SSR8AC/P8SSR8DC
	PCI-D96SU/D128SU	PCI-P16R16/P16R16U/P16C16U/P16POR16U
	PCI-822LU/826LU	PCI-1002L/1002H/1002LU/1002HU
	PCI-1202L/1202H/1202LU/1202HU	PCI-1602/1602F/1602U/1602FU
	PCI-1800L/1802L/1800H/1802H/1800LU/1800HU/18002LU/1802HU	