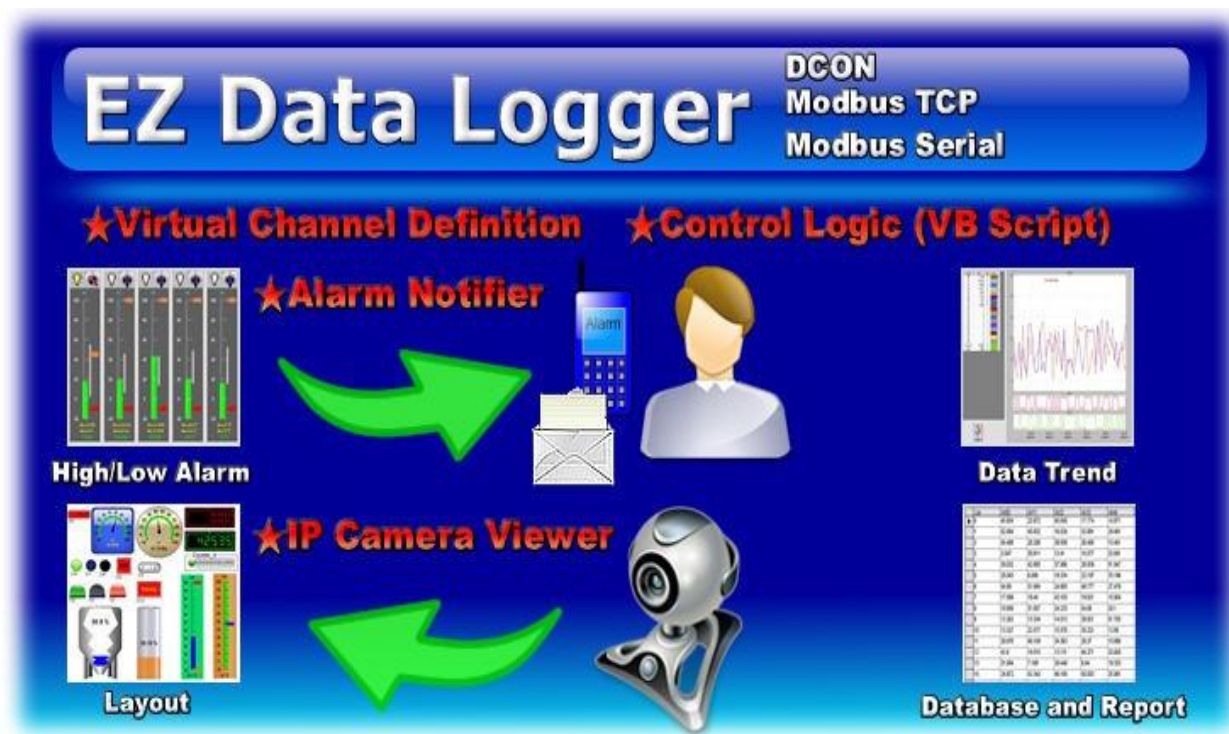




EZ Data Logger is a small data logger software. It can be applied to small remote I/O system. With its user-friendly interface, users can quickly and easily build a data logger software without any programming skill.

Download:

https://www.icpdas.com/en/product/guide+Software+EZ_Data_Logger+EZ_Data_Logger

Main Features

- **Support DCON, Modbus RTU, Modbus Ascii, Modbus TCP (IP and Domain Name) protocols**
- **Support mutiple COM Ports and TCP/IP connections**
- **Support Virtual Channel definition** User can operate the data into the virtual channel by channel tag names easily.
For example: $VC1 = (AI_2 + AI_3) / 2$
- **Support Control Logic (VB Script)**
User can edit the script to set the output values or to caculate data into virtual channels.
You can get/set the channel values by channel tag names.
For example : If $AI_0 > 50$ Then $DO_0 = 1$
- **Support Alarm Notifier (by sending SMS or E-Mail)**
User can set the engineer's cell phone number and email address. When the channel value over the alarm value or back to normal, the contact messenger will send a message by SMS (using GSM Modem) or by E-Mail(using ethernet).
- **Flexible module configuration**
Each module and I/O point can have different description and color
- **Flexible workgroup configuration**
Each channel can be assigned to any workgroup.
- **Real time data trend (with zoom in and zoom out)**
Each trend line can store more than 86400 records.

- ♦ **Layout view**

User can set back picture and drag-drop I/O points to the mapping place. User can also change the channel layout object as Linear Gauge, Angular Gauge, Toggle, Number LED.....

- ♦ **IP Camera Viewer**

User can add an IP camera's web address, and then add it to group. Then the layout display will show the web page in a sub window.

- ♦ **Access database supported**

The database also can be exported to Excel file or CVS file

- ♦ **Reporter**

Can print the trend line or data from the database

- ♦ **High/Low alarm with audio warning**

Each AI channel can have its own high/low limitation. Once the AI value over high limitation or below low limitation, the alarm light will be triggered with audio. The alarm status will keep warning till users switch off the alarm light.

- ♦ **Can search for DCON modules and M7000 serial modules**

For DCON modules, 7000, 87K, 8000 modules can be searched. For Modbus RTU modules, M7000 serial modules can be searched and automatic setting the gain and offset.

- ♦ **Value scaling**

Set gain and offset can scale analog values from volt or amp unit to another physical measurement unit.

Include calculating function(given 2 points to calculate the gain and offset).

For example: rpm for rotation, kg for weight.

- ♦ **Support 3 level user**

Admin: Full control

Power User: Can start to run or stop running project. Can set AO/DO value.

User: Can only switch the group to display.

- ♦ **Programming skill needless**

All operation are done by click mouse and enter value.

Supported Module

- DCON modules (I-7000, I-87K, I-8000

series)[I-7000 Remote I/O Module](#)

[I-8000 Main Control Unit](#)

[8K and 87K I/O Modules](#)

- Modbus/TCP

[I-8000E-MTCP](#)

[I-8000E-MTCP Support modules](#)

[ET-6000](#)

[ET-7000](#)

[ISaGRAF controllers \(I-8417/8817/8437/8837, I-7188EG, I-7188XG, Wincon-8x37 \)](#)

[7188E-MTCP](#)

[◆PAC-7186EX-MTCP](#)

[I-7188EF-016](#)

[Ethernet to FRnet Convert](#)

[I-7243D](#)

[Modbus TCP server/DeviceNet Master Gateway.](#)

- Modbus/RTU

[M-7000 series](#)

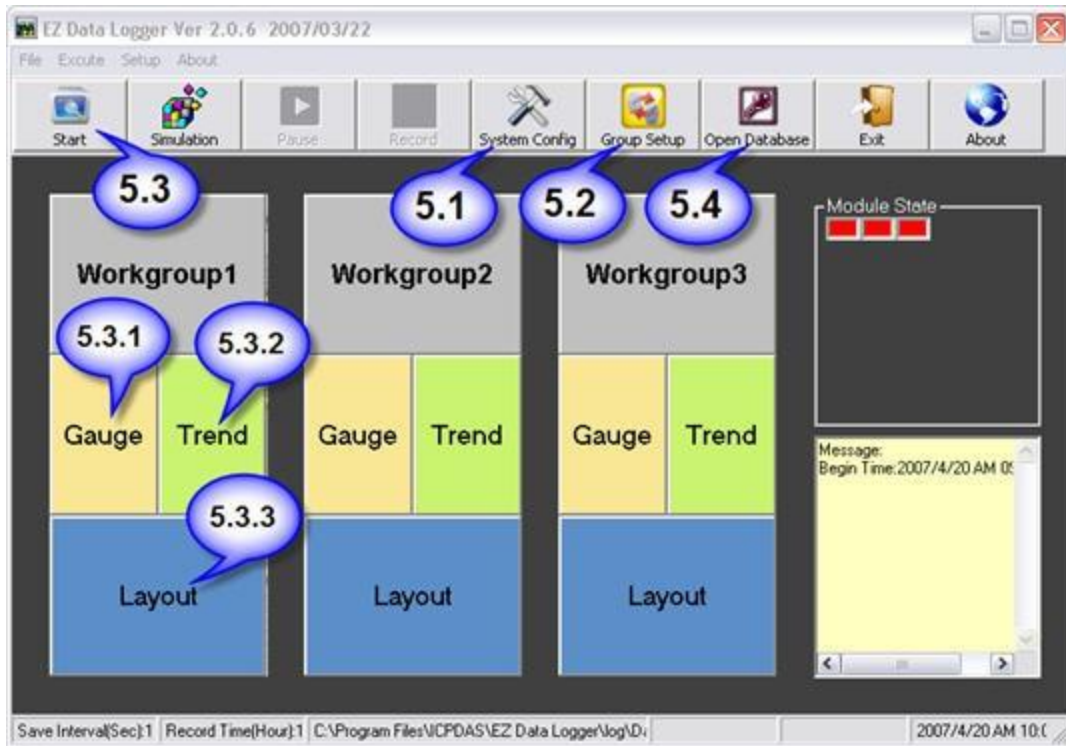
- Devices with Modbus RTU, Modbus Ascii, Modbus TCP

protocols

Limitation

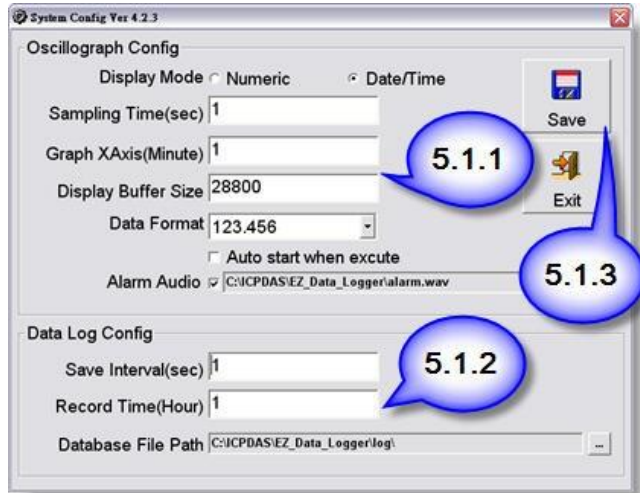
- Most 32 channels for each work group
- One ICPDAS Modbus device to active other modbus drivers (see.[Q2](#))

Quick Start



- **Step 5.1** [Configure System](#)
- **Step 5.2** [Group Setup](#)
- **Step 5.3** [Start to run\(or simulation\)](#).
 - Step 5.3.1 [Gauge display](#).
 - Step 5.3.2 [Trend line display](#).
 - Step 5.3.3 [Layout display](#).
- **Step 5.4** Open Database

Configure System



Display mode:

- Numeric: Log data by list. The minimum sampling time is 0.01 sec.
- Date/Time: Log data by time. The minimum sampling time is 1 sec.

The X-axis of the trend are different



Sampling time: The time interval of scanning IO channels, updating database, and display values.

Graph XAxis(minute):
The span of the trend display.

Display Buffer Size:
Maximum points of each trend line.

Data Format:
The format of the display values.

Auto start when excute:
Set enabled to auto start logging. You can create a shortcut in Windows=>"Start"=>"Start up" to logging data when computer power on.

Save Interval:
Time interval of saving data in database(a multiple of sampling time).

Record Time:
EZ Data Logger will create a new database when record time is up.

Database File Path:
Auto renamed by Datayyyymmdd_hh.mdb when record time is up(yyyy:year mm:month dd:day hh:hour).
The database will be saved in the path.

Group Setup



Step 5.2.1 [Install driver](#)**Step 5.2.2** [Add device](#)

Step 5.2.3 [Modify channels and add to group.](#)

Step 5.2.4 [Workgroup property.](#)

Install driver



Driver List You can
Install a [DCON](#) / [Modbus
serial](#) / [Modbus TCP](#)
driver here.

Install

Install a driver

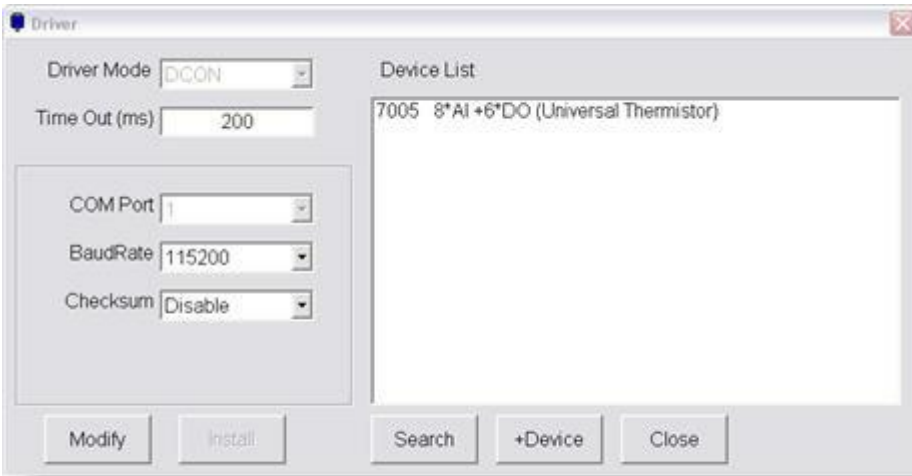
Modify

Modify the selected driver

Delete

**Delete the selected driver (You can not delete
a driver if the driver is in use)**

Install a DCON driver



Driver Mode: DCON

Time Out(ms): 200 (Default)(Modifiable)

COM Port: Select one connection COM Port (Unmodifiable).
You can not install another driver at the same COM Port.

BaudRate: 115200 (Default)(Modifiable)

Checksum: Disable (Default)(Modifiable)

Install: Install the driver, and only modifiable configurations can be changed after installation.

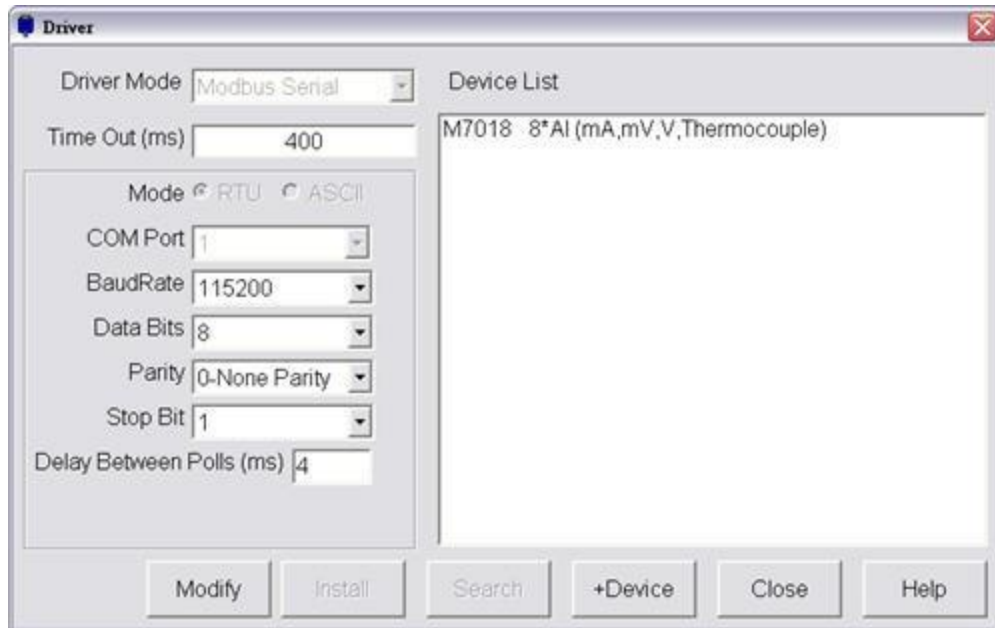
Modify: Save the modified configurations.

Search: To search for DCON modules and add them after stop searching.

+Device: To add DCON modules by user define. See 5.2.2 Add Device [DCON](#).

Device List: List all the devices which are using the driver.

Install a Modbus serial driver



Driver Mode: Modbus serial

Time Out(ms): 400 (Default)(Modifiable)

Mode: RTU or ASCII **COM Port:** Select one connection COM Port (Unmodifiable). You can not install another driver at the same COM Port.

BaudRate: 115200 (Default)(Modifiable)

Data Bits: 8 (Default)(Modifiable) **Parity:**

0-NoneParity (Default)(Modifiable) **Stop**

Bit: 1 (Default)(Modifiable)

Delay Between Polls: The delay time between last response and the new request.

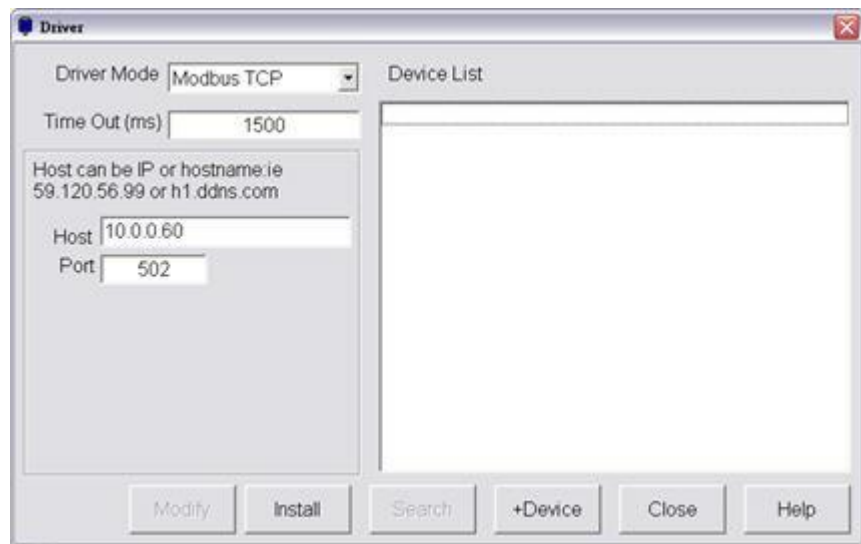
Modify: Save the modified configurations.

Search: To search for M7000 modules and add them after stop searching.

+Device: To add DCON modules by user define. See 5.2.2 Add Device [Modbus Serial](#).

Device List: List all the devices which are using the driver.

Install a Modbus TCP driver



Driver Mode: Modbus TCP

Time Out(ms): 1500 (Default)(Modifiable)

Host: IP Address or domain name.

Port: Connection TCP port.

Modify: Save the modified configurations.

Search: Disable.

+Device: To add DCON modules by user define. See 5.2.2 Add Device [Modbus TCP](#).

Device List: List all the devices which are using the driver.

Add Device



Device List You can add a [DCON](#) / [Modbus serial](#) / [Modbus TCP](#) device here.

 **Add a device**

 **Modify the selected device**

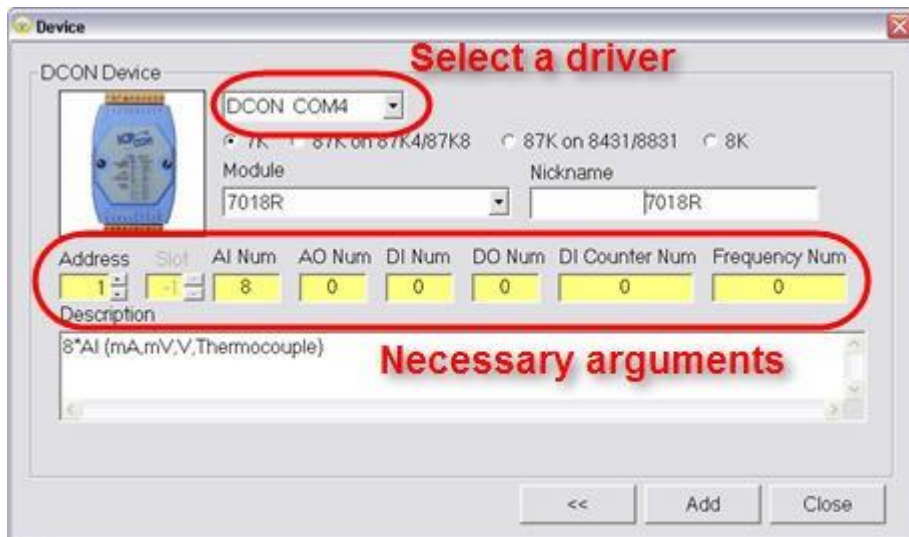
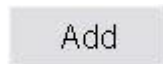
 **Delete the selected device**

Add a DCON Device

Select option "DCON Device" and click >>



Select a driver => input the necessary argument => click



Option difference:

	7K	87K on 87K4/87K8	87K on 8431/8831	8K
Slot	X	X	0~7	0~7

Module: You can select a DCON dvce, and the IO numbers will be automatic inputed.

Nickname: You can give the device a nickname to identify.

Address: The network ID number on the RS-485 network.

Slot: Slot number (for 8000 MCU).

AI Num: Analog input channel number.

AO Num: Analog output channel number.

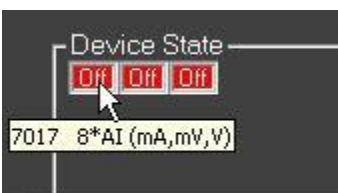
DI Num: Digital input channel number.

DO Num: Digital output channel number.

DI Counter Num: DI counter channel number.

Frequency Num: Frequency channel number.

Description: Can be showed with the tooltip on device state.

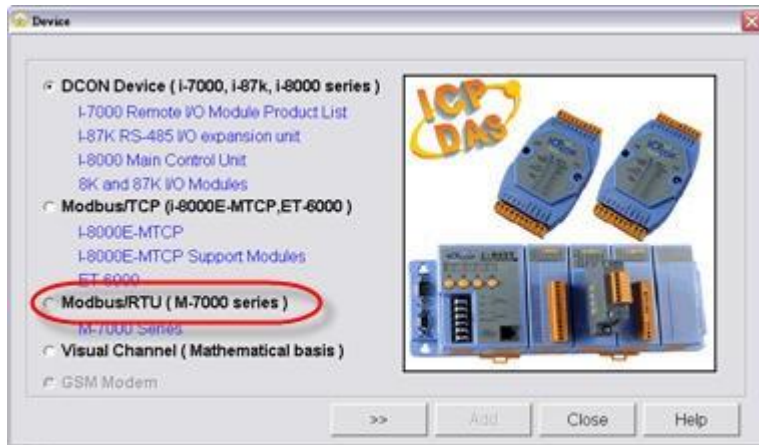


You can modify the nickname or description later.

Add a Modbus Serial Device

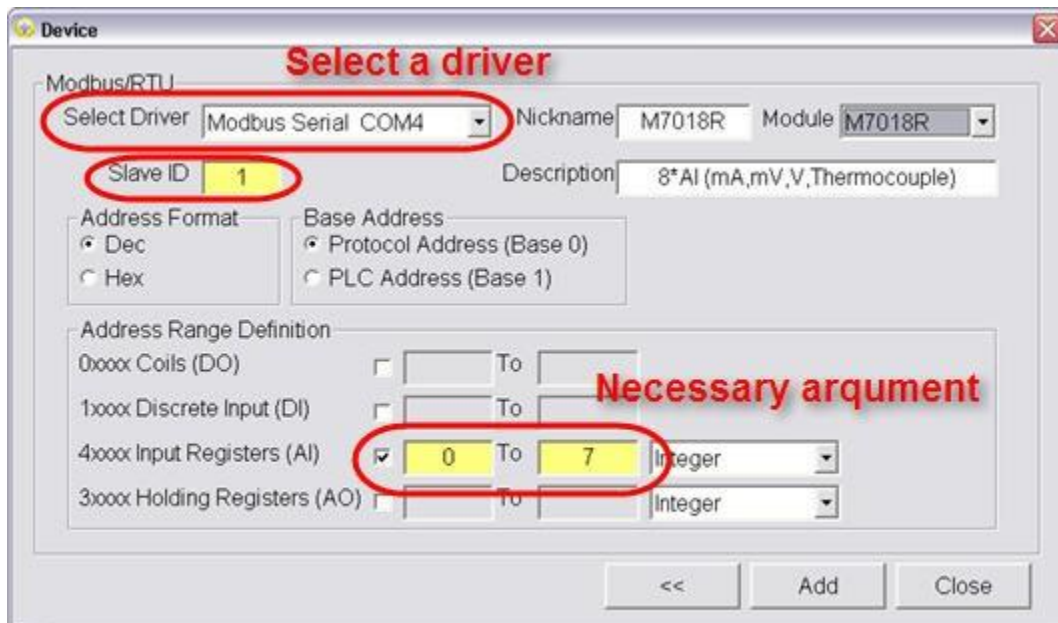
Select option "Modbus/RTU" and click

>>



Select a driver => input the necessary argument => click

Add

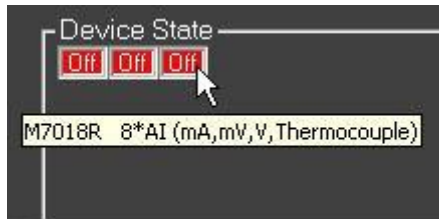


Slave ID: The modbus ID number.

Module: You can select an ICPDAS M7000 series module.

Nickname: You can give the device a nickname to identify.

Description: Can be showed with the tooltip on device state.



0xxxx Coils (DO): From start address to end address.

1xxxx Discrete Input (DI): From start address to end address.

3xxxx Input Registers (AI): From start address to end address.

4xxxx Holding Registers (AO): From start address to end address.

Address format: Dec for decimal, Hex for hexadecimal.

Base Address: 0 or 1.

You can modify the nickname or description later.

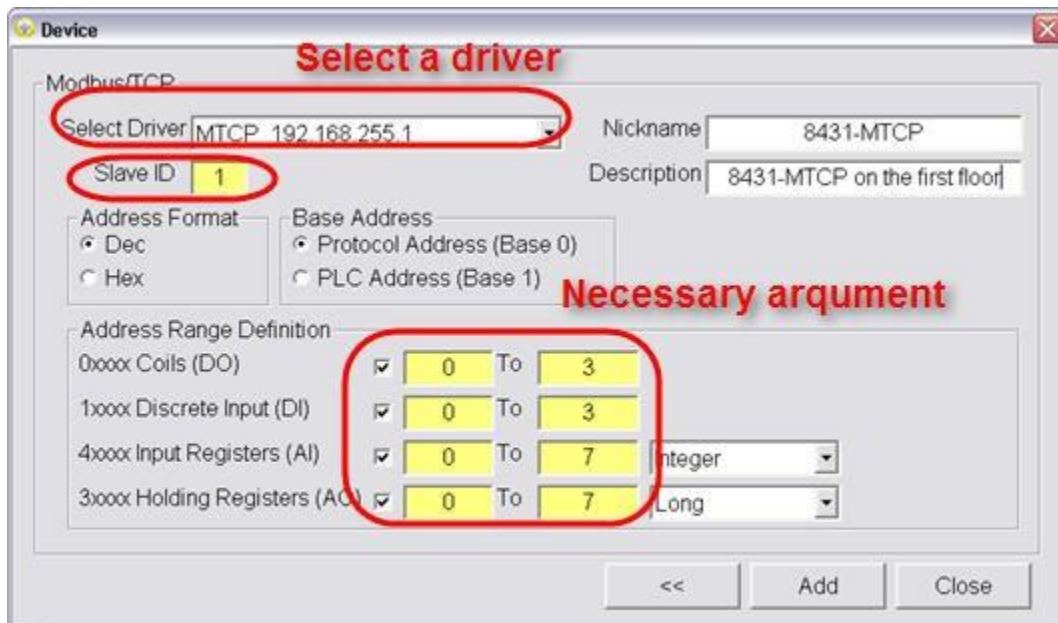
Add a Modbus TCP Device

Select option "Modbus/TCP" and click >>



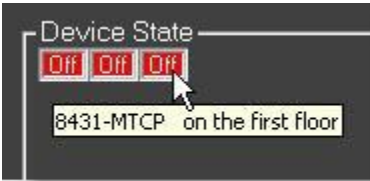
Select a driver => input the necessary argument => click

Add



Nickname: You can give the device a nickname to identify.

Description: Can be showed with the tooltip on device state.



Slave ID: The modbus ID number.

0xxxx Coils (DO): From start address to end address.

1xxxx Discrete Input (DI): From start address to end address.

3xxxx Input Registers (AI): From start address to end address.

4xxxx Holding Registers (AO): From start address to end address.

Address format: Dec for decimal, Hex for hexadecimal.

Base Address: 0 or 1.

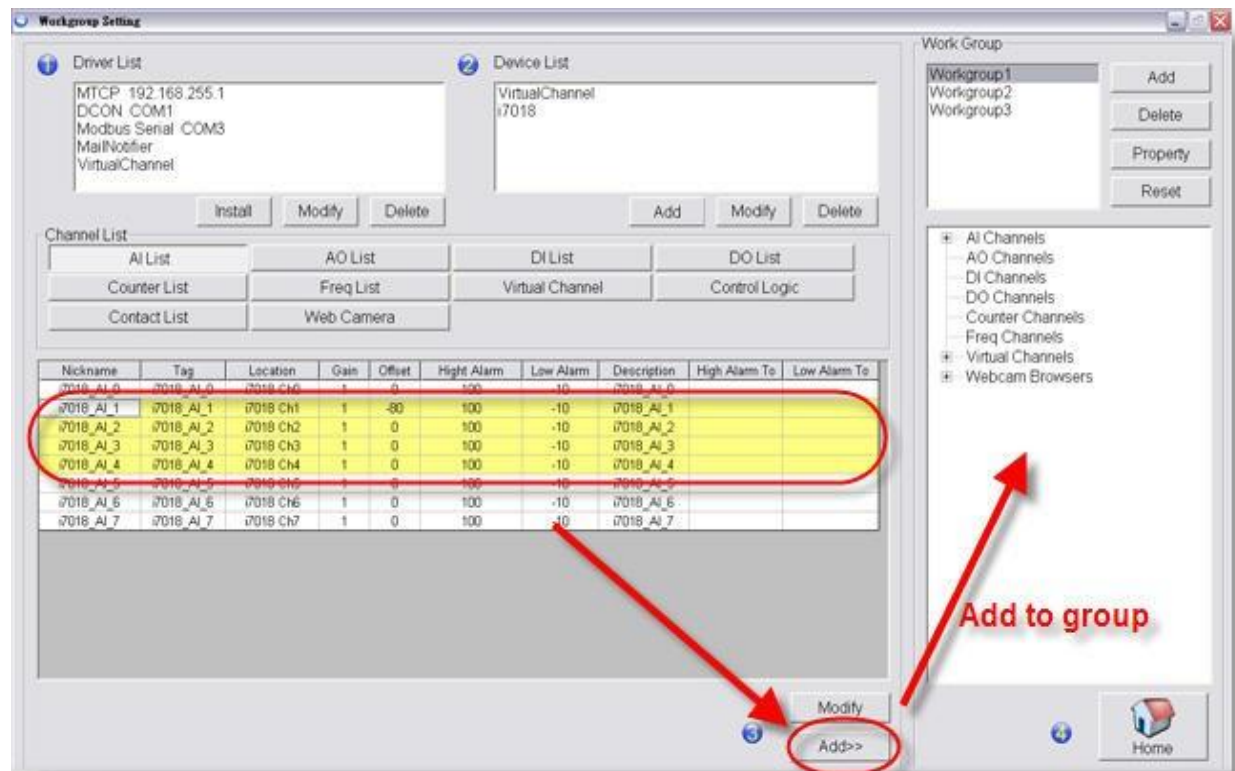
You can modify the nickname or description later.

Modify Channels and Add to Group

Each channel can be assigned to any workgroup.

Click **Add>>** to add selected channels to workgroup.

Click **Modify** to set the nickname, gain, offset, high/low alarm, or description.



After you change the settings ,click **Modify** to save.

Modify Channel

Nickname: 7018R_AI_1 Gain: 1

Tag: 7018R_AI_1 Offset: 0

Description: 7018R_AI_1 High Alarm: 100

Init Value: Low Alarm: -10

Operation: Scaling: AI Value Display Value

Point1: 0 0

Point2: 32767 10

Calculate

Display Mode: AGauge

Style List:

- CircleGolden.ini
- CircleGoldenFormatValue.ini
- common.ini
- commonFormatValue.ini
- GlassBlue.ini
- GlassBlueFormatValue.ini
- GlassGreen.ini
- GlassGreenFormatValue.ini
- SquareGray.ini
- SquareGrayFormatValue.ini

Modify

Cancel

Nickname: You can give the channel a nickname to identify.

Tag: Tag name can be used in virtual channel and control logic.
 (Notice : The tag name must lead with character a~z(or A~Z), the leading character can not be numbers)

Description: Can be showed with the tooltip on display object.

Gain and Offset: Set Gain and Offset can scale the values to any unit you want.

Caculate: Click  to caculate the gain and offset by point1 and point2. see [O&A](#).

High/Low Alarm: Each AI channel can have its own high/low limitation. Once the AI value over high limitation or below low limitation, the alarm light will be triggered with audio. The alarm status will keep warning till users switch off the alarm light.

Init Value: The begining value of virtual channel.

Operation: The operation of virtual channel.

Display Mode: You can choose the channel layout object here.
(Text Box / Angular Gauge / Linear Gauge / Perecent / Number LED / Toggle)

Style List: You can choose the style of the layout object.

Workgroup Property

You can add or delete workgroup here. Each workgroup can be assigned maximum 32 channels.



Add

: Add a workgroup.

Delete

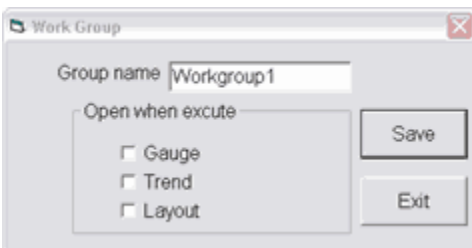
: Delete a workgroup.

 : Set workgroup name and automatic display.

 : Clear all channels.

 : Back to home.

Workgroup Property setting:

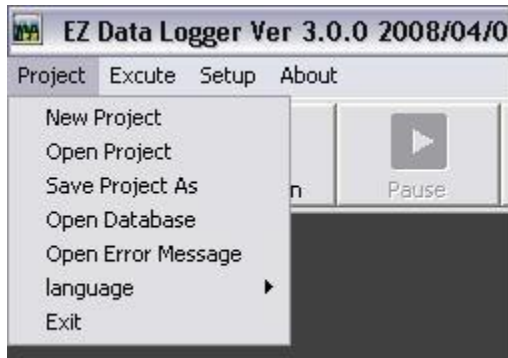


Group name: You can give the workgroup a name to identify.

Open when excute: Set enabled to automatic open when EZ Data Logger excute.

Project

The project include a configuration file, a script file, and a folder for layout back picture, You can:



New Project: Open a new project.

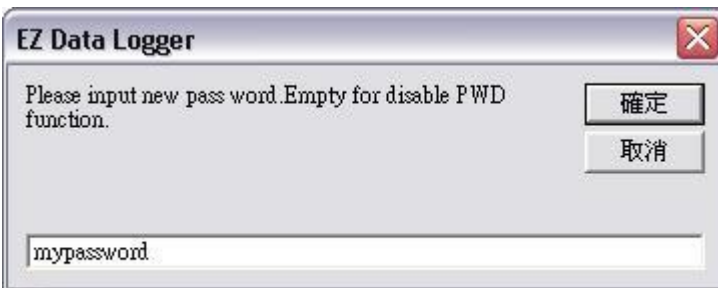
Open Project: Open other project.

Save Project As: Save current project as another.

Security

If you do not want the end user to change the configurations, you can set the password to disable "System Config" and "Group Setup" button.

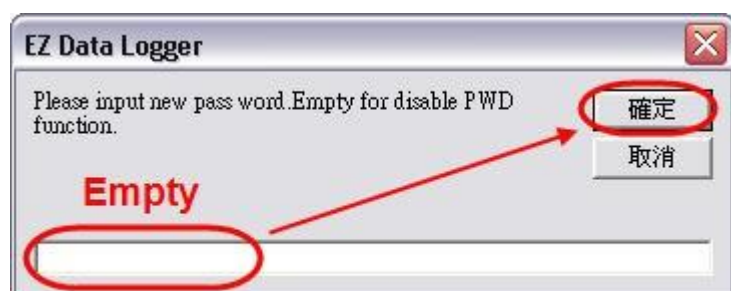
Set Password:



Password protection: Click logout to disable these buttons. Every time to excute EZ Data Logger will disable these buttons also.



Login: Click login to enable these two buttons. Set password empty to disable password protection.



Strat to Run



Start to run. Start to display data and log.



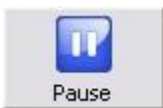
Stop running.



Simulation data to display and log.



Stop simulation.



Pause all trend display.



Continue all trend display.



Stop record data to database.



Record data to database.

Gauge Display

Click "Gauge" button on main form to show gauge display.



Range (AImax / AImin): To change the range of the gauge

<<: Exchange to last workgroup.

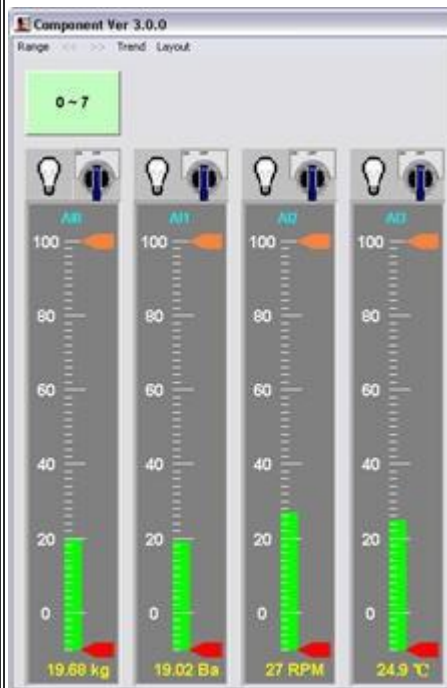
>>: Exchange to next workgroup.

Trend: Exchange to trend display.

Layout: Exchange to layout display.

Hide: Hide and show the main form.

AO



0 ~ 7

Channel switch button:

If there are more than 8 analog channels, click channel switch button to exchange.



Alarm light: The light will turn on when the value higher/lower than high/low alarm.(Latched)



Switch: Click to turn off the alarm light. If there is any alarm light on, EZ Data Logger will play an audio warning.

Trend Display Click "Trend" button on main form to show trend display.



Display(Pause/Continue): Pause/Continue the trend going.

Print: Print the trend.

Axis: To set the Y-Max, Y-Min, and XAxis(minute).

BackColor: To set the backcolor of the trend.

SelectAll: Show all trend line.

SelectNone: Hide all trend line.

<<: Exchange to last workgroup.

>>: Exchange to next workgroup.

Gauge: Exchange to gauge display.

Layout: Exchange to layout display.

Hide: Hide and show the main form.



Scroll button: For zoom in and zoom out.

Value: Click the value grid to show the form for setting AO/DO or resetting counter.

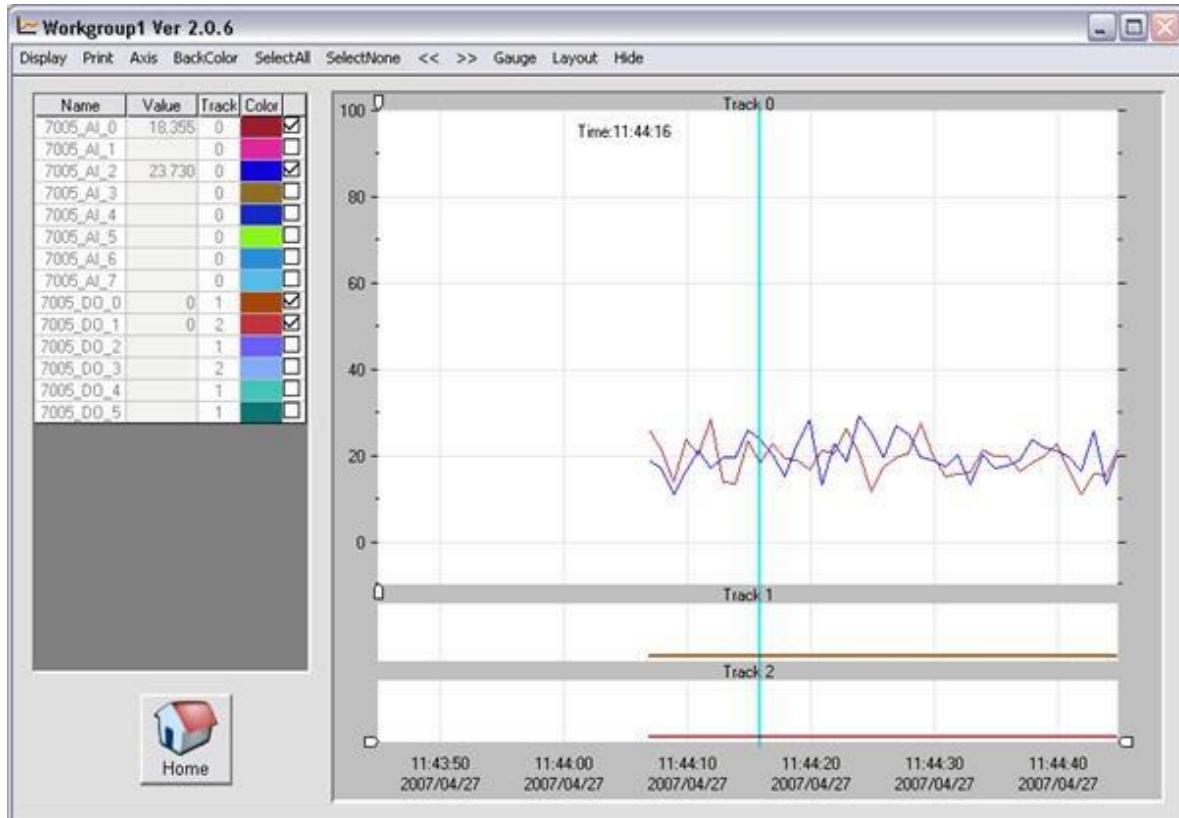
The image shows three screenshots of the 'Set Output Value' dialog boxes. The first dialog box is for 'AO1' with a value of 23.567 and a 'Set' button. The second dialog box is for 'DO0' with buttons for 'On', 'Off', and 'Inverse'. The third dialog box is for 'Counter_0' with a 'Reset' button. All three dialog boxes have a 'Manual' radio button selected and an 'Auto' radio button.

Track: Click the track grid to change the trend line to another track.

Color: Click the color grid to change the trend line color(You can not change the color when start logging).

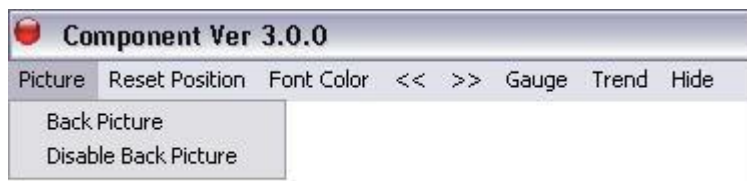
Check box: ☒ =>show the trend line, ☐ =>hide the trend line.

Cursor Mode: Set display pause to change trend to cursor mode. Then you can click the trend to show the before values .



Layout Display

Click "Layout" button on main form to show layout display.



Picture(Back Picture): To set the back picture of the form. Support *.jpg, *.bmp.

Picture(Disable Back Picture): Clear back picture.

Reset Position: Reset all objects' position.

Font Color: To set the labels' color.

<<: Exchange to last workgroup.

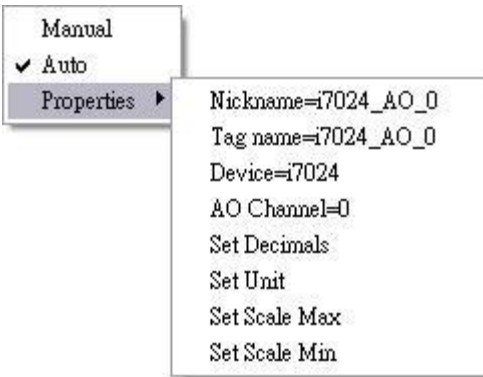
>>: Exchange to next workgroup.

Gauge: Exchange to gauge display.

Trend: Exchange to trend display.

Hide: Hide and show the main form.

Mouse Right Click menu:

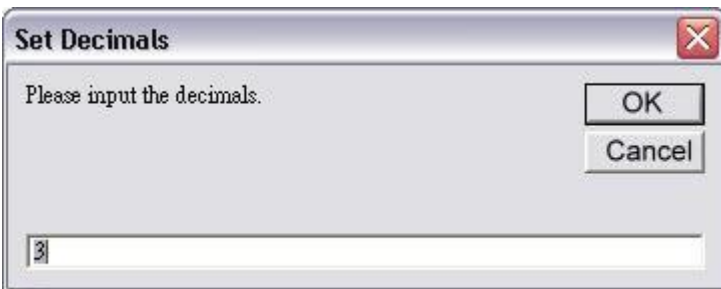


Manual : Enable mouse control (mouse control the output value)

Auto : Disable mouse control (the output value will be set by control logic)

Properties : Shows the channel's properties.

Set Decimals : Set the value's decimals.



Set Unit : Set display unit.



Display value example: (Value = 123.456)

Decimals	Unit	Display
0		123
1		123.5

Set Scale Max: to set gauge's scale
max(Linear Gauge, Angular Gauge)

Set Scale Min: to set gauge's scale
min(Linear Gauge, Angular Gauge)

Open Database

Open database can plot the trend with the earlier database, and export the data to an excel file, or a CSV file.



Print: Print the trend or the table(maximum 12 channels).

SelectAll: Show all trend line.

SelectNone: Hide all trend line.

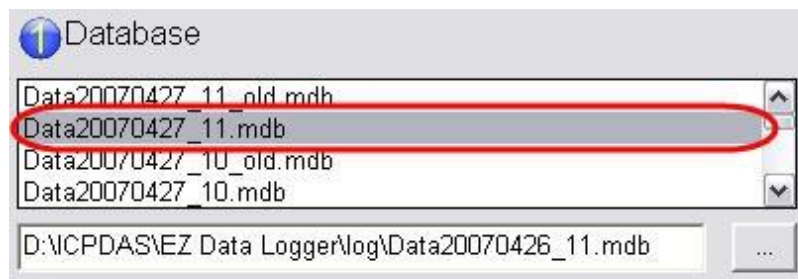
Y-A xis(Max/Min): To set the Y-Max, Y-Min.

X-Axis: To set the span of the trend display.

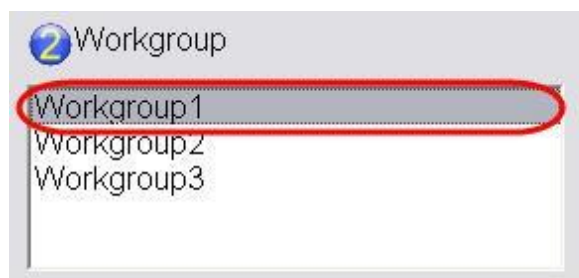
BackColor: To set the backcolor of the trend.

3 Steps to open database and plot the trend.

Step1. Select a database: Click the database list or click  to open a database in other directory.



Step2. Select a workgroup: Click the workgroup list.



Step3. Scroll the pointer to choose time range. Then you can click "Load Trend" to plot the trend, or click "Load Table" to load the data table.



Print Print the trend or the table.

Export Export to Excel or CSV.

Trend: Click the trend can show the cursor values on the left table.

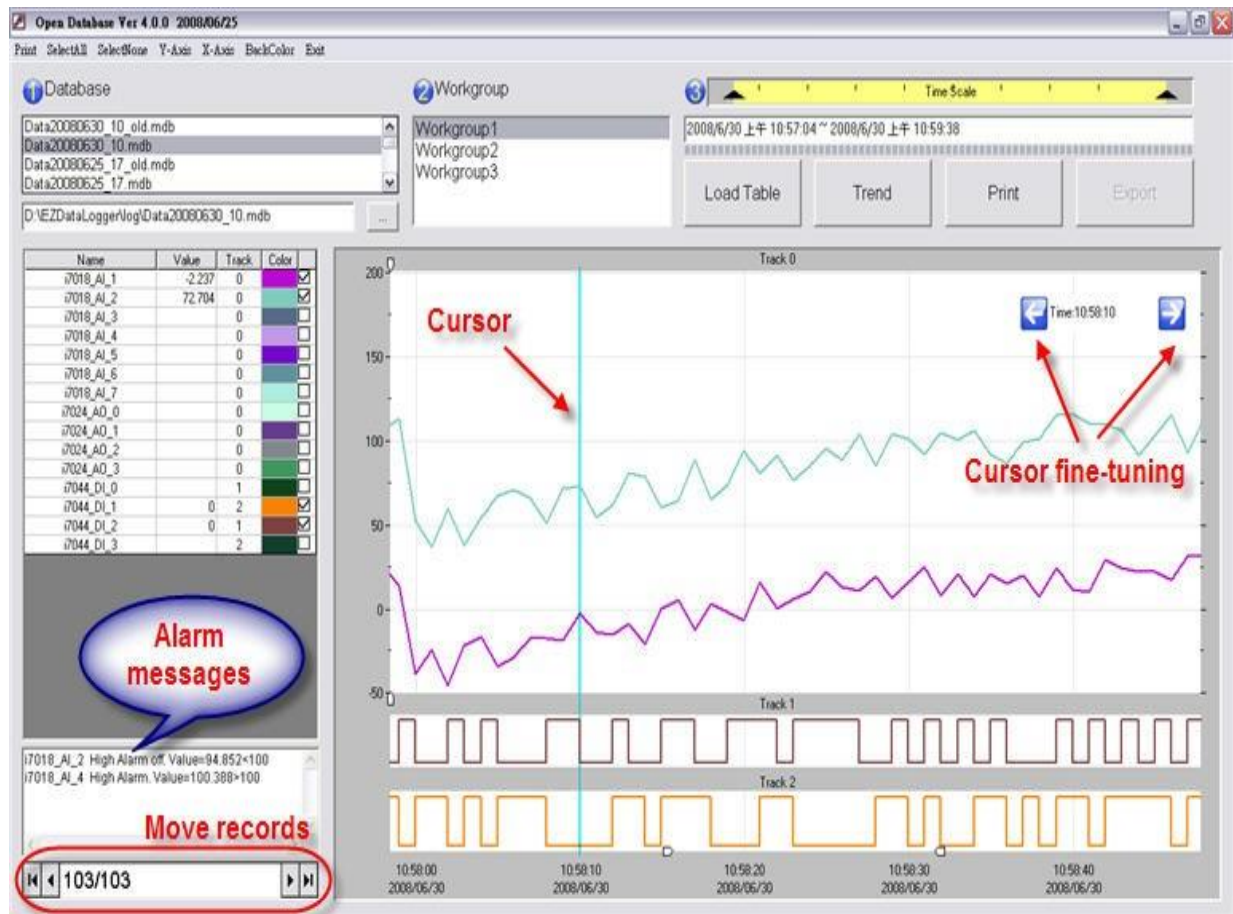
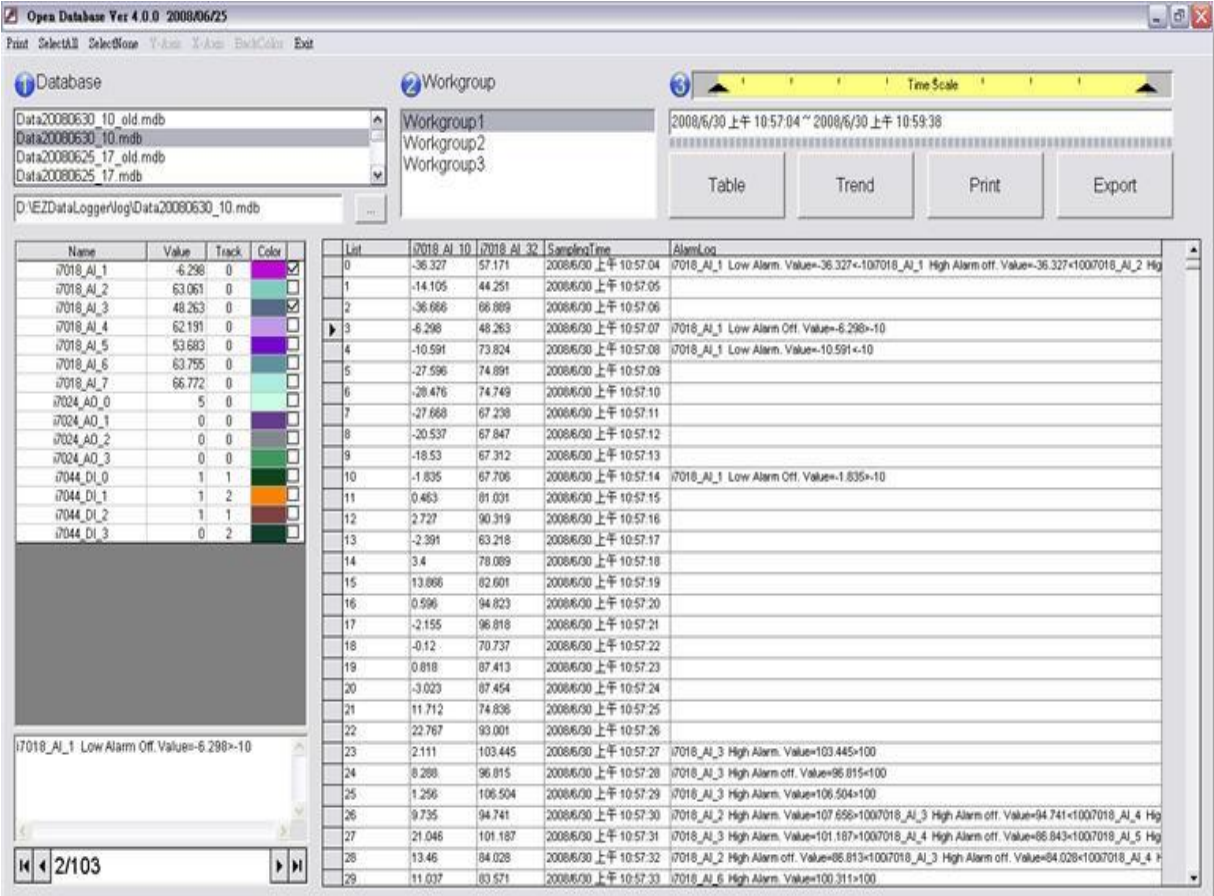
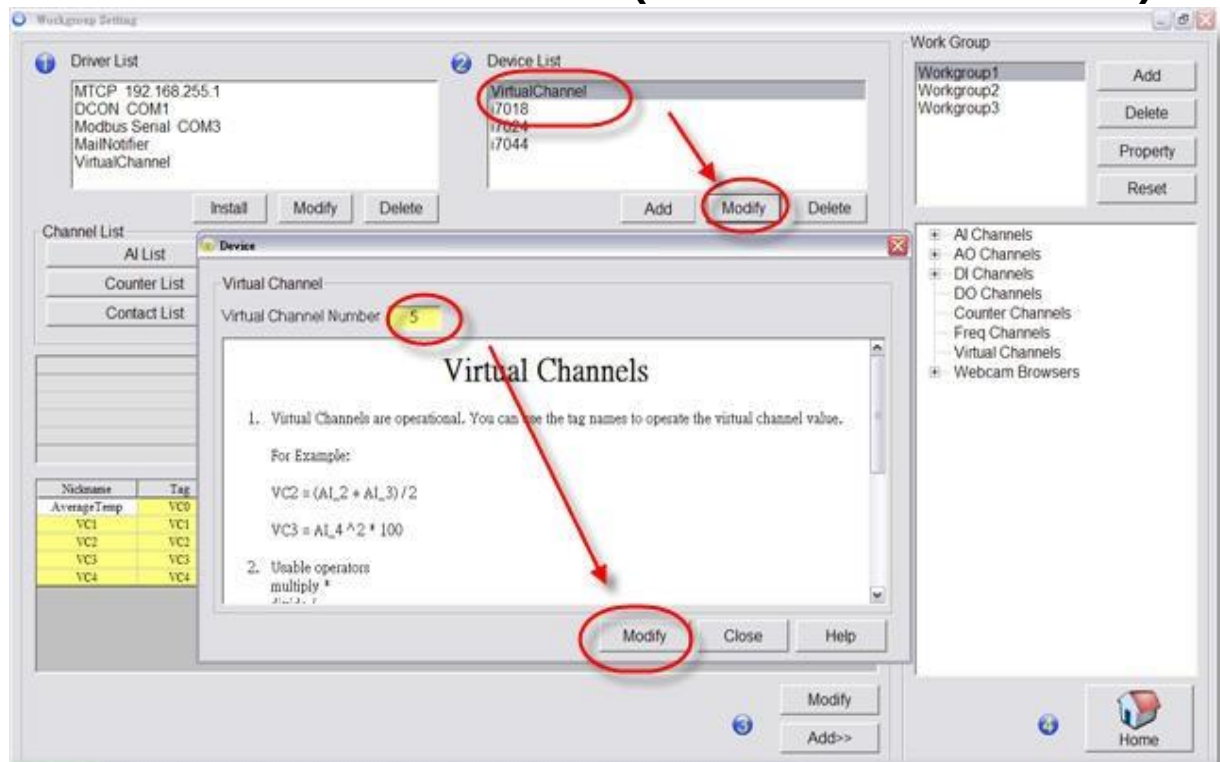


Table: Click the check box on the left side to show/hide the row of the channel.

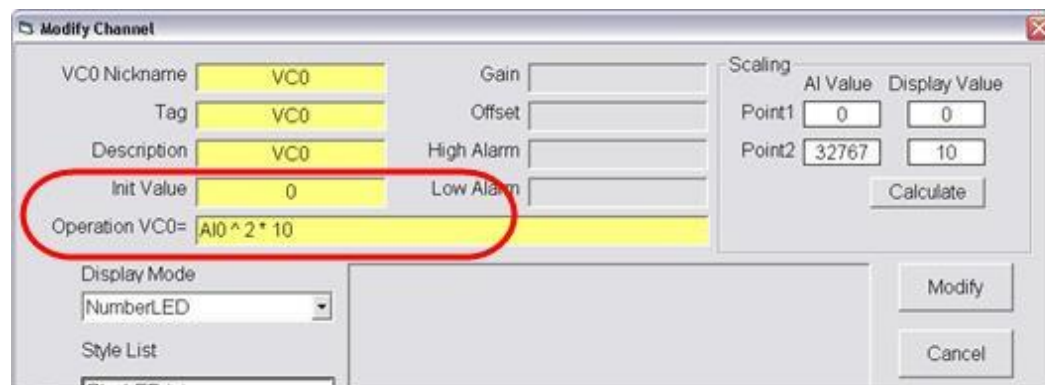
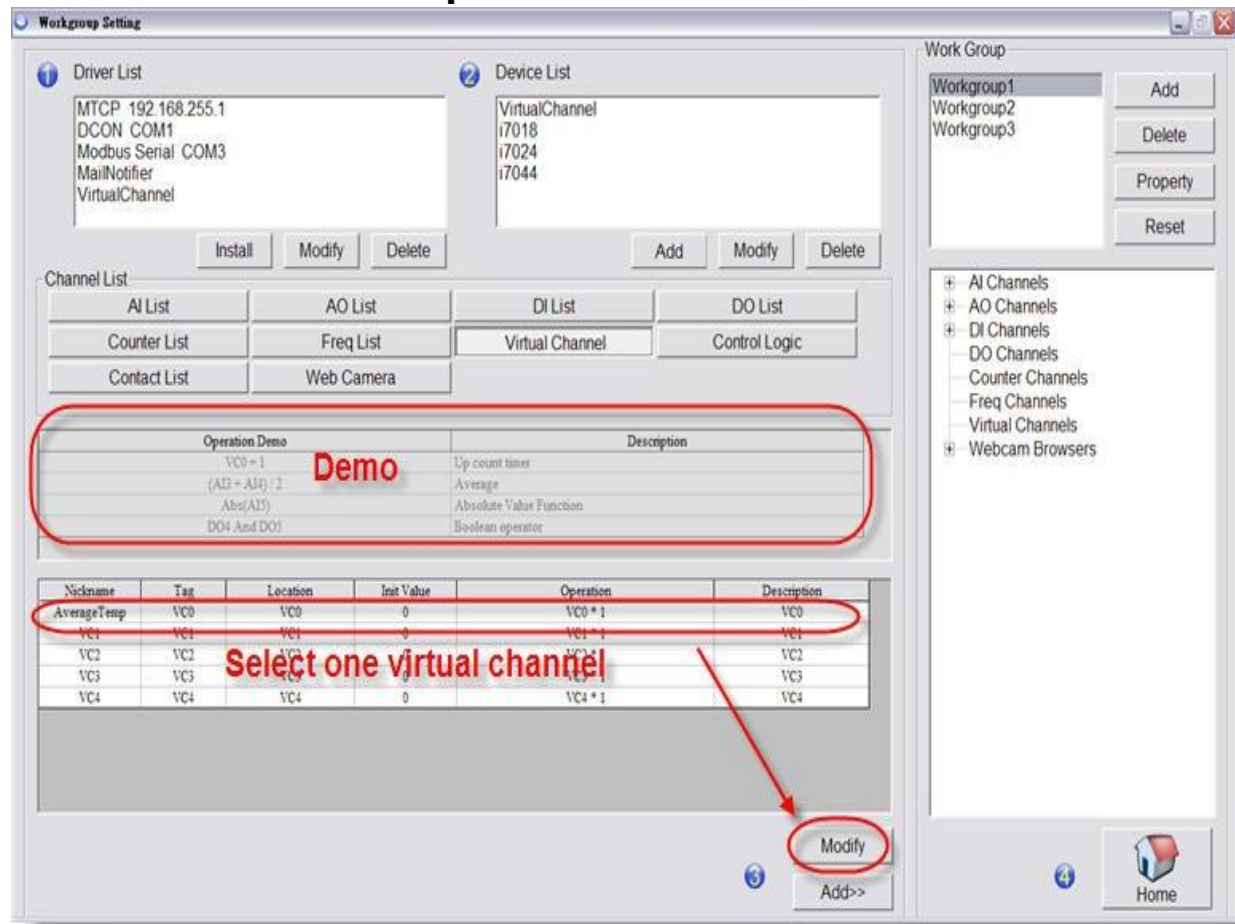


Virtual Channel User can operate the data into the virtual channel by channel tag names easily.

Set virtual channel numbers: (Maximum 256 channels)



Set virtual channel operation:



1. Virtual Channels are operational. You can use the tag names to operate the virtual channel value.

Example:

$$VC0 = (AI_1 + AI_2) / 2$$

$$VC1 = AI_3 ^ 2 * 100$$

$$VC2 = DO_0 \text{ And } DO_1$$

$$VC3 = \text{Abs}(AI_6)$$

2. Operators

multiply *

divide /

plus +

minus -

power ^

logic operators Not, And, Or, Xor....

3. Usable functions

You can use these functions in script

Sin (<i>number</i>)	Returns the sine of a specified number (radian)
Cos (<i>number</i>)	Returns the cosine of a specified number (radian)
Tan (<i>number</i>)	Returns the tangent of a specified number (radian)
Atn (<i>number</i>)	Returns the arctangent of a specified number (radian)
Abs (<i>number</i>)	Returns the absolute value of a specified number
Sqr (<i>number</i>)	Returns the square root of a specified number

4. Initial Value

The initial value at start running.

Control Logic

Control Logic uses the VB script. You can edit the script to set the output values or to caculate data into virtual channels. You can get/set the channel values by channel tag names.

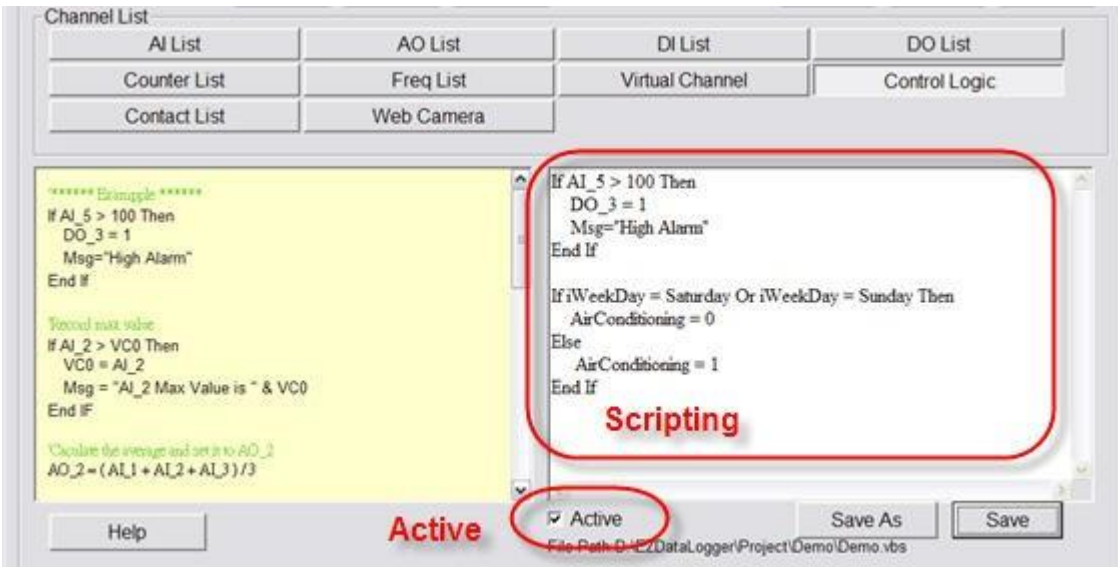
If you active the control logic, EZ Data Logger will set the AO/DO automatically. And when you start to run, the mouse control of the layout object which is used in script will be disabled. If you want to stop automatical control, you can mouse right click the layout object, and then select "Control". Please refer to [Layout Display Mouse Right Click menu:](#)

Channel List

AI List		AO List		DI List		DO List		
Counter List		Freq List		Virtual Channel		Control Logic		
Contact List		Web Camera						
Nickname	Tag	Location	Gain	Offset	Hight Alarm	Low Alarm	Description	High Alarr
i7018_AI_0	AI0	i7018 Ch0	1	0	100	-10	i7018_AI_0	
i7018_AI_1	AI1	i7018 Ch1	1	0	100	-10	i7018_AI_1	
i7018_AI_2	AI2	i7018 Ch2	1	0	100	-10	i7018_AI_2	
i7018_AI_3	AI3	i7018 Ch3	1	0	100	-10	i7018_AI_3	
i7018_AI_4	AI4	i7018 Ch4	1	0	100	-10	i7018_AI_4	
i7018_AI_5	AI5	i7018 Ch5	1	0	100	-10	i7018_AI_5	
i7018_AI_6	AI6	i7018 Ch6	1	0	100	-10	i7018_AI_6	
i7018_AI_7	AI7	i7018 Ch7	1	0	100	-10	i7018_AI_7	

Tag names

Modify
Add>>



Statments :

You can use these If...Then... , For... Next, statments in script.

If condition1 Then [statementblock-1]

ElseIf condition2 Then

[statementblock-2]] ...

Else

[statementblock-n]]

End If

Variables :

You can use these updated variables in script.

iYear :	year
iMonth :	month
iDay :	day
iHour :	hour
iMinute :	minute

iWeekDay :	weekday (Sunday = 1, Monday = 2, Tuesday = 3.... Saturday = 7)
Now :	Returns the current system time
Timer :	The Timer function returns the number of seconds since 12:00 AM.
Msg :	If Msg is not null, it will be print in the main warning text.

Const :

You can use these const variables in script.

Const

Sunday

Monday

Wednesday

Thursday

Friday

Saturday

Functions :

You can use these functions in script.

Sin (<i>number</i>)	Returns the sine of a specified number (radian)
Cos (<i>number</i>)	Returns the cosine of a specified number (radian)
Tan (<i>number</i>)	Returns the tangent of a specified number (radian)
Atn (<i>number</i>)	Returns the arctangent of a specified number (radian)
Abs (<i>number</i>)	Returns the absolute value of a specified number
Sqr (<i>number</i>)	Returns the square root of a specified number

Demo :

'Set DO Alarm

If AI_5 > 100 Then

◆@DO_3 = 1

◆@Msg="High Alarm"

End If

'Record max value

If AI_2 > VC0 Then

◆@VC0 = AI_2

◆@Msg = "AI_2 Max Value is " & VC0

End IF

'Calculate the average and set it to AO_2

AO_2 = (AI_1 + AI_2 + AI_3) / 3

'Use the global variables. Turn off AirConditioning on Sunday, and Saturday.

If iWeekDay = Saturday Or iWeekDay = Sunday Then

 AirConditioning = 0

Else

 AirConditioning = 1

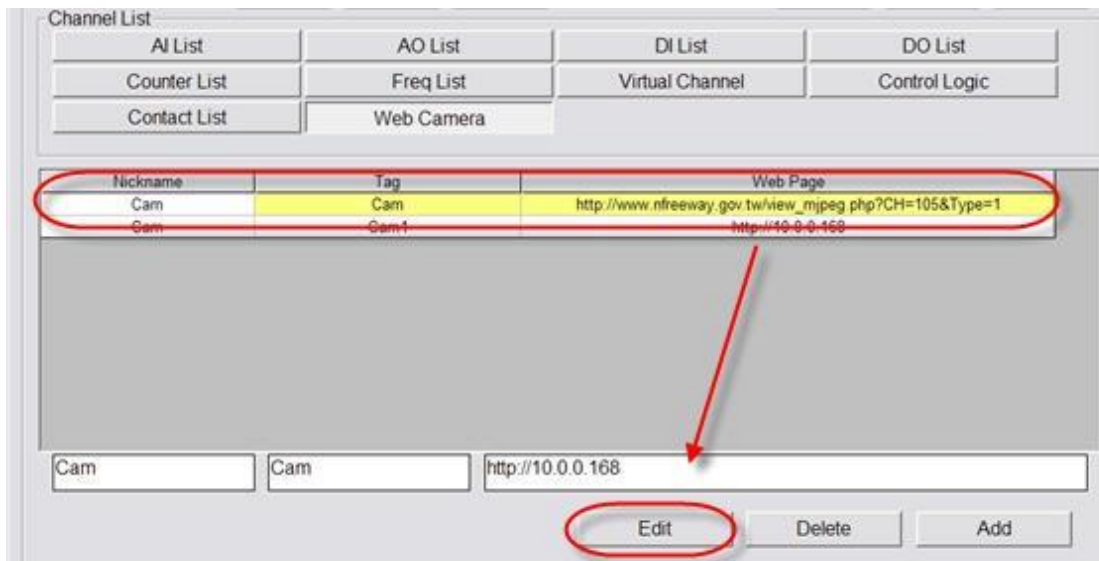
End If

'Use logic Operator

DO_3 = DI_2 And DI_3

IP Camera Viewer

IP Camera viewer use the web browser to show. You can add an IP camera web address, then resize the viewer and scroll the windows to fit the camera picture. After all, add the IP camera to group. Then Layout display will show the IP camera page in a sub windows.



In layout display:



: Save the IP camera's window as a jpg picture in "capture\group name\camera name" folder.

: Refresh the web page.

Alarm Notifier(by sending SMS or E-Mail)
User can set the engineer's cell phone number and email address. When the channel value over the alarm value or back to normal, the contact messenger will send a message by SMS (using GSM Modem) or by E-Mail(using ethernet).

[Mail notify configuration](#)

[SMS notify configuration](#)

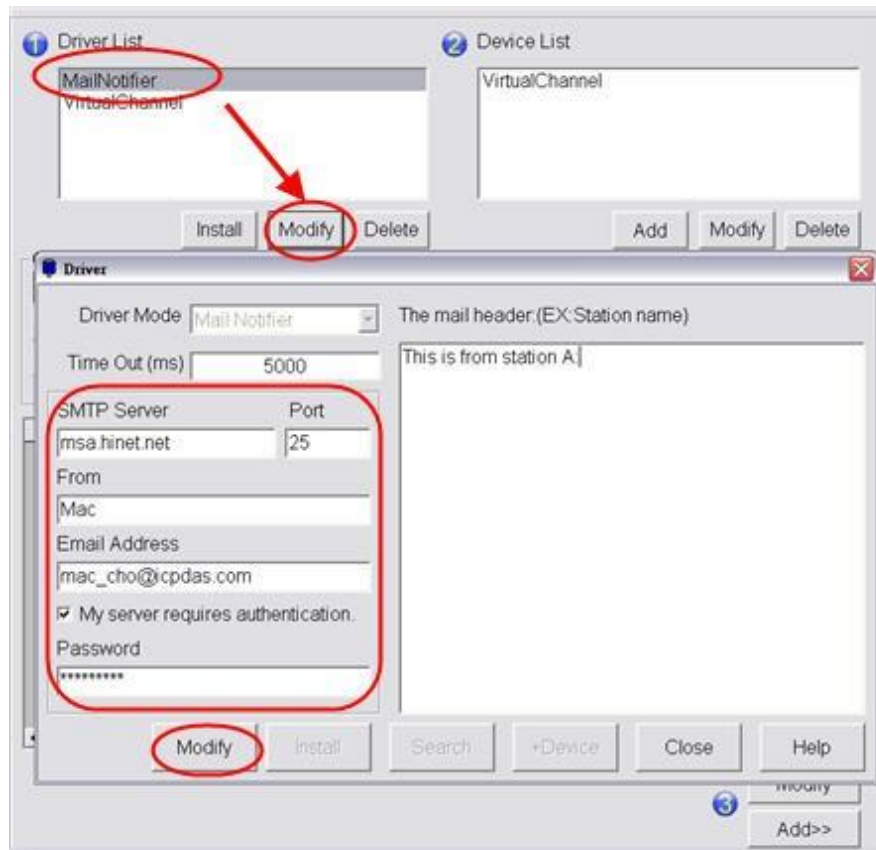
[Edit the contact list](#)

[Set the alarm to notify.](#)

[Mail & SMS Sender](#)

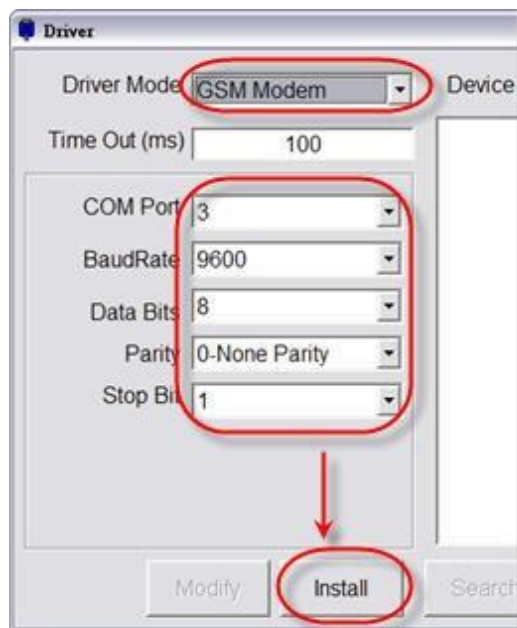
Mail notify configuration:

1. Edit the MailNotifier driver: set SMTP server, sender's e-mail, name, and the mail's head text.



SMS notify configuration :

1. Connect a GSM modem to your COM port. (your GSM modem have to support PDU mode)
2. Install a GSM modem driver.
3. Add a GSM device, then edit the SMS head text.



Edit the contact list.

Channel List

AI List	AO List	DI List	DO List
Counter List	Freq List	Virtual Channel	Control Logic
Contact List	Web Camera		

Name	Tag	Phone Number	E-Mail
Macgyver	Engineer	+123456789	my_mail@hotmail.com
David	Engineer		david@gmail.com

You can use the same tag name with different contacts. When alarm happens, all contacts with the same tag will be notified.

David	Engineer		david@gmail.com
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Modify Delete Add

Set the alarm to notify:

- 1. Select the AI channels, and click "Modify".**
- 2. Select the alarm contact to.**

Modify Channel

Nickname

Tag

Description

Scaling

Gain

Offset

	AI Value	Display Value
Point1	0	0
Point2	32767	10

Calculate

Alarm

High Alarm

Low Alarm

Contact to

Contact to

None

Engineer

Component Style

Angular_Basic.ini

Angular_Circle_Golden.ini

Angular_Circle_Green.ini

Angular_Square_Blue.ini

Angular_Square_Gray.ini

Editor

Modify

Cancel

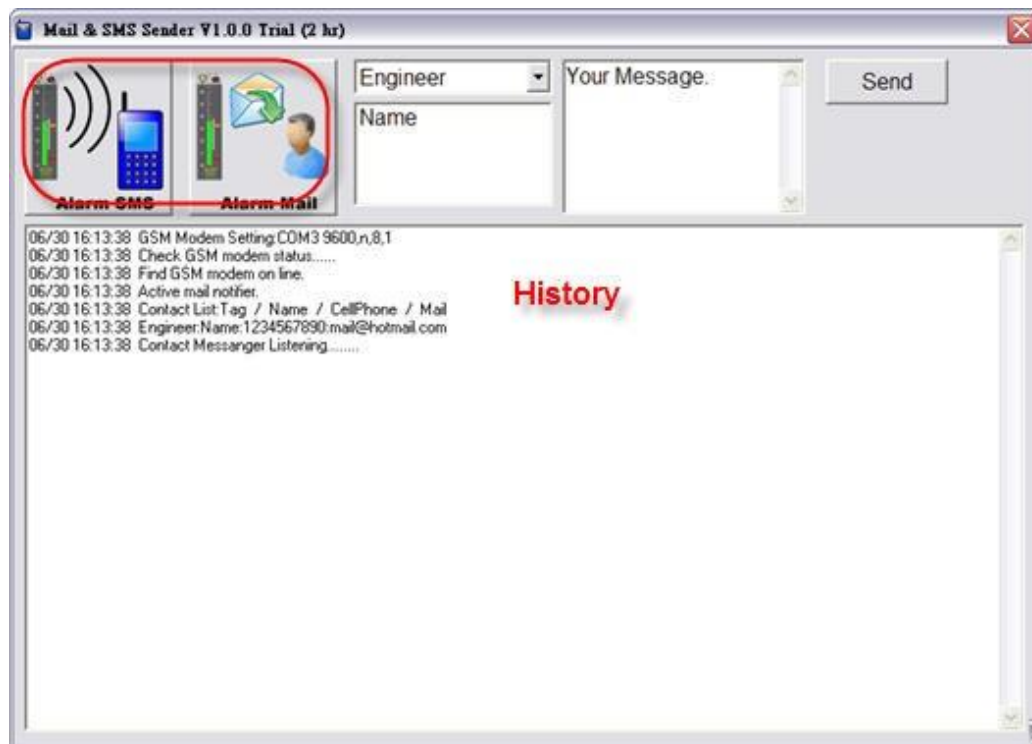
Mail & SMS Sender:

Mail & SMS Sender can send the the e-mail and SMS. It will be minimized to the system icon tray.

Mouse right click to show the main form.

You can enable/disable the mail/SMS sending.





User Level

From menu "User" => "SetPassWord", you can set the password of admin and power user.



	Admin	Power User	User
Modify the project	●	○	○
Account management	●	○	○
Start/Stop projects	●	●	○
Set AO/DO values	●	●	○
Switching	●	●	○

● : allowed
○ : not

group pages				allowe d
--------------------	--	--	--	---------------------

Admin : All permissions.

Power User : Run/Stop program, Set DO/AO value.

User : Switch groups to show.(No password)

You will log in as the level that password is null at beginning.

Admin Login: Identify the password, and log in as admin.

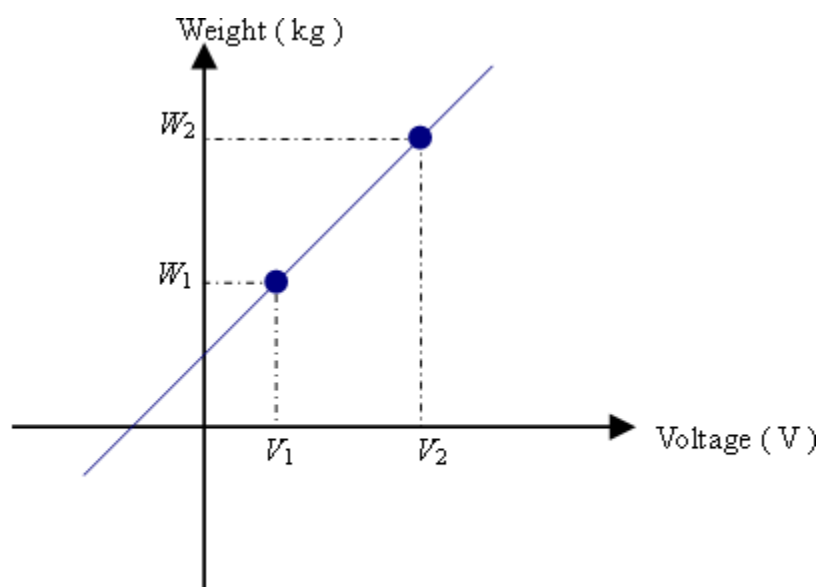
Power User Login:Identify the password, and log in as power user.

Q&A

Q1.How do I display the analog values in another unit, for example kg?

Set Gain and Offset can scale the values to any unit you want. To obtain the exact Gain and Offset, you have to get two values first, and then use following method to get the final result.

Set "Gain" and "Offset" in "Group setup" .



$$\text{Gain} = \frac{W_2 - W_1}{V_2 - V_1} \quad \text{Offset} = W_1 - \text{Gain} \times V_1$$

Calculate in modify channels form: Input the point1 and point2's AI value and display value and click calculate to calculate the gain and offset .

Modify Channel

Nickname	AI1	Gain	0.000305185
Tag	AI1	Offset	0.
Description	i87019R_ID2_AI_1	High Alarm	100
Init Value		Low Alarm	-10
Operation			

Scaling

	AI Value	Display Value
Point1	0	0
Point2	32767	10

Calculate

Q2.How to active Modbus driver?

When you install Modbus drivers, you have to connect a ICPDAS Modbus device to active all the Modbus drivers. Then the driver can access other Modbus devices, such like PLC..... Following Modbus device can be connected to active all the Modbus driver.

[M7000 serial modules](#), [I-7188EX-MTCP](#), [I-8000-MTCP](#), [ET-6000](#), [ISaGRAF controllers](#) ([I-8417/8817/8437/8837](#), [I-7188EG](#), [I-7188XG](#), [Wincon-8x37](#))