Manual

(Version：V1.0)

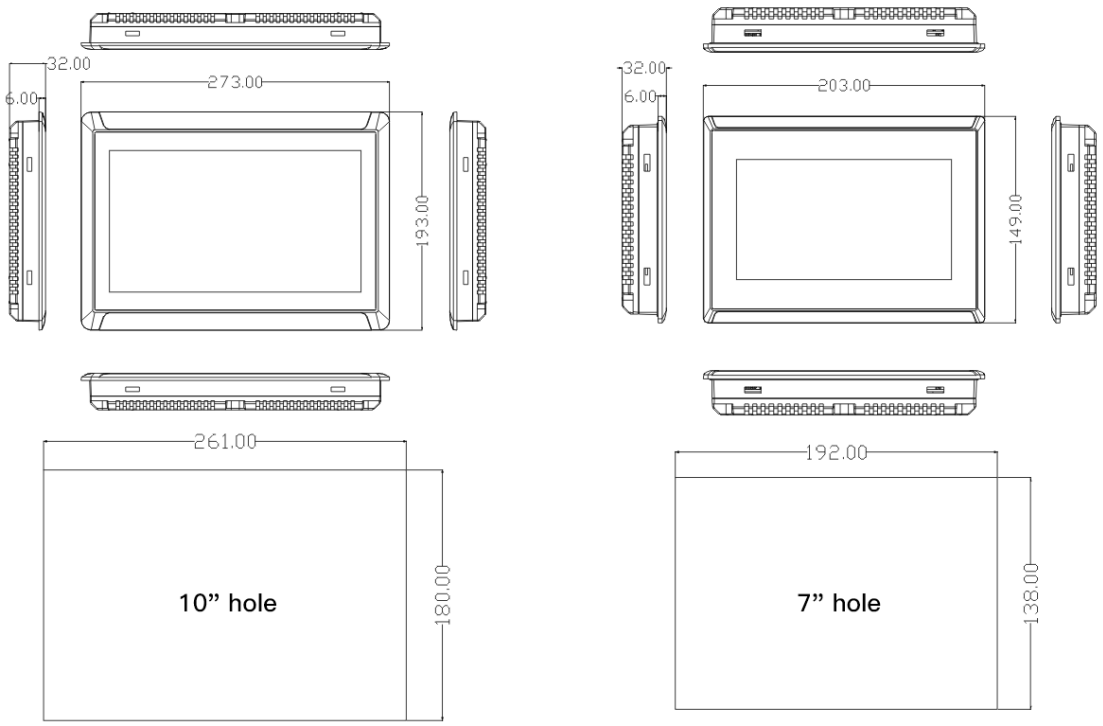
Content

Installation

Dimension for installation opening

ST1-2100 or ST1-2200　192×138mm

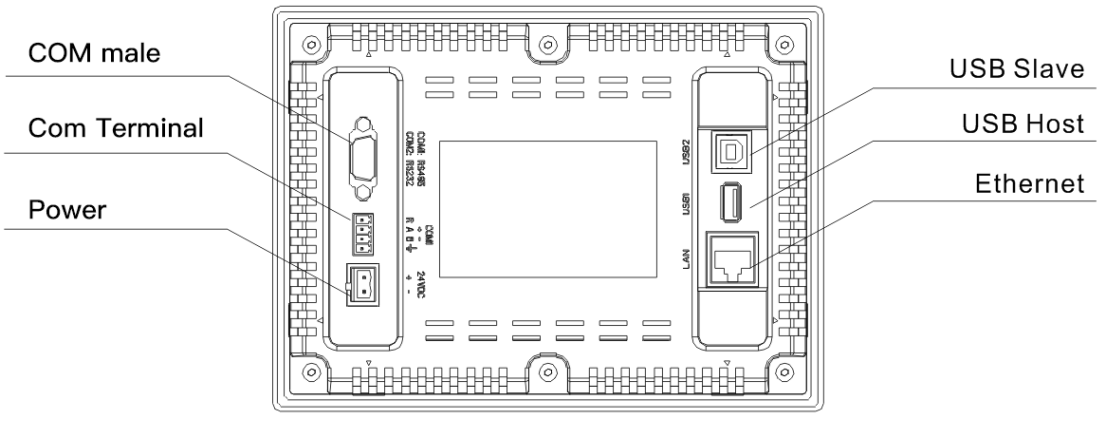
ST1-3200　261×180mm



Interface

ST1 interface

Cable layout：back side of the HMI



Interface comparison

interface	ST1
COM	2/3/5 for RS232，7/8 for RS485
Com Terminal	4 points with resistance （RS485）
Power Terminal	2 points
Dip switch	N/A
USB SLAVE	Download configuration
USB HOST	Update firmware and configuration, download historical data
Ethernet port	Download the configuration project, communication with PLC

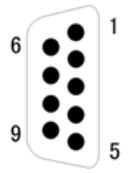
Note：No dip switch code in ST1, the function of the dip switch has been integrated into the software.

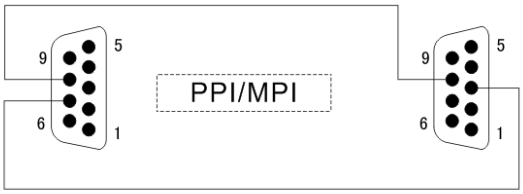
COM port connection

For ST1, COM port includes RS232 and RS485. The pins set up as below, pin 7/8 for RS485 and pin 2/3/5 for RS232.

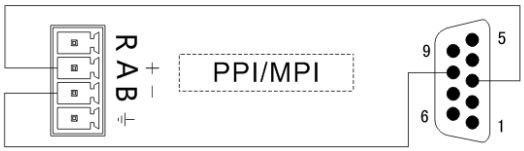
As for 4 Points terminal, A is set for RS485+，B RS485-, R is when using built-in 120Ω resistance then to short connection R and A, it will be convenient for long-distance communication.

Remark：the pluggable terminal COM1 and the DB9 COM1 share the same RS485 series port, thus they can't be used at the same time.

HMI	DB9 Male				Pluggable terminals				
	picture	interface	PIN	Pin Definition	interface	PIN	Pin definition	remark	picture
UH300		COM2	1	——	COM1	1	R	120Ω resistance	
			2	RS232 RXD		2	A	RS485+(A)	
			3	RS232 TXD		3	B	RS485-(B)	
			4	——		4	PE	Shielded ground	
			5	GND	remark：The pluggable terminal COM1 and the DB9 COM1 share the same RS485 serial port.				
		COM1	6	——					
			7	RS485+(A)					



RS485, DB9 connection

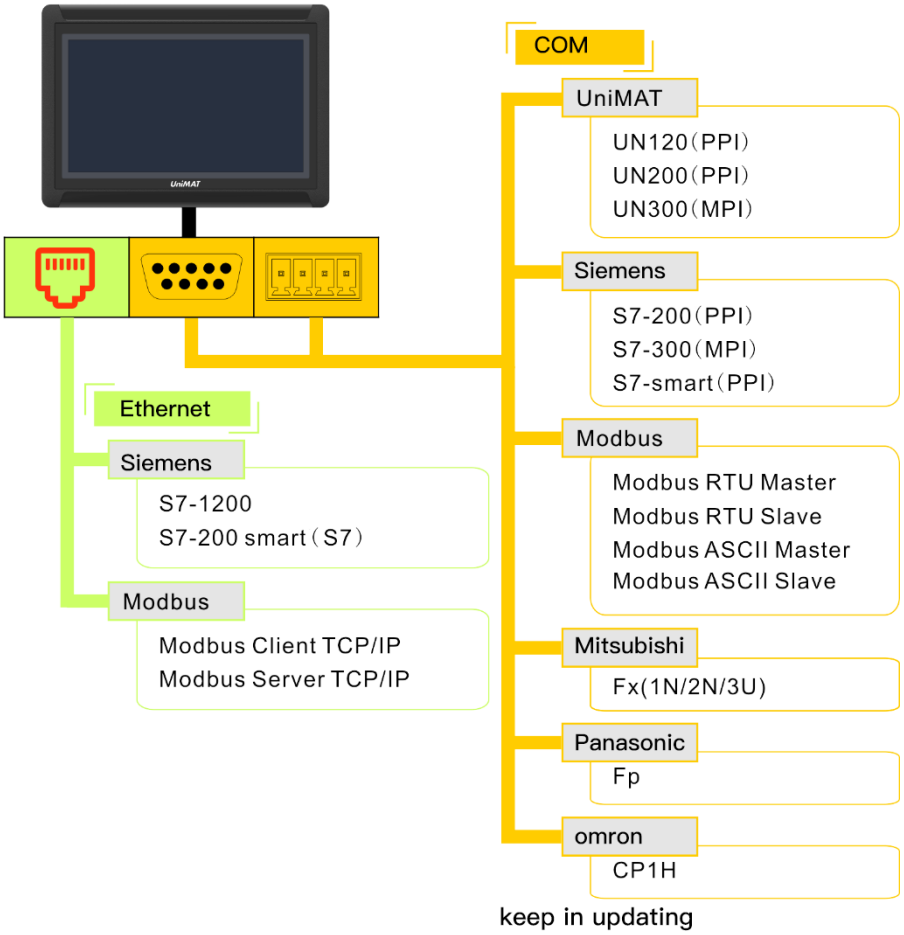


RS485 Terminal connection

Communication protocol

Function brief

Our HMI support many kinds of communication protocols, such as PPI、MPI、Modbus、smart S7、Mitsubishi、Panasonnic、Omron, etc.



Series communication：

COM1（RS485）

PPI（UN120/200 CPU、SiemensS7-200/smart CPU）

MPI（UN300 CPU、SiemensS7-300 CPU）

MODBUS（MODBUS RTU host & slave、MODBUS ASCII host & slave）

COM2（RS232）

Mitsubishi（Fx1N、Fx2N、Fx3U）

Brasiltec (HCA2, HCA8

Panasonnic（Fp）

Omron（CP）

MODBUS（MODBUS-RTU　MODBUS ASCII）

Ethernet communication：

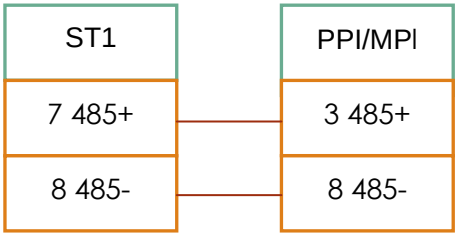
MODBUS TCP（Server / client）

S7 communication (S7-200 smart)

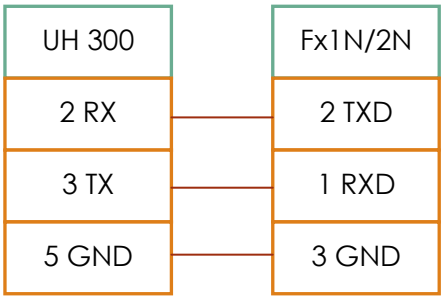
remark：our HMI has set the function buttons for smart running & stop .

Connect with PLC

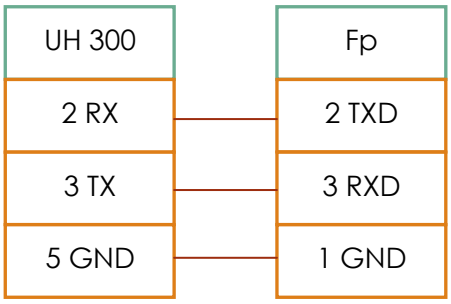
ST1 — Siemens



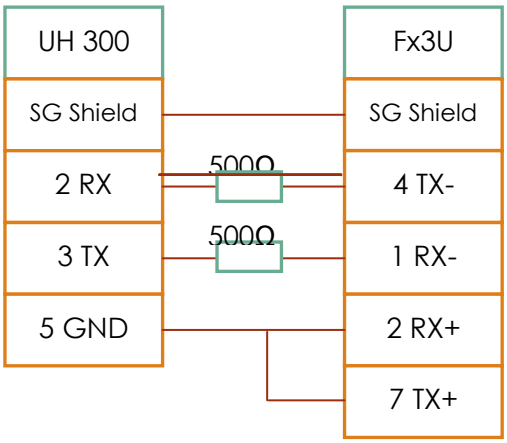
ST1 — Mitsubishi Fx1N/Fx2N (DB9)



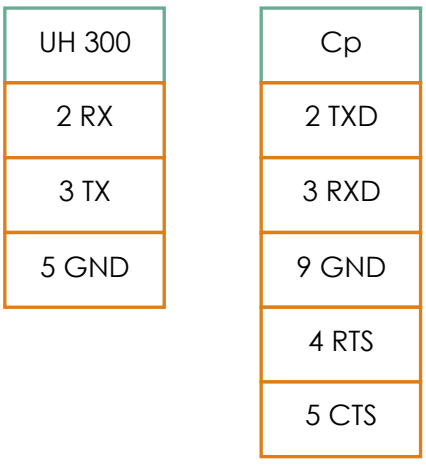
ST1 — Panasonic Fp



ST1 — Brasiltec HCA2/8 and Mitsubishi Fx2N/3U (8 pin circular hole)



ST1— Omron CP



Address setting

Function introduction

1. RS485-UN120/UN200（Siemens S7-200）【PPI communication】same as S7 communication

Register name	Address format	Input range	Remark
I	dd.o	0.0~4095.7	bit: input mapping register
Q	dd.o	0.0~4095.7	bit: output mapping register
M	dd.o	0.0~4095.7	bit: bit memory
S	dd.o	0.0~4095.7	bit: Sequence Control Relay
SM	dddd.o	0.0~4095.7	word: special bit memory, SM0.0~SM4095.7
V	ddddd.o	0.0~10239.7	bit: the bit of variable memory
IW	dddd	0~4094	word: input mapping register, each word occupies two byte address
QW	dddd	0~4094	word: output mapping register, each word occupies two byte address
MB	dddd	0~4095	byte: bit register, each word occupies one byte address.
MW	dddd	0~4094	word: bit register, each word occupies two bytes address.
MD	dddd	0~4092	double word: bit register, each word occupies four bytes address.
SB	dddd	0~4095	byte: sequence control relay, each word occupies one byte address.
SW	dddd	0~4094	word: sequence control relay, each word occupies two bytes address.
SD	dddd	0~4092	double word: sequence control relay, each word occupies four bytes address.
SMB	dddd	0~4095	word: special bit memory, SMB0-SMB29 read only, each word occupies one byte address.
SMW	dddd	0~4094	word: special bit memory, SMW0-SMW28 read only, each word occupies two bytes address.
SMD	dddd	0~4092	word: special bit memory, SMD0-SMD26 read only, each word occupies two bytes address.
VB	ddddd	0~10239	Byte: variable memory
VW	ddddd	0~10238	word: variable memory, each word occupies two bytes address.
VD	ddddd	0~10236	double word: variable memory, each word occupies four bytes address.
TV	ddd	0~255	word: the current value of the timer.
CV	ddd	0~255	word: the current value of the counter.
AIW	dd	0~62	word: analog input, each word occupies two addresses.
AQW	dd	0~62	word: analog output, each word occupies two addresses.

2. RS485-Siemens S7-300（MPI communication）

Register Name	Address format	Input range	remark

I	dddd.o	0.0~1023.7	bit: input mapping register
Q	dddd.o	0.0~1023.7	bit: output mapping register
M	dddd.o	0.0~255.7	bit: bit memory
DBX	DDD:dddd.o	1:0.0~99:32767.7	bit: the bit for the word in DB block storage area. The block no. DDD 0-99. Each block word dddd with range 0-32767 and each word's bit is 0-7.
IW	dddd	0~1022	word: input mapping register, each word occupies two byte address
QW	dddd	0~1022	word: output mapping register, each word occupies two byte address
MW	dddd	0~254	word: bit memory, each word occupies two bytes address.
MD	dddd	0~252	double word: bit memory, each double word occupies four bytes address.
DBW	DDD:dddd	0:0~99:32766	word: DB block storage area, block no. DDD 0-99, each block word dddd with range 0-32766. each word occupies two bytes address.
DBD	DDD:dddd	0:0~99:32764	double word: DB block storage area, block no. DDD 0-99, each block word dddd with range 0-32764. each double word occupies four bytes address.
PIW	dddd	0~1022	word: process image input area.
PQW	dddd	0~1022	word: process image output area.

3. MODBUS

Register Name	Address format	Input range	remark
0x	ddddd	1~65536	bit: output coil.
1x	ddddd	1~65536	bit: input coil, read only.
3x_bit	ddddd.DD	1.0~65536.15	bit: the bit input register with 16 bit. Read only
4x_bit	ddddd.DD	1.0~65536.15	bit: the bit output register with 16 bit.
3x	ddddd	1~65536	word: the word with 16 bit what be input register. Read only.
4x	ddddd	1~65536	word: the word with 16 bit what be output register.
3x_double	ddddd	1~65535	Double word: input register, high-low 16bits upside down with 3x double word, read only
4x_double	ddddd	1~65535	Double word: output register, high-low 16bits upside down with 3x double word

Note：

- d：decimal, the input range is 0~9.
- o：octal, and the input range is 0~7.
- DDD：block number, the input range is 0-255.
- DD：hexadecimal, and the input range is 0-15.
- Word: it means that the register can only be used as a word.
- Double word: it indicates that the register must select 32 bits in the configuration
- Bit: it means that the register can only be used as a bit.
- Read only: it means that the register can only read but not be written in.

- The Register Name supported by different device models may be different and the range may vary. Please refer to the related technical documents of the connected devices in detail.

*1 remark：in expanding mode, when input address, using “/” means connection and using “#” means expanding mode. For example, 2/1#REGxxx means the second connection No. 1 address REGxxx.

4. Brasiltec and Mitsubishi FX series

Fx2N

Register name	bit/word	Address format	Max. address	Mini. address
X	bit	OOO	377	0
Y	bit	OOO	377	0
M	bit	DDDD	3071	0
S	bit	DDD	999	0
SM	bit	DDDD	8255	8000
T	bit	DDD	255	0
C	bit	DDD	255	0
D	word	DDDD	7999	0
SD	word	DDDD	8255	8000
TV	word	DDD	255	0
CV	word	DDD	199	0
32CV	word	DDD	255	200

HCA2 and HCA8 and Fx3U

Register Name	bit/word	Address format	Max. address	Mini. address
X	bit	OOO	377	0
Y	bit	OOO	377	0
M	bit	DDDD	7679	0
S	bit	DDD	4095	0
SM	bit	DDDD	8255	8000
T	bit	DDD	255	0
C	bit	DDD	255	0
D	word	DDDD	7999	0

SD	word	DDDD	8255	8000
TV	word	DDD	255	0
CV	word	DDD	199	0
32CV	word	DDD	255	200

5. Panasonic Fp series

Register Name	bit/word	Address format	Max. address	Mini. address
X	bit	OOO	377	0
Y	bit	OOO	377	0
R	bit	DDDD	7679	0
T	bit	DDD	4095	0
C	bit	DDDD	8255	8000
L	bit	DDD	255	0
DT	word	DDDDD	99999	0
LD	word	DDDDD	99999	0
FL	word	DDDDD	99999	0
SV	word	DDDD	9999	0
EV	word	DDDD	9999	0
WX	word	DDDD	9999	0
WY	word	DDDD	9999	0
WR	word	DDDD	9999	0
WL	word	DDDD	9999	0
IX	word	D	13	0
IY	word	D	13	0
ID	word	D	32	0

6. Omron CP1H

Register Name	bit/word	Address format	Max. address	Mini. address
CIO_bit	bit	dddd.DD	6143.15	0.0
LR_bit	bit	ddd.DD	199.15	0.0
HR_bit	bit	dddd.DD	1535.15	0.0

AR_bit	bit	ddd.DD	959.15	448.0
DM_bit	bit	ddddd.DD	32767.15	0.0
CIO	word	DDDD	6143	0
LR	word	DDD	199	0
HR	word	DDDD	1535	0
AR	word	DDD	959	448
TC	word	DDD	127	0
DM	word	DDDDD	32767	0

Fins

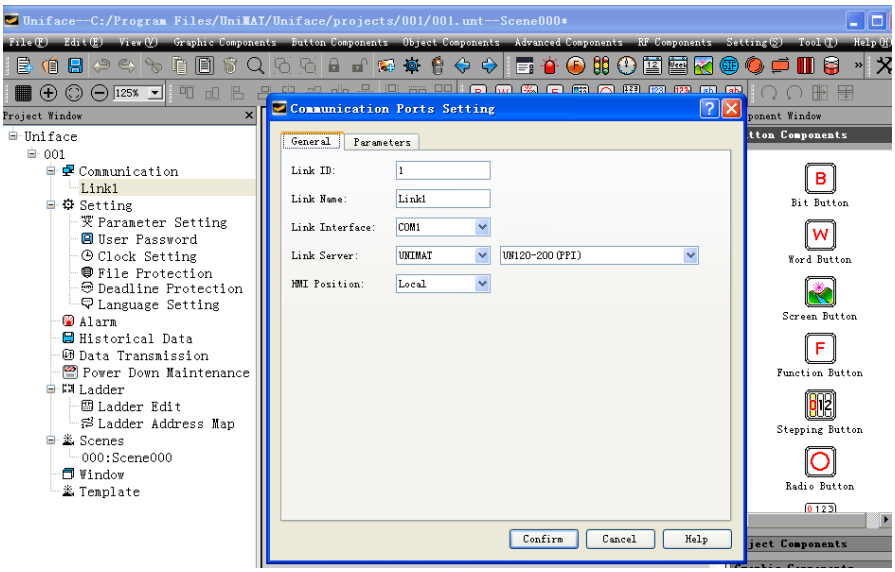
Register Name	bit/word	Address format	Max. address	Mini. address
CIO_bit	bit	dddd.DD	6143.15	0.0
WR_bit	bit	ddd.DD	199.15	0.0
HR_bit	bit	dddd.DD	1535.15	0.0
AR_bit	bit	ddd.DD	959.15	448.0
DM_bit	bit	ddddd.DD	32767.15	0.0
CIO	word	DDDD	6143	0
WR	word	DDD	199	0
HR	word	DDDD	1535	0
AR	word	DDD	959	448
TC	word	DDD	127	0
DM	word	DDDDD	32767	0

7. Address searching function

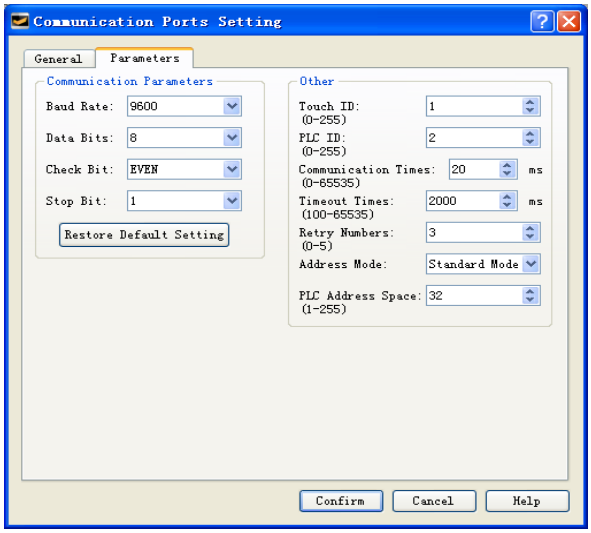
Click the search function of edition or shortcut key crtl+F then the address search menu is popped up which can search the bit or word of the internal address and external connection address, or the current scene and all the scenes, and supports the address replacement at the same time.

Example

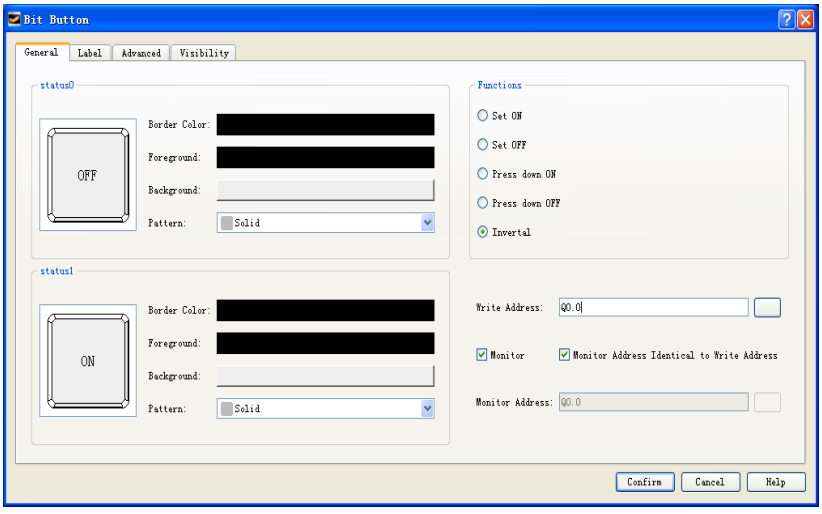
1. HMI’s communication parameters setting:set communication port--- mode selection--PPI

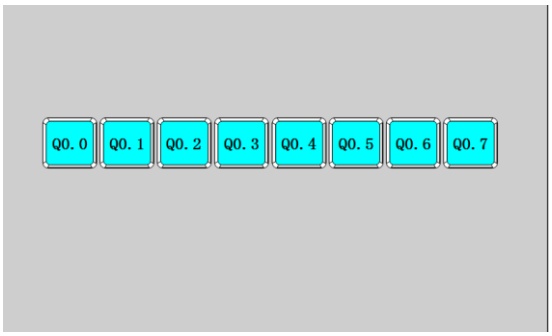


2. PPI communication parameters setting as showing in below chart.

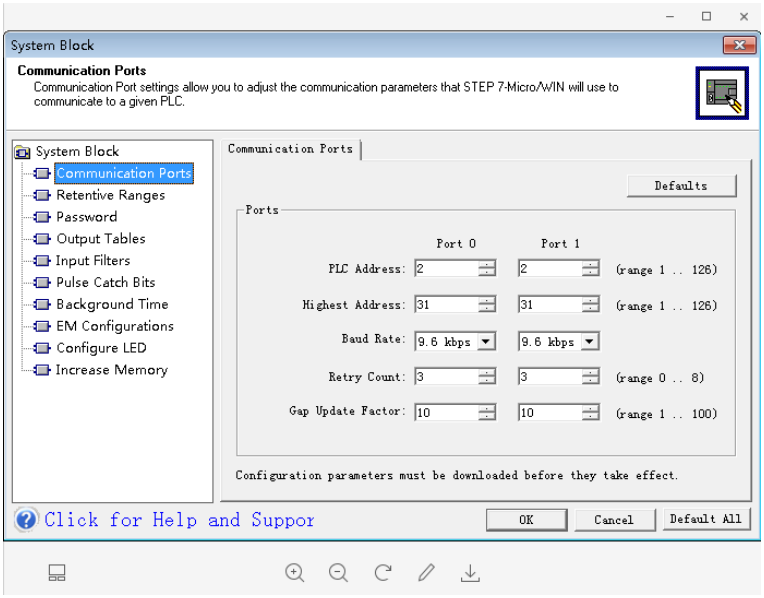


3. Put a few bit buttons onto the screen and setting the written addresses of these bit buttons Q0.0, Q0.1.



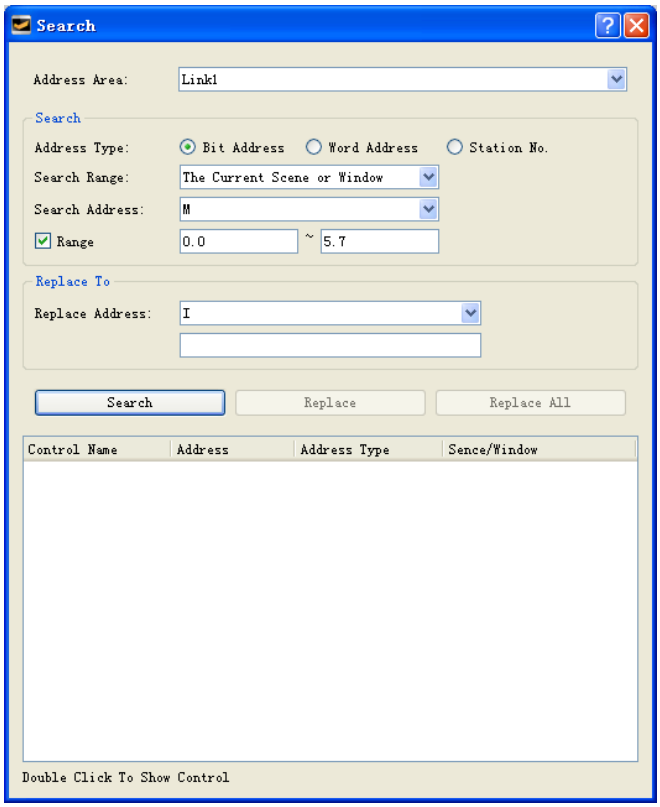


4. The system block parameter setting interface of S7-200 program software is shown as the following diagram



5. Connect the HMI to PLC through 485 communication cable and power them together, then download the corresponding project to HMI. When click the components on the screen, the corresponding PLC output points will be lighten.

6. Address searching. Click the search function of edition or shortcut key ctrl+F to pop up the search interface. You can search bit and word in the current scene or all of the scenes. At the same time, you can replace the selected addresses, double-click the corresponding addresses to pop-up corresponding control option of corresponding scene.


Search
Address Area:
Link1
Search
Address Type:
Bit Address
Word Address
Station No.
Search Range:
The Current Scene or Window
Search Address:
M
Range
0.0
~
5.7
Replace To
Replace Address:
I
Search
Replace
Replace All
Control Name
Address
Address Type
Sence/Window
Double Click To Show Control

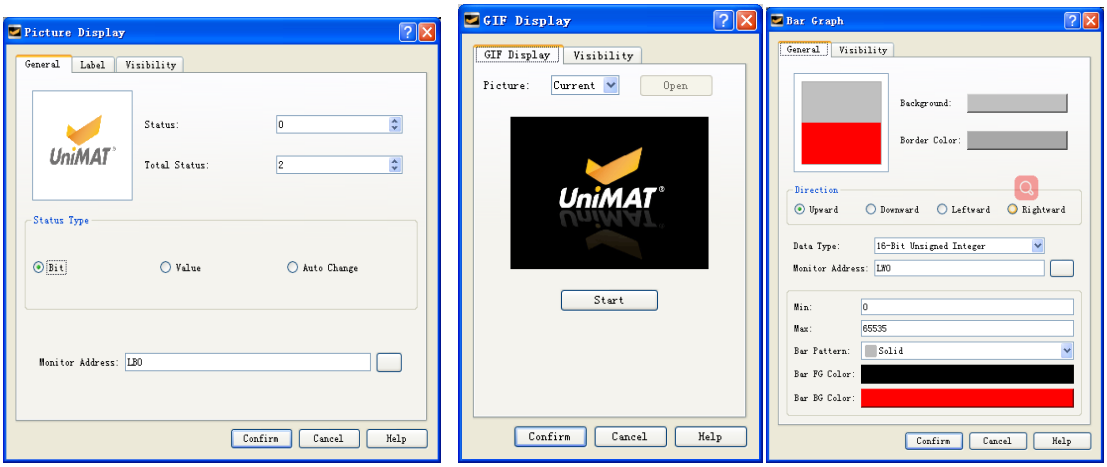
Animation design

Function introduction

Picture Display function: to achieve the dynamic display of static pictures through other ways, such as address control, time setting.

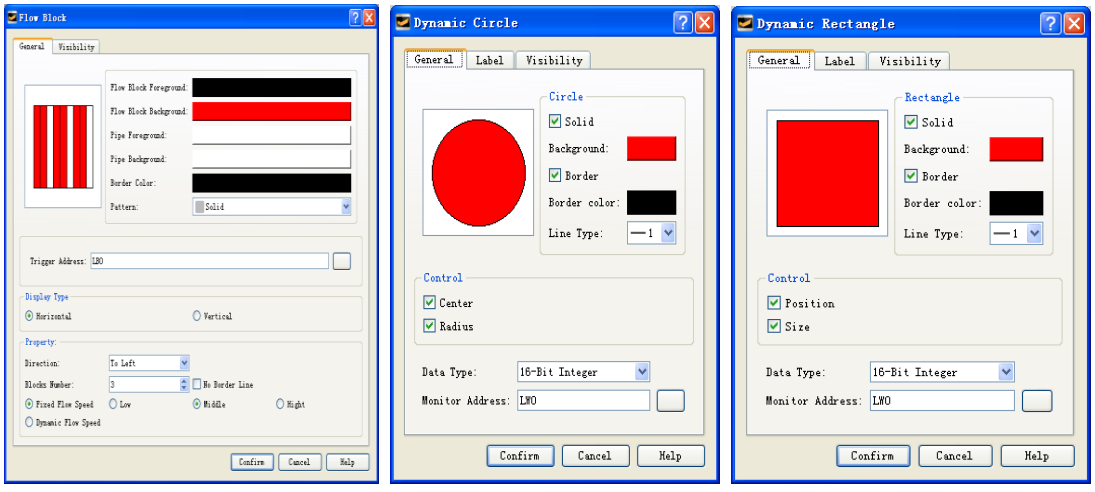
GIF picture: to set dynamic gif pictures. You can set the animation in the library, or user-defined GIF files.

Bar Graph: the value of the corresponding address is displayed by the bar graph.



Flow Block: Flow Block is used to simulate in animated pictures the liquid flow status in pipeline. Whether a flow block is flowing is determined by the status of the trigger, when the trigger is 1, the flow block is flowing, when the trigger is 0, the flow block is static. The flowing speed is specified by user.

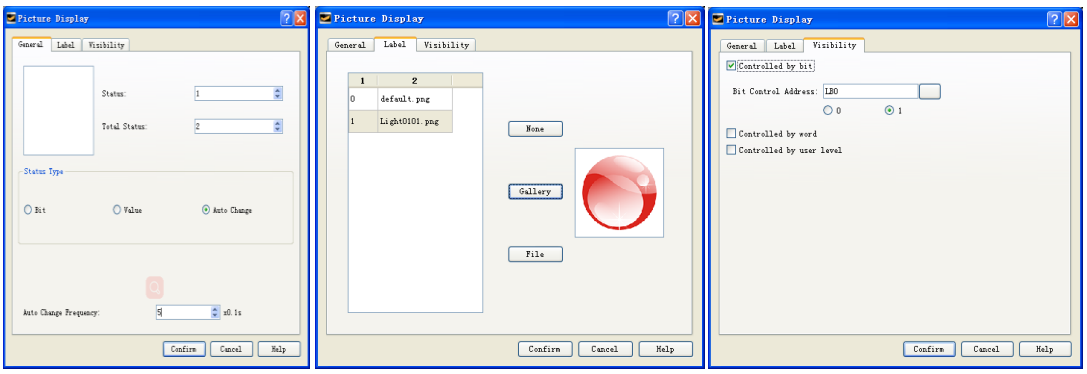
Dynamic Rectangle and Dynamic Circle: their function is similar which changes the position or size of graph according to the value of monitoring address, thus to show real-time change of the monitor address on a dynamic basis.



Example

1. shining light (controlled by time)

Put a Picture Display on scene, in the general page set the Total Status 2, Status type to auto change with frequency being set 5 x 0.1s. In Label page, add an indicator pattern from the Gallery to a status screen, in Visibility page set controlled by bit, When the corresponding bit value to achieve the effective state the indicator pattern will be displayed.

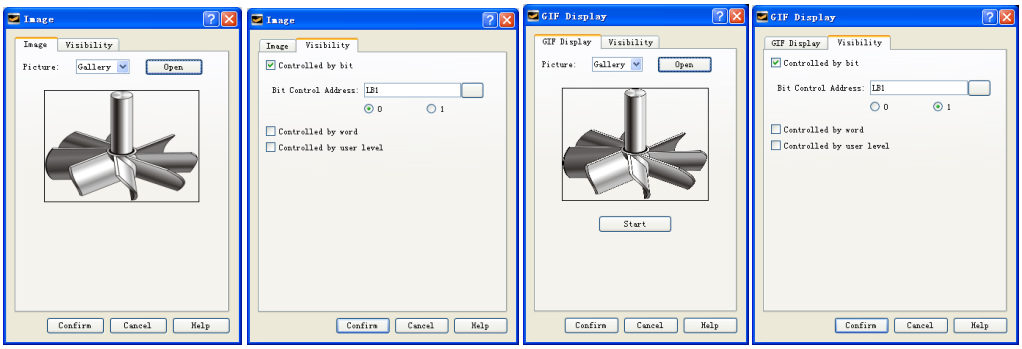


2. Liquid storage tank.

Put a image of Graphic Components, select a liquid storage tank from Gallery, and drag into a Bar graph of Object components to cover the liquid area of tank.

3. Rotation motor

First put a picture  and set as display when bit control value being 0, put a similar GIF component  and set as display when bit control value being 1. These two components must be set the same size and same position(Use alignment function). Or put a picture to be displayed when its bit control value being 0and put a Picture Display, set to automatically switch 0.1s, Then select two motor pictures with same shape but different angle in the Gallery, set to display them when the bit control value being 1.



4. Flow block

Add expand flow block at advanced components and set the corresponding address for it.

5. Dynamic rectangle, Dynamic circle

In the Object components, add dynamic rectangle or dynamic circle and set the corresponding address.

Dynamic rectangle, for example, the data type is 16-bit integer, and the address is set as LW1. Then the value of LW1 is rectangular x coordinates. The value of LW2 is rectangular y coordinates; the value of LW3 is the width of rectangle; the value of LW4 is the height of rectangle.

Dynamic circle, for example, the data type is 16-bit integer, and the address is set as LW1. Then the value of LW1 is the X coordinate of the center of the circle. The value of LW2 is the Y coordinate of the center of the circle, and the value of LW3 is the radius of the circle.

Recipe Function

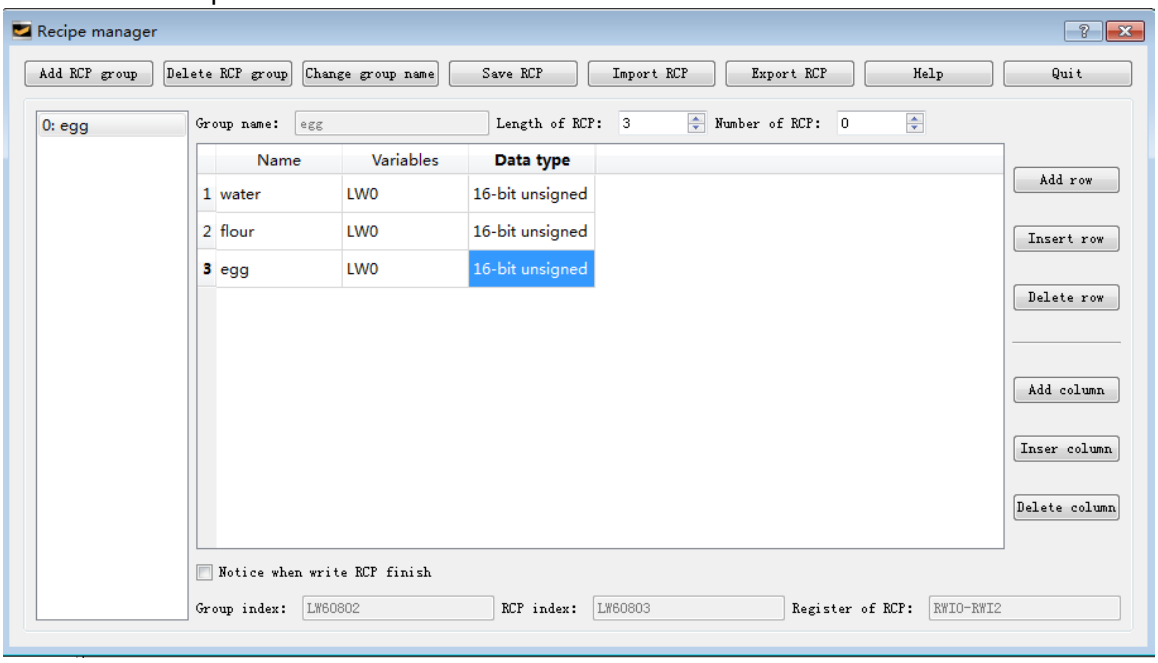
Function introduction

In manufacturing field, recipe describes proportion relation of different recipes, it's the gather of some variables corresponding parameters setting value during production process.

For example, a bread factory produces bread, there will be a basic ingredient recipe, this recipe will list all ingredient lists that used for producing bread (for example water,flour, sugar, egg, sesame oil etc.)Besides, also list all choosable ingredient lists (for example fruits, kernel, chocolate chips etc.) These choosable ingredient can be added to basic recipe to produce various breads. For example,sweet cake will use more sugars,while low sugar cake will use less sugar. Here, we call the ingredient proportion relation as recipe.

In Uniface recipe editor function, one group recipe is one proportion relation. In the table of editor, customers can match proportion relation among ingredients visually. Click "Recipe Setting" of tool menu, then you can see recipe configuration dialog box, please check as below:

1. Create a recipe group and name as bread.
2. Add the ingredients number of bread that is recipe length is 5.
3. Modify ingredients name and matched variable address.
4. Click save recipe and exit.



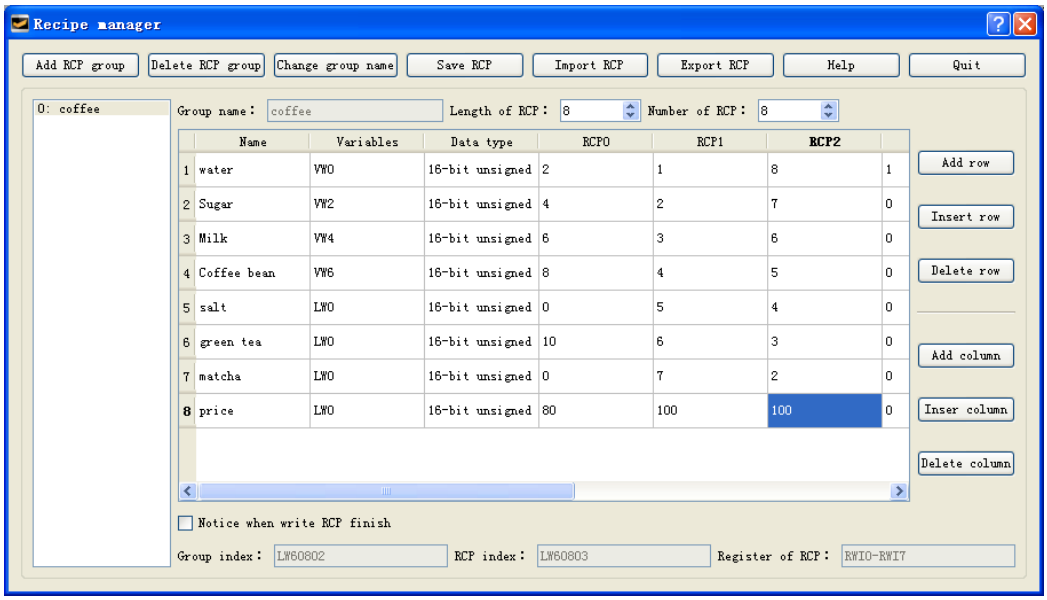
Example

1. project target

Realize the adjustment of different kinds of coffee ingredients, so that can complete the coffee modulation by one key operation.

2. how to achievement

Click recipe control  , add a new recipe group and set ingredients number of recipe, each recipe contains different ingredients proportion, and then save the recipe.



Add the corresponding components and set corresponding variables to project scene, and group index is modify Internal Register LW60802 can achieve switch-over of recipe group, If recipe index is Modify Internal Register LW60803 can achieve recipe switch-over of recipe group.

Numerical input and display address of recipe ingredients is using the internal recipe register address. Such as the above recipe, there are 8 ingredients, the system internal address is RWI0-RWI7 from top to bottom if connects corresponding PLC address just needs to input the corresponding variables, such as VW0, VW2, VW4 etc..

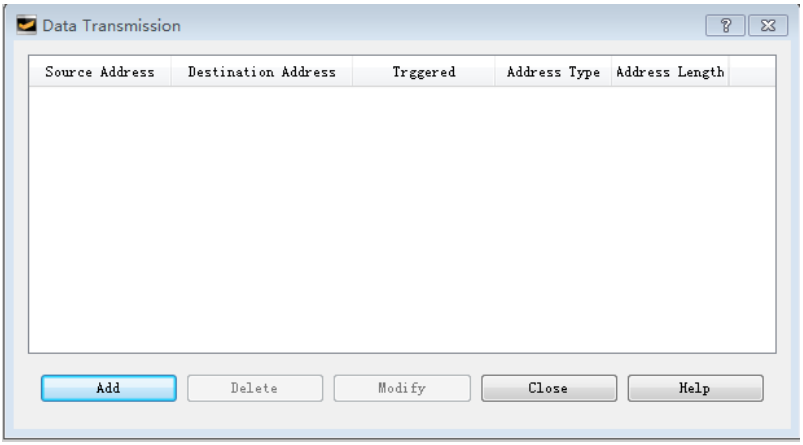
Recipe's uploading, downloading or saving can be achieved in the function button.

Data transmission

Function introduction

Data Transmission is used for the data exchange between external device and HMI or between device and device.

Click Data Transmission in Project Manager to pop up the data transmission list as below.



1. Click "Add", you can add data transmission. At present, maximum number entries is 100. Triggered type is interval trigger and minimum time unit is 200ms, the data types which can be transfered is bit, word, double word, and the maximum transmission data size by each trigger is 100(bit, word, double word)

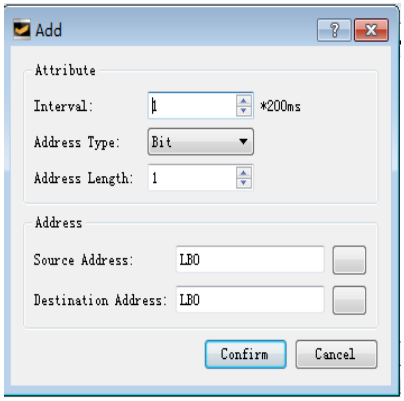
a) Interval: 1~100 (* 200ms)

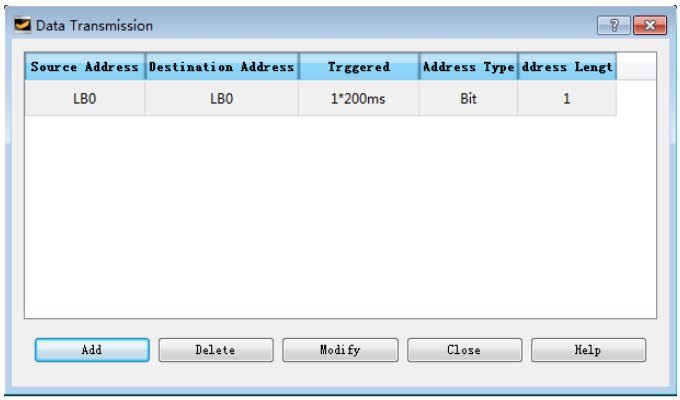
b) Address type: bit, word, double word

c) Address length: 1~100, the data size of each transmission, unit is the type chosen at "address type"

d)Source address/ Destination address: the transmission direction is from source address to destination address, this type of chosen register must be same as the address set in "Address type".

2. After setting, click "confirm", add this set entry into the list.





3.After adding, click close button exit, after downloading the configuration you can do data exchange according to the set transmission type.

Example

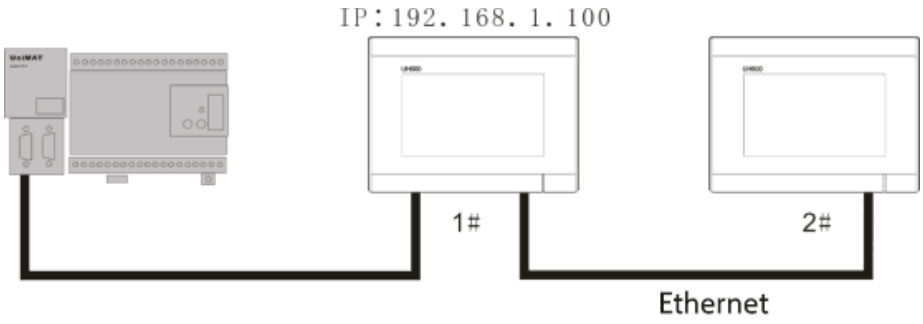
1. Project target

Achieve 1# HMI & 2# HMI to control CPU's Q0.0 & Q0.1 status.

2. Wiring

UN 214-1AD23-0XB8 1pc

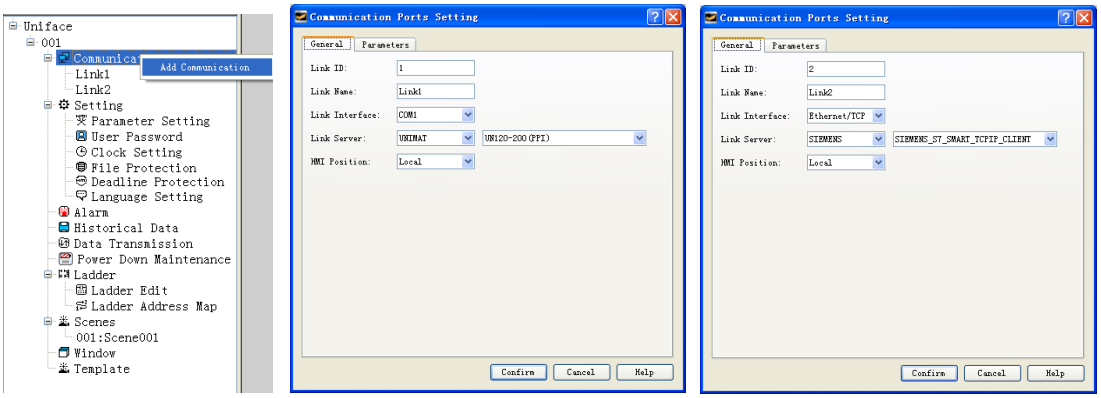
UH 507-4EU01-0AA0 2pcs



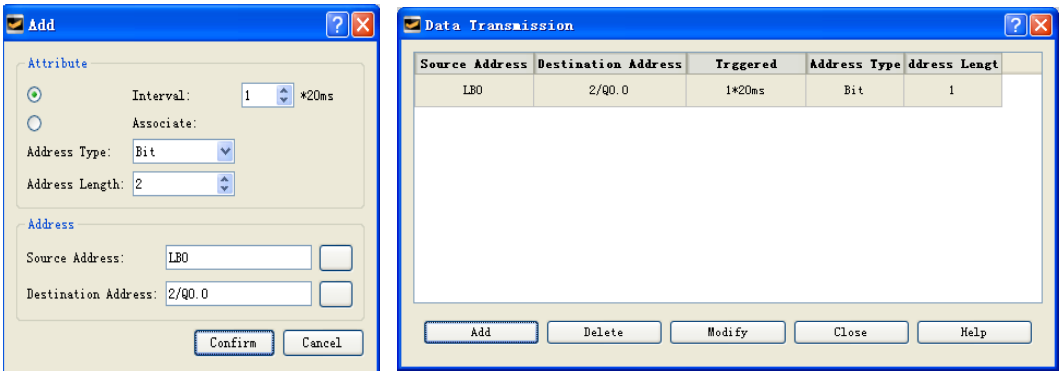
3. Project setting

1# HMI

Create a new project, add a new Link and set the parameters of Link1 & Link2 respectively. Set one is PPI and another Link MODBUS Server TCP/IP.



Set data transmission: click the add icon, set address length 2, source address LB0 and destination address 2/Q0.0.



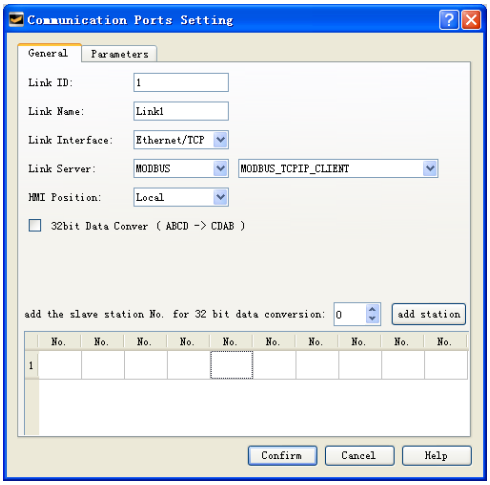
Remarks: when set the destination address, if you input directly, need to add "2/" in front. If you click the right side icon to choose Link settings, you don't need to add "2/".

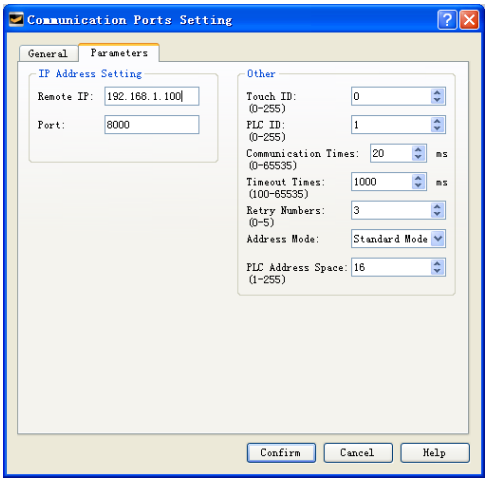
Add two bit buttons on project scene, and set the addresses LB0 and LB1.

After setting 1 #HMI, save the configuration and download to HMI.

2# HMI

Create a new project, set the communication connection Link1 is MODBUS Client TCP/IP, the remote IP of Link1 parameter is set as the remote IP address of 1# HMI, as 192.168.1.100.





Add two bit buttons in project scene, and set the addresses 0x1 0x2 respectively.

Save the setting of 2# HMI and download to HMI.

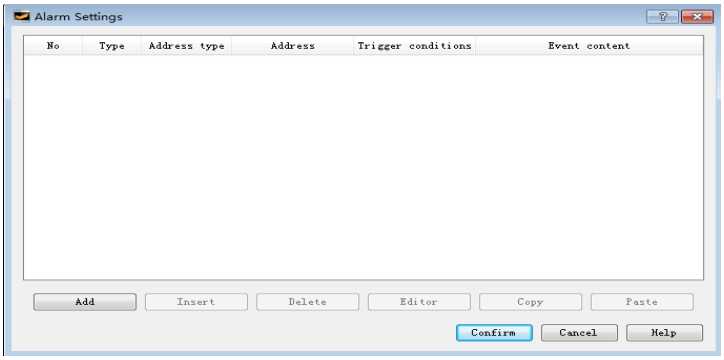
Complete the above setting, then can achieve 1# & 2# HMI to control CPU's Q0.0 and Q0.1 status.

Alarm

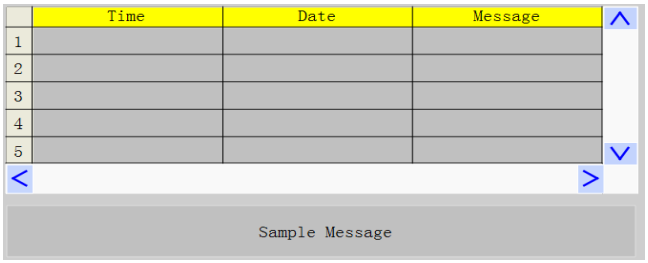
Function Introduction

When triggering some events that should not be triggered during the operation of the device, the system will make warning and record the time and content of the corresponding events. The alarm is used to set the alarm information. Only the alarm is configured, the alarm control and the dynamic alarm bar can be used normally.

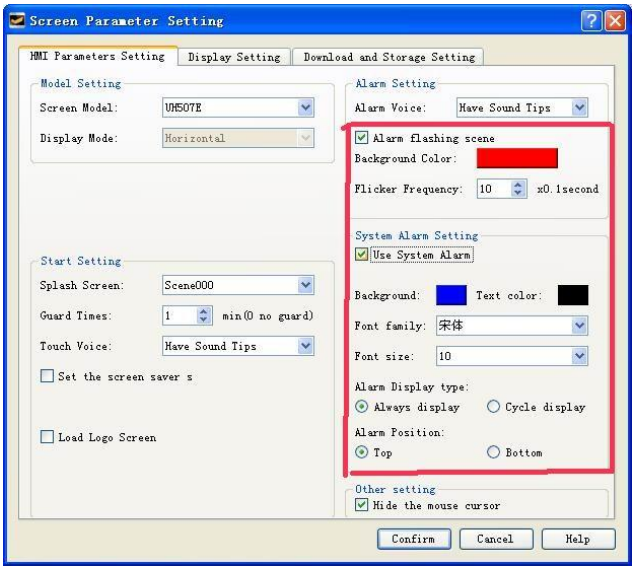
1, set the alarm information, firstly set the trigger condition



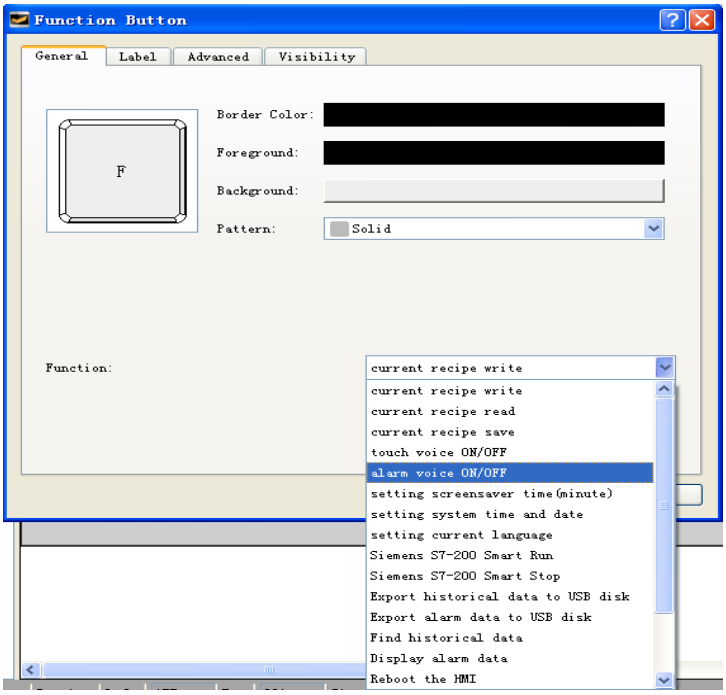
2, record the real-time alarm: to show the real-time alarm data, alarm scrollbar



3, System alarm setting: to set the display mode of overall pages alarm.



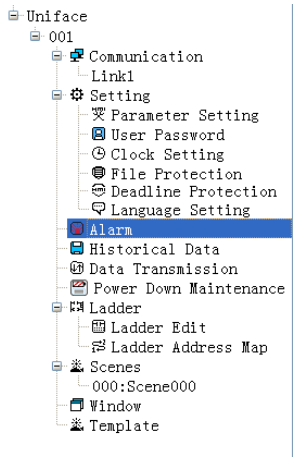
4, Clear alarm voice:the alarm sound can be set on/off by the function button.



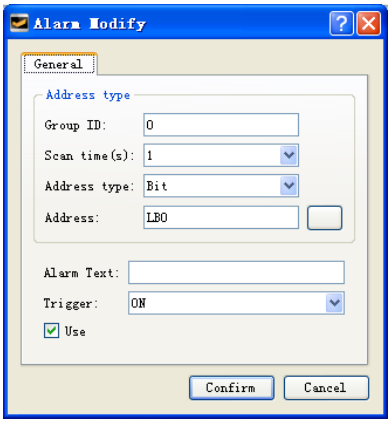
Example

A. set the real-time alarm

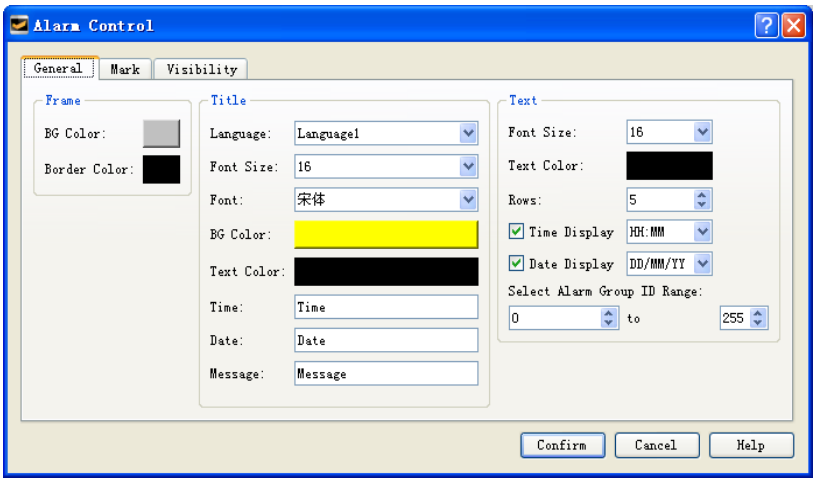
1. Double click Alarm icon to open Alarm Setting in software window.



2. Add the matched alarm event in the alarm setting and change the trigger condition.



3. Add an alarm control, and change the corresponding display parameters.



4. When the corresponding alarm event is triggered, the Alarm Control will display the alarm time, date and content, etc.

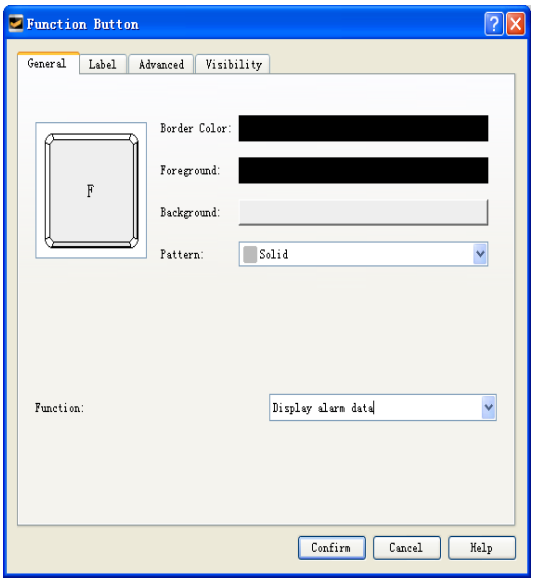
5. Add a dynamic alarm bar at the scene and trigger the corresponding event, the triggered time will scrolling display on the scene.

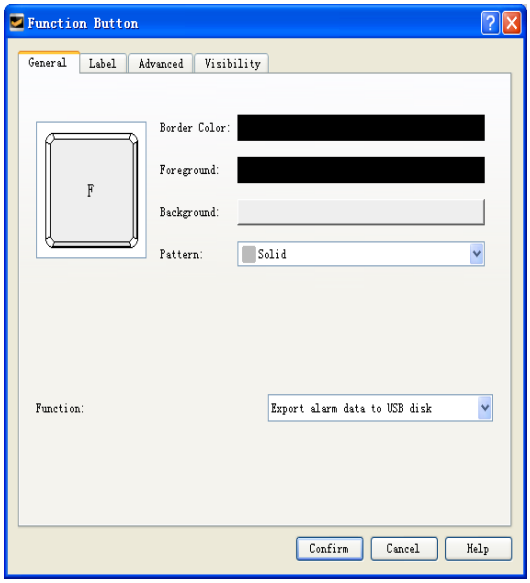
6. When setting the overall alarm, the alarm information will be displayed at the corresponding position of all pages.

B. Historical alarm setting

1. Query historical alarm. Query the historical record, triggered time, faulty information and fault clearance time etc.

Insert a function button which set to display alarm data. Then well done.





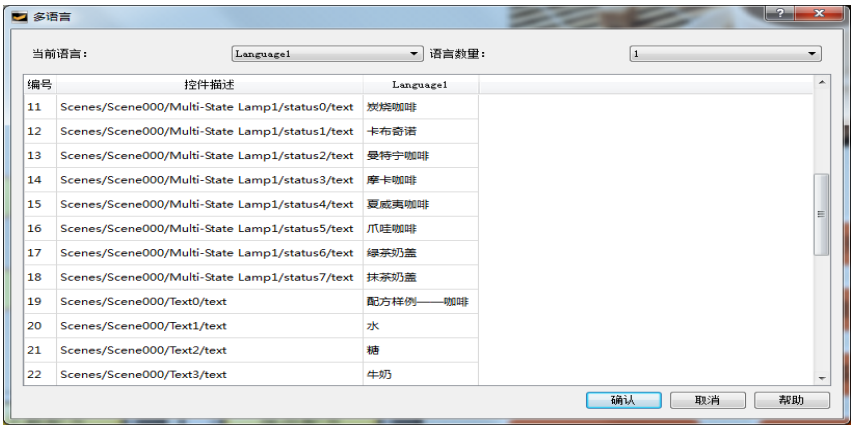
Remark: Query historical alarm data can not be done at off-line. Just operate on the touch screen.

2. Download the historical alarm data. You Can download the historical data to the U disk by the function button. Select the Download History Alarm Data in the function buttons.

Multilingual

Function introduction

The function realizes the multilingual setting. Double click "language settings" and pop up the following dialog,



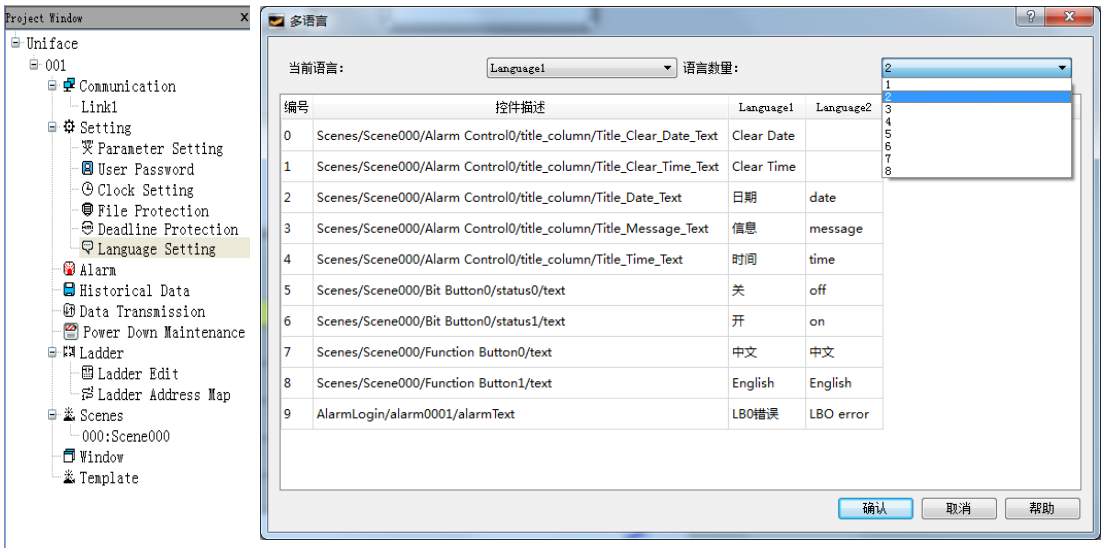
- Current language: the current language used for text.
- Language quantity: 8 languages in total
- Component description: describe the text information of the control in the current scene.

Example

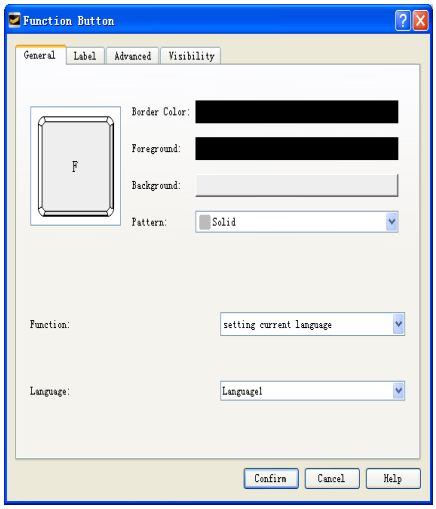
1. project target Download program to HMI, set two buttons to switch Chinese & English.

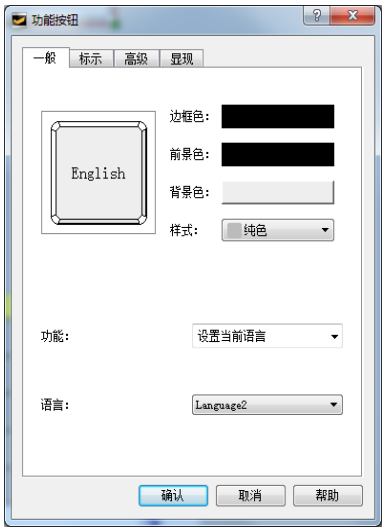
2、Project setting. Create a new project, put the corresponding controls at scene and set the relevant alarm, make these all be displayed in Chinese. Then add two function buttons at the scene and set one for Chinese and another for English. As follows:

Click the language setting in the left project window, select 2 of the language, and translate for Language1. After the translation is completed, click confirm.

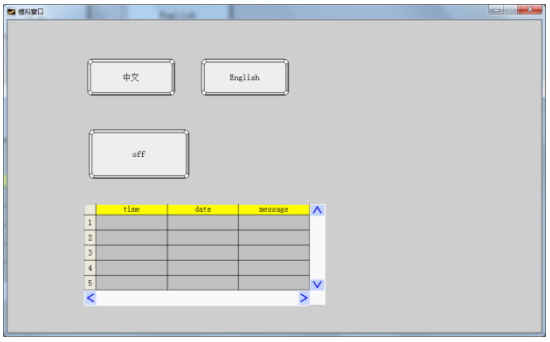


Click the function button Chinese matched and Select Setting Current Language at Function and Language 1. English matched one Select Setting Current Language at Function and choose Language 2





Then the function is set up and press Chinese button then display Chinese and English button for English.

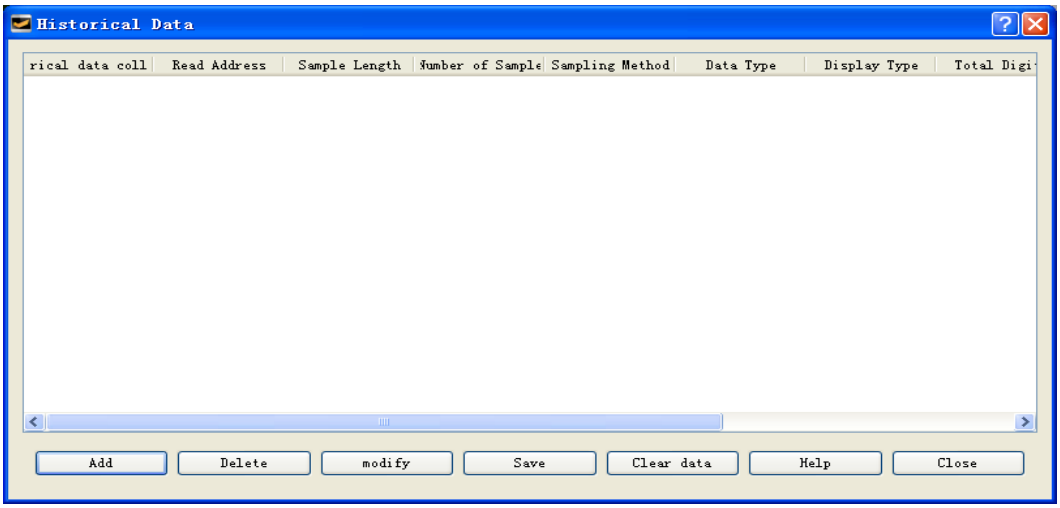


Historical data record

Function introduction

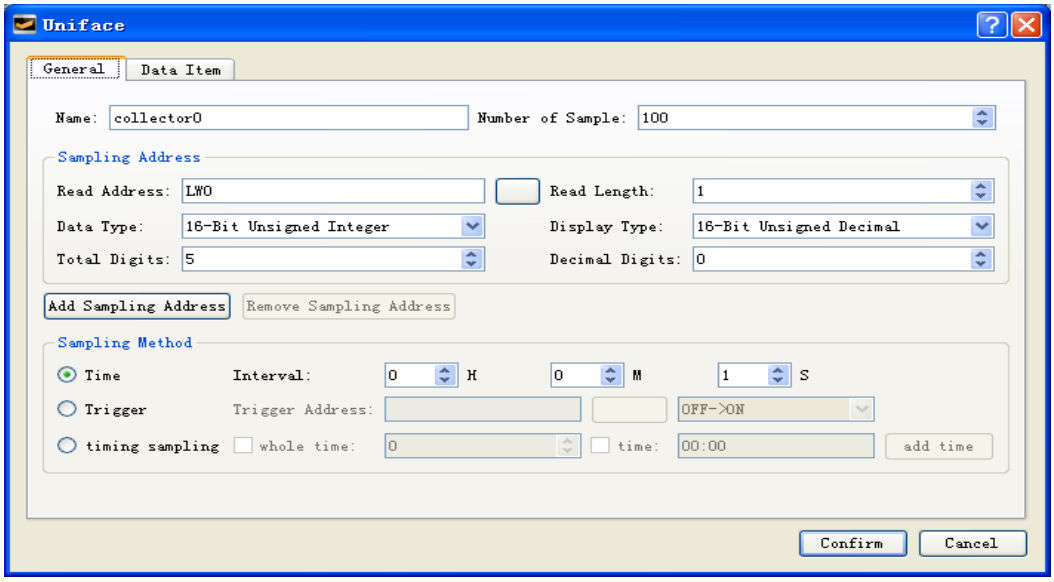
Records the data that the address variable appears during working, forms the corresponding historical data record table and draws the historical curve trend map to the data. Data can also be downloaded to the U disk and we can read the data of the U disk through the computer or other devices. (historical data records can not show changes in data records by off-line simulation, it is necessary to download to the touch screen to view the related records data).

"Historical data" is used in conjunction with the "historical data display" on Advanced components. "Historical data" is mainly used for the setting of parameters, "historical data display" displays the historical data. If you haven't create a new "historical data collector", you can double click the Historical Data and pop up the following window. (Need to save file before a historical data collector is formed)



Notice : It can add Max. 10 historical data collectors each time.

Click "add" in the pop-up menu to create a new historical data collector. Pop-up window as below,



Name: user can change the name displayed in project manager accordingly. (only for letters or numbers)

Read address: to read the starting address of the data

Sampling length: the number of data to read from memory at most is 16.

The total number of sampling is the number of data extracted, which supports 100000 articles at most.

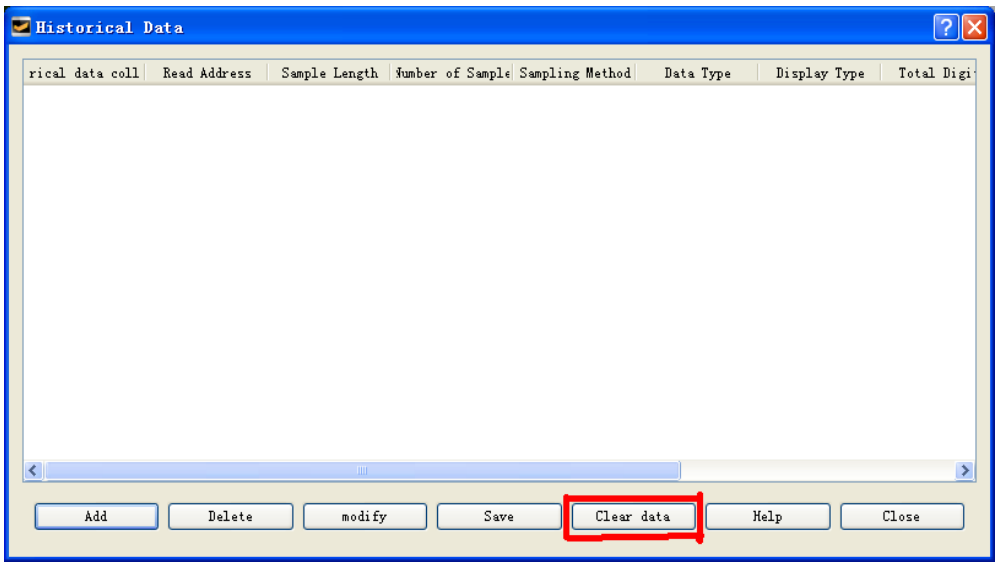
Sampling mode: timing sampling, and reading data according to the time interval set.

Trigger sampling： to record the data according to the set of bit status or edge trigger.

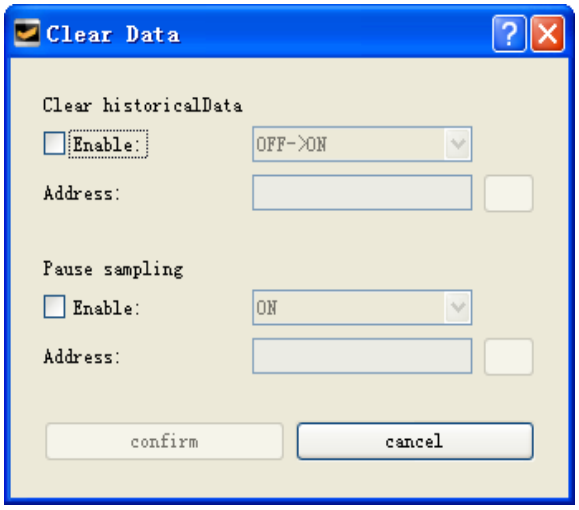
Regular sampling： setting several specific time points for sampling.

Example

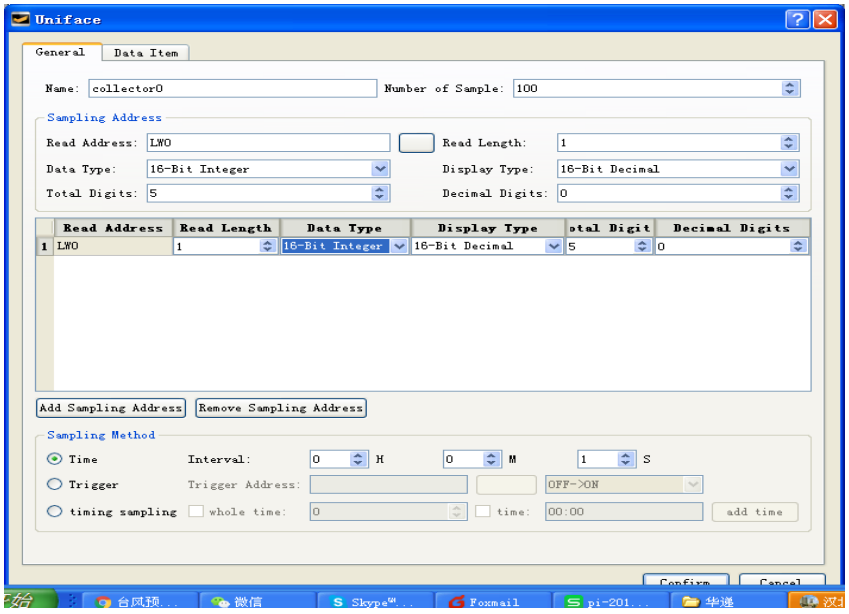
1. double-click to open the historical data function at the directory of software project manager.



2. It controls the suspension sampling or clear historical data by address variables. Set the corresponding control address the corresponding state of the address variable is triggered the relevant function.

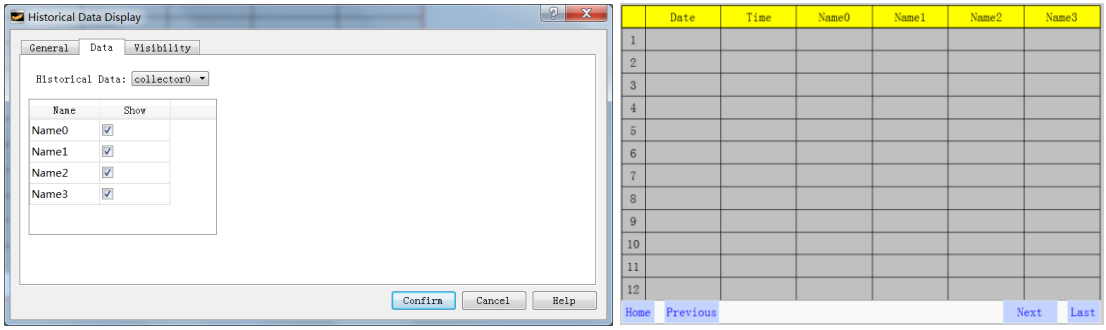


3. Adding the address variables that need to record the historical data and the way of data sampling, the number of individual historical data variables is up to 8, supporting the discrete address variables. There are three ways of sampling historical data, including time sampling, trigger sampling, and timing sampling; each historical data collector has a maximum of 100 thousand samples, and the data record will be automatically stored in the Flash, and more than 100 thousand will automatically cover the previous data item.



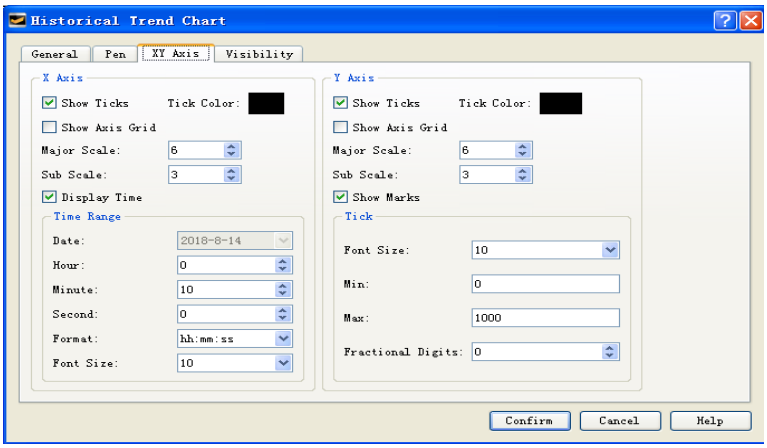
4. When the historical data collecting address is set up, you need to add the corresponding historical data display components in the software advanced options,

including historical data displays and historical trends, add historical data displays to the software scene, and set up historical data items to display.

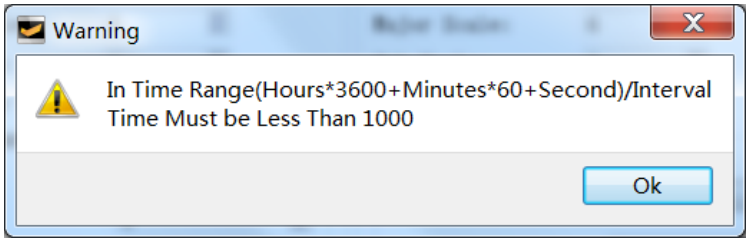


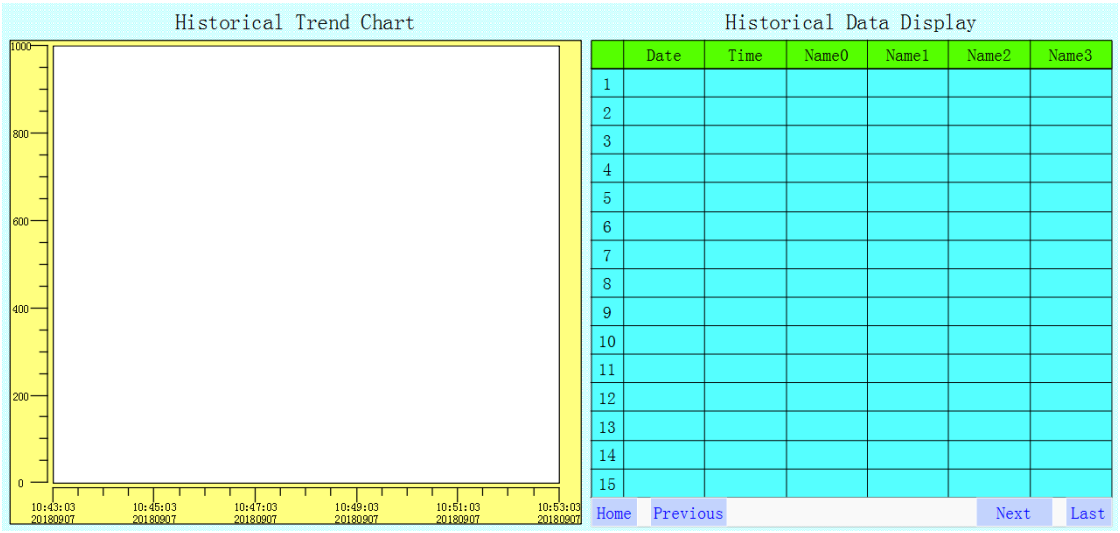
After the device operating, on HMI it will display the change of the corresponding component address variable value, and data will be saved when power off .

5. When adding historical trend picture at scene, set the corresponding attribute of the XY axis interface, including the time setting of the X axis, the numerical range setting of the Y axis, etc.



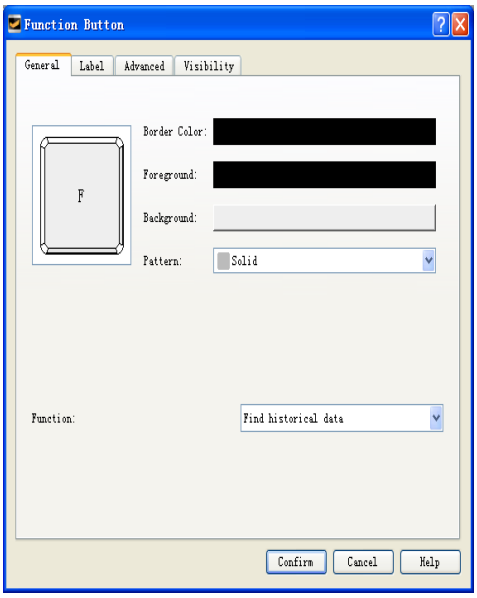
In the process of setting the time range, if the following errors appear, please check the time setting of historical data collection time and historical trend map and make reasonable changes to the corresponding time range or sampling time.

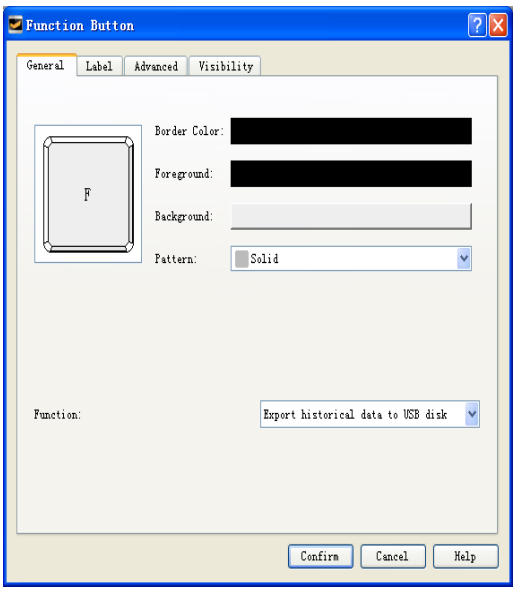




6. Historical data query. We can query historical data and record information according time. Just pull a function button and select the query history data on the function button.

7. Download the historical data. Download the collected historical data to the USB disk in CSV file format. It can be opened directly by Excel. Just pull a function button and select the query history data on the function button.





User encryption

Function introduction

The function of user encryption is mainly to protect user's permission. It can add and delete users, and set user permission level.

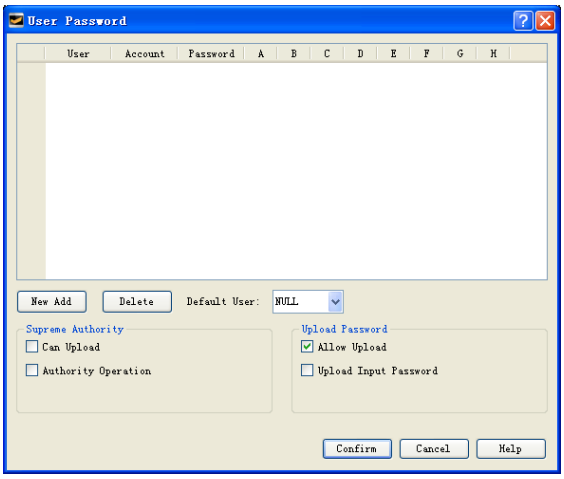
Project initial user setting:

When the system has not set the user encryption, the default user is NULL, namely can touch all components.

This function coordinates components' user level which is in advanced pages to use. For example, the user level control in the advanced page setting the bit button is D, the D level of the Uni001 user in the user password setting is N, and the D level of the Uni002 user is Y, then the Uni001 user can not touch the use button, and the Uni002 user can touch the use button.

Users can set up the upload password here. When setting up the password, you need to enter the correct password to upload the configuration of HMI to PC.

The highest permission: the user uses this password can open all hierarchical controls.



Note: when a user has multiple levels of authority (for example, A/B/D), as long as it is unlocked in one of the controls, the corresponding all permissions are unlocked (when the A is opened, B and D are open at the same time, before logon the login, no more password is required).

Log out: in the screen button, you can set log out and quit the current user. If you do not click log out, then at the screensaver time and log out automatically.

The setting for the advanced components user

User login: this function is mainly used for user login. The user click this control to log in.

Show user: this function is used to display the current login user name. Drag this control into the scene. When any user login, it displays the current user name. When no user login, it shows that the user does not exist as NULL.

Add user: this function is used to add users, set up their passwords and corresponding permissions, and its authority is only owned by administrator. Clicking this control to add a user, enter a new user name in the account, enter his password, and enter the highest permission password of the administrator (the password is set in the user password in the project window, the password is the highest permission operation:s), corresponding A-H is the user level, clicking one means having the authority, click confirm then finish this operation.

Delete user: this function is used to delete unnecessary users, and authority are only owned by administrator. Clicking this control can delete users, select the users who need to be deleted in the account, enter the administrator password, click the confirmation to delete the user.

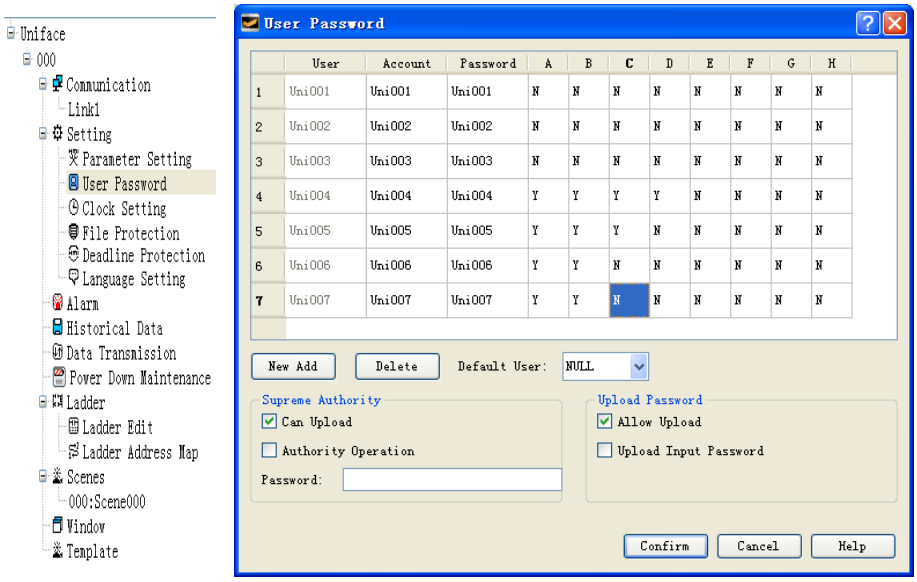
Modify the password: this function is used to modify the user's password. Any login user can modify his password. Using this control, click to modify the password of the current login user, enter the old password, and then enter the new password to click confirm. If the old password is incorrect, the new password can not be entered.

Modify the level: this function is used to modify the user's level permissions, and the authority is only owned by the administrator. Using this control, you can modify the right of the current users and re-assign the corresponding permissions after entering the administrator password.

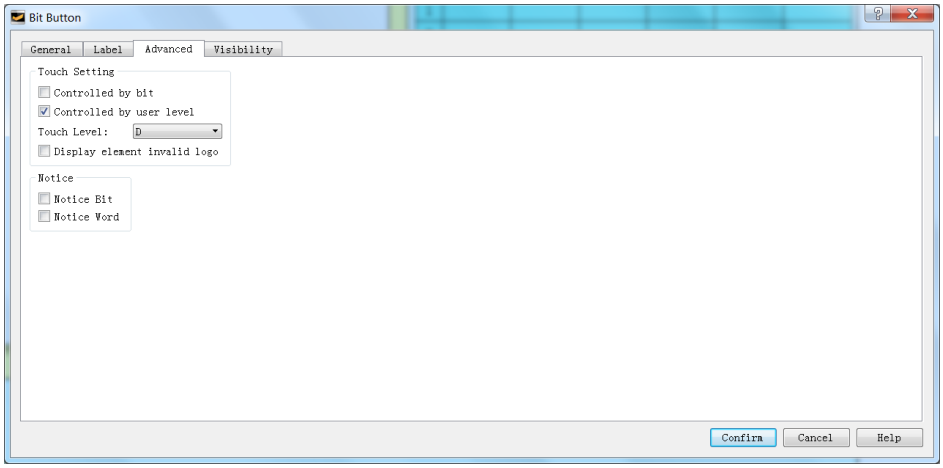
Note: the administrator’s password can be logged in any valid account.

Example

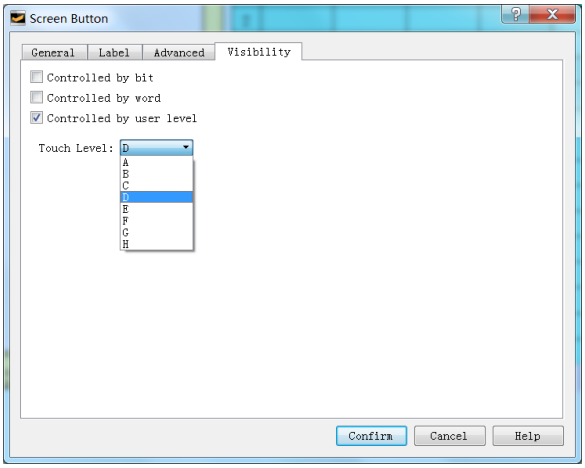
1. Create the relevant user name, user password and the corresponding user rights, can set the highest authority, the highest authority can open all functional rights, when the password is allowed to upload, in the upload process need to input the corresponding upload password to upload the project of HMI.



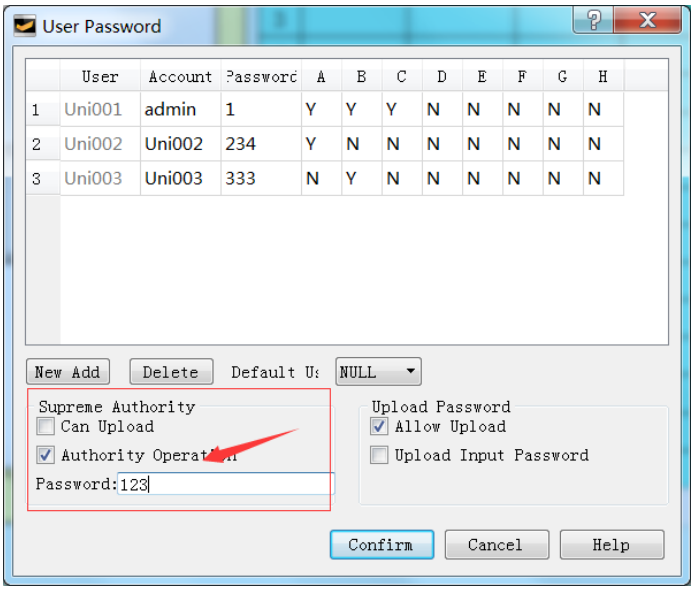
2、To encrypt a control, select the user level control of the touch setting in the advanced level, set the corresponding touch level, if the graph setting level is B, then the user with the B level can use it. The display touch invalid label has an invalid touch on the current control.



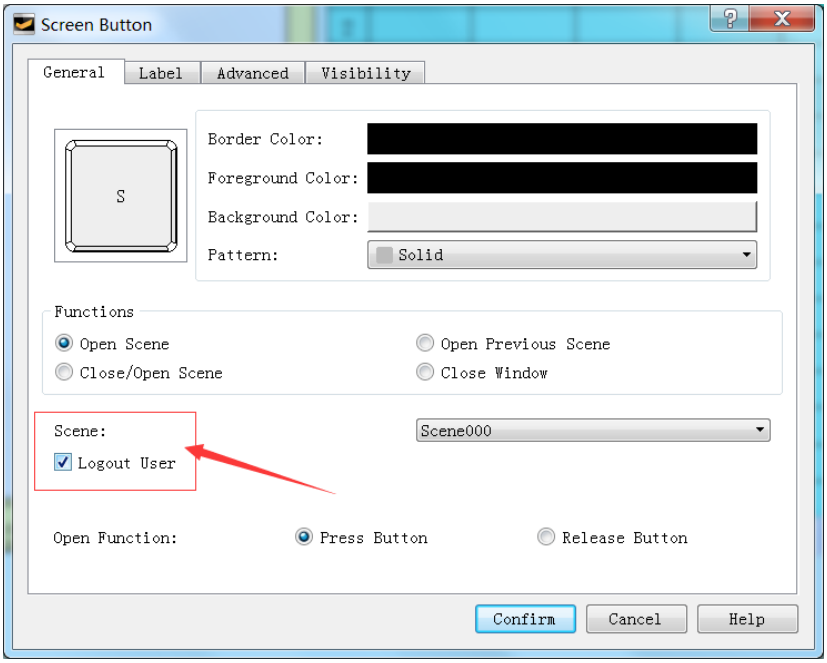
3、A certain control is encrypted and displayed, that is, the user can log in and touch only if the control has access to the relevant privileges.



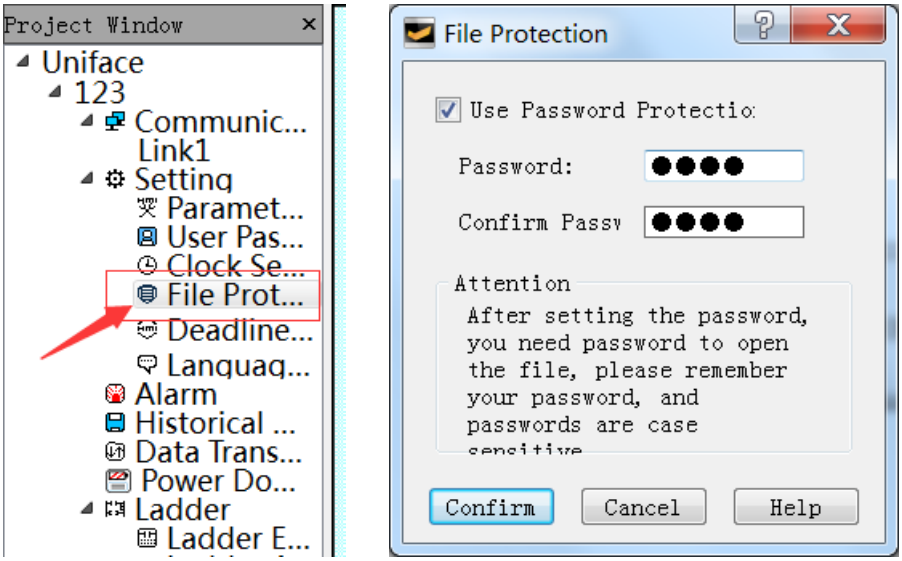
4、The highest permissions show that the task user enters the highest permissions password and can operate on all controls.



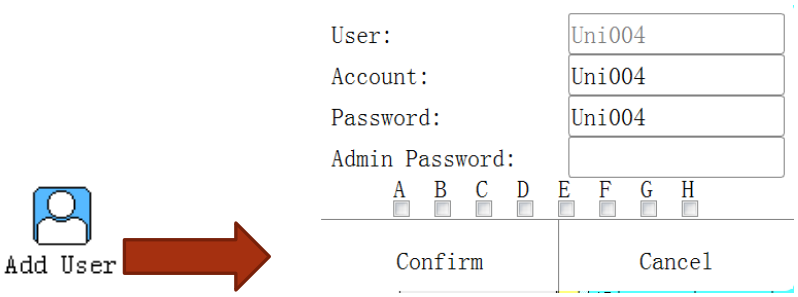
5、Users log off, and after an operator has finished the operation, click logoff to exit the current user login. The relevant settings are in the screen button, and choose to log off the user login.



6、The file protection function under the windows directory of software engineering can protect users' rights and interests to a certain extent and open the password.



7、It supports displaying users through the touch screen, adding new users, modifying passwords, modifying permissions, and deleting users. In the advanced component, drag into the new user, the related interface is automatically generated, where the rights of the corresponding user can be added, while the administrator password is the highest authority password in the engineering user's rights, such as the above figure (step 4) the maximum password of 123.


Add User
User:
Uni004
Account:
Uni004
Password:
Uni004
Admin Password:
A B C D E F G H
Confirm
Cancel

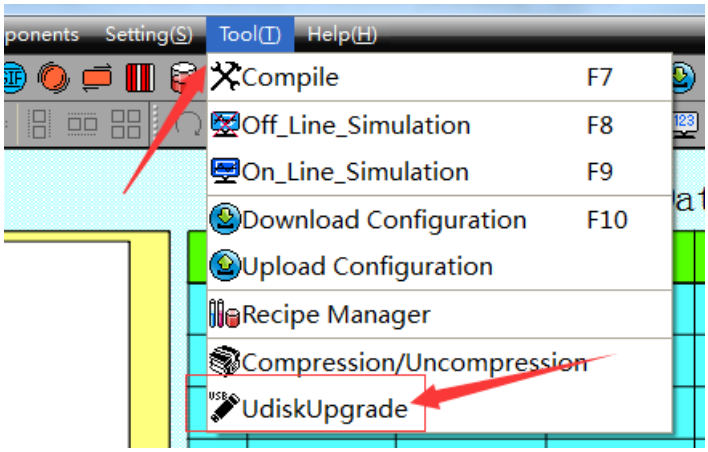
U disk update program

Function introduction

Using U disk can update HMI's program and firmware version. At the same time, it can also use U disk to download the historical data of HMI device.

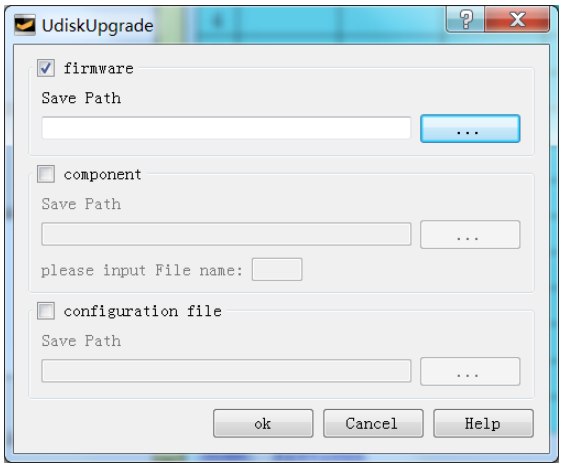
For example

1、Click the click tool to pop the drop-down menu to select the U disk update.



2、Pop up the U disk update window to update the configuration and firmware of the current project, and update the three files to the U disk. Mode of operation: check the firmware and click the "..." on the right. Select the save path and store it in the U disk. Click OK. Check the configuration again, click on the right "..." Select the save path and store it in the U disk. Click OK.

Note: firmware is the version of the host computer software. It is recommended to save it into the U disk to ensure that the version matches the configuration. A U disk supports up to 8 different configuration projects. A project needs to modify the engineering name if it needs multiple configurations and adjust it in the "file name please" when the U disk is updated. The configuration file is required to be placed in the U disk.

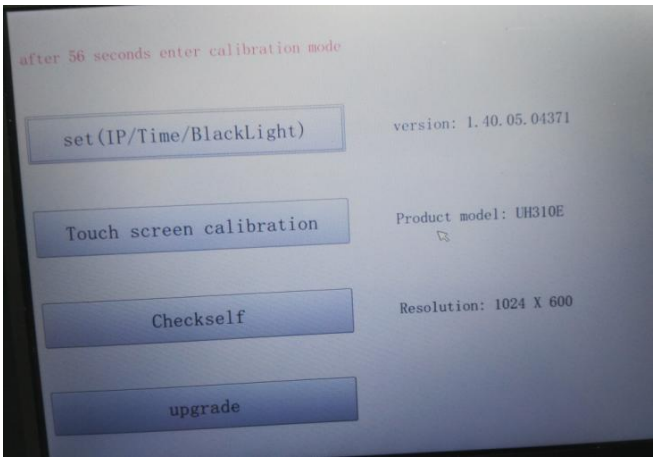


3、After the storage is finished. At this moment, there are three files in the U disk, such as:

component.uupf	2017/3/1 15:08	UUPF 文件	3,046 KB
firmware.uupf	2017/3/1 10:28	UUPF 文件	995 KB
bootconfig	2016/11/8 17:50	配置设置	1 KB

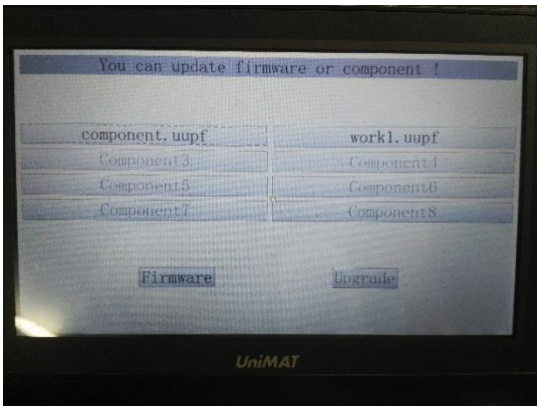
4、Insert the U disk loaded on the file onto the touchscreen and restart the touch screen.

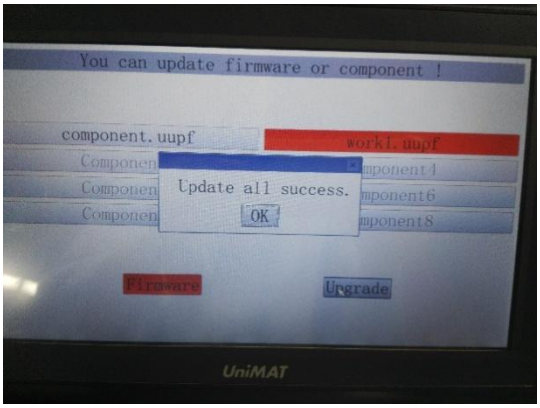
5、After power supply, the touch screen enters the system setting interface.



6、Click on the bottom button upgrade to enter the U update interface.

7、The top 8 is configured, and the following Firmware is the firmware. Click the firmware and the two buttons that need to be updated to be red, and then click Upgrade to start the update and firmware. After the update is successful, the pop-up prompts the small window.





8、Pull out the U disk and restart the touch screen to complete the U disk update.

QR Code

Function introduction

In practice, some information needs to be converted to QR code on the touch screen. In Uniface, we can achieve this function through QR code display. The method of setting a QR code display is listed as below:

Click the two-dimensional code display under the menu advanced component, move the mouse to the screen area, the mouse displays the cross, click the left mouse button and drag the mouse to add a control. Double click the control to pop up a dialog box, which is the dialog box that displays the properties of the two-dimensional code.

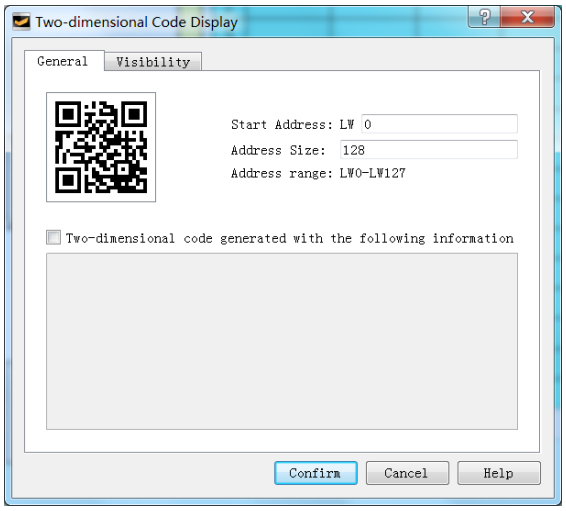
- Start address: the information used to generate the two-dimensional code is stored in the memory address of the touch screen. The starting address is the first address read by the two-dimensional code display.
- Address length: the length of address read and read by the two-dimensional code display.
- Check box: (two-dimensional code generates the following information): if the selection is checked, when the project starts running, the contents of the edit box are written to the address to be read by the two-dimensional code display.
- Edit box: edit box to enter information that you want to write to the specified address.

Note: the two-dimensional code generator only displays the default two-dimensional code in the offline simulation and online simulation, and does not generate a new two-dimensional code. It generates a new two-dimensional code on the screen only.

For example

1、Two dimensional code is fixed information content

Select two dimensional code in the advanced component, select the appropriate size and position in the engineering picture, select the "two-dimensional code to generate the following information" in the two-dimensional code attribute, input the two-dimensional code jump information and click to determine.



2、Two dimensional code is controlled by address variable

Create a two-dimensional code control, set the length of the two bit code address and address, pull into a ASCII input display control, and set the address to start address. To download the project to the touch screen, the contents of the ASCII can be edited to change the content of the two-dimensional code, and the corresponding information can be displayed by scanning the changed two-dimensional code.

One panel connect with multi-machines

Function introduction

One screen multi machine (extension mode): HMI as a master station device, communication with multiple slave stations; when using the extended mode, the configuration address of the HMI host computer software needs to be distinguished from the station number (from the station 1:1#, the slave station 2:2#).

Minimum communication combination

1、HMI（host）+PLC（slave #1）+PLC（slave #2）

2、HMI（host）+PLC（slave #1）+HMI（slave #2）

3、HMI（host）+HMI（slave #1）+HMI（slave #2）

Communication protocol supported by extended mode：PPI、MPI、Modbus。

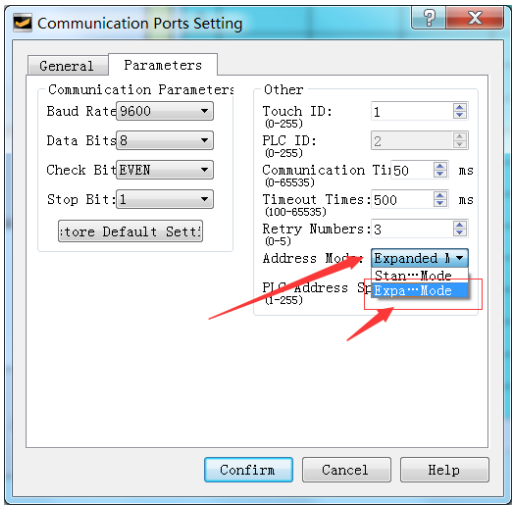
Note how to expand the mode parameter settings: baud rate, slave station, data bits, parity bits and other system parameters.

Main station HMI station number is not recommended to be broadcast address or the same as the slave station number, which will result in communication failure

For example

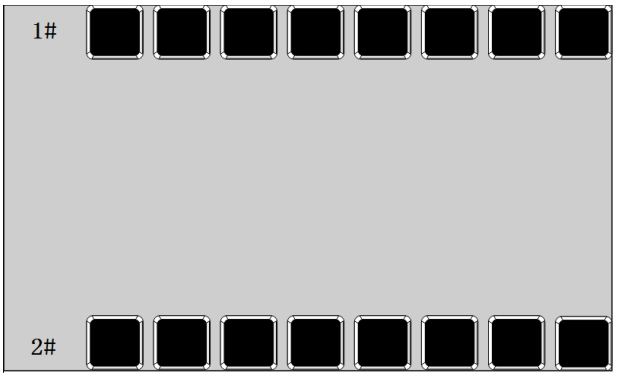
（PPI）：

The software interface double-click to open the Link1 communication port settings of the project window, and change the address mode to the extended mode and save it in the parameter settings interface.



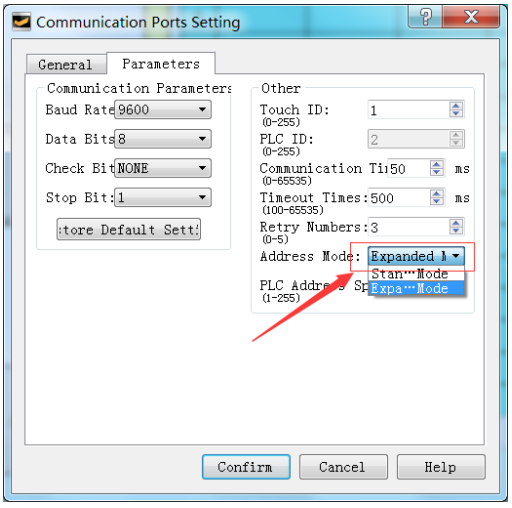
Add two PLC slave address corresponding components to the software screen, for example, 1# is 1, and the station number is 1 PLC.

2# is PLC from the station number 2

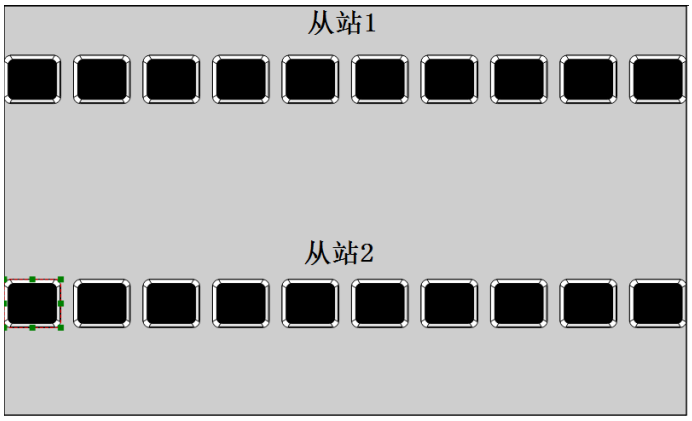


（Modbus）：

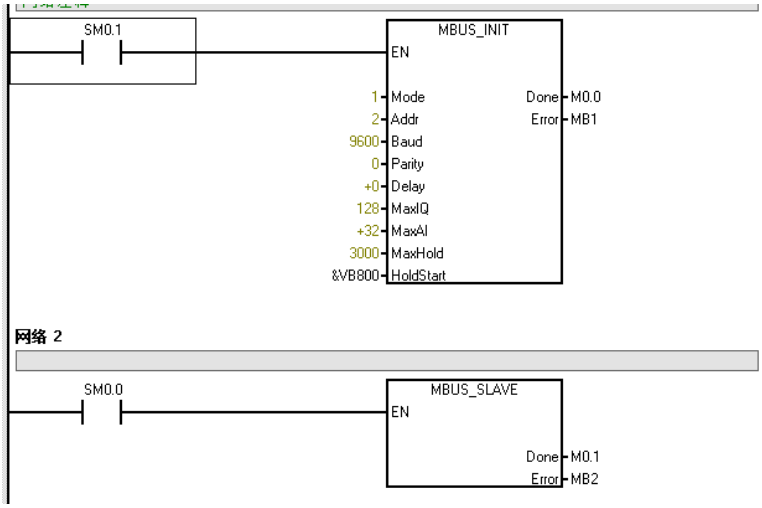
The software interface double-click to open the Link1 communication port settings of the project window, and change the address mode to the extended mode in the parameter settings interface and save it.



Add two PLC slave address corresponding components to the software screen as shown in the diagram, where the slave station 1 is 1, the station number is 1 PLC, and the slave station 2 is PLC from the station number 2.



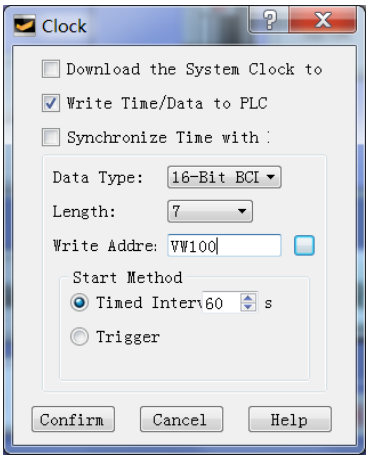
plc program as below,



Timer set up

Function introduction

The clock setting function can be divided into three functions: downloading system time to HMI, writing time to PLC and synchronizing with PLC.



1、Download system time to HMI

Download the system time to HMI.

2、Write time to PLC

- Trigger: when the trigger address is 1, write the time information of the system to the corresponding PLC address. The data type and length are defaults. The default value of data type is 16 bit BCD, and the default value of length is 7.
- Write address: write the system time to the corresponding PLC address.
- The start-up model

✧ Time interval: set the time interval as a time unit and write the system time information to the corresponding PLC address.

✧ Trigger: when the trigger address is 1, write the time information of the system to the corresponding PLC address.

3、Time synchronization with PLC

- Data type and length are defaults. The default value of data type is 16 bit BCD, and the default value of length is 7.
- Read the address: read the address information in the PLC
- Trigger method

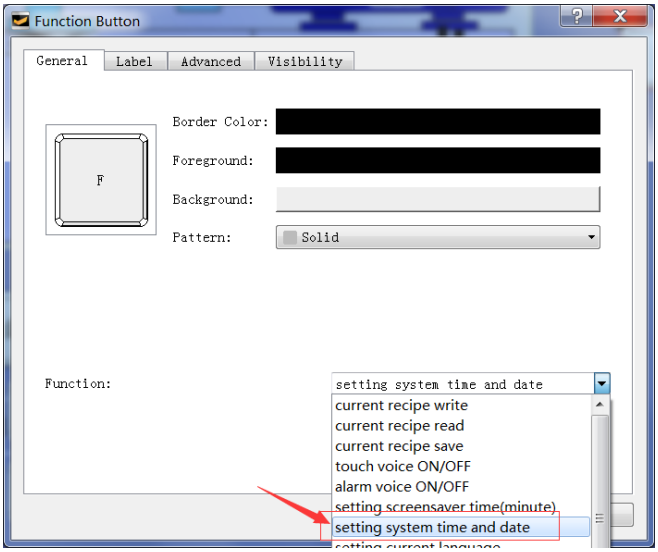
- ✧ Time interval: set the time interval as the time unit, and the information in the corresponding PLC address is read circularly.
- ✧ Trigger: when the trigger address is 1, read the information in the corresponding PLC address.

Note: the scope of the input year is between 1970 and 2037.

For example

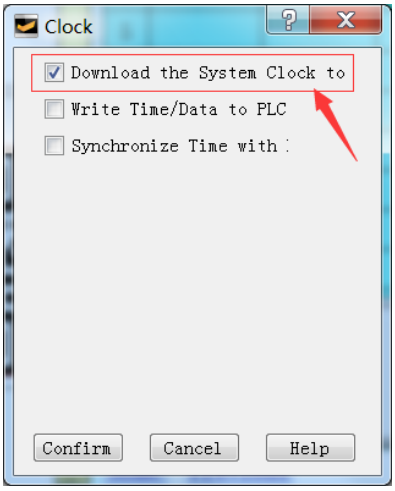
1、Set the system time on the touch screen

Through the function button in the setting of system time function to achieve, or enter the touch screen system settings interface for system time settings.



2、HMI　Download system time to HMI

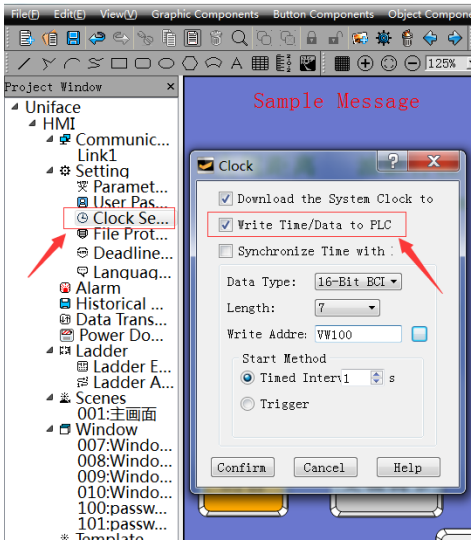
In the project window, select the clock settings, check the download system time to HMI, you can update the time in the host computer to HMI.



3、Write time to PLC

①PLC without real time clock

A, new clock settings, select write time to PLC, set the clock address, such as VW100. The starting time interval is 1s, that is, write PLC once per second.

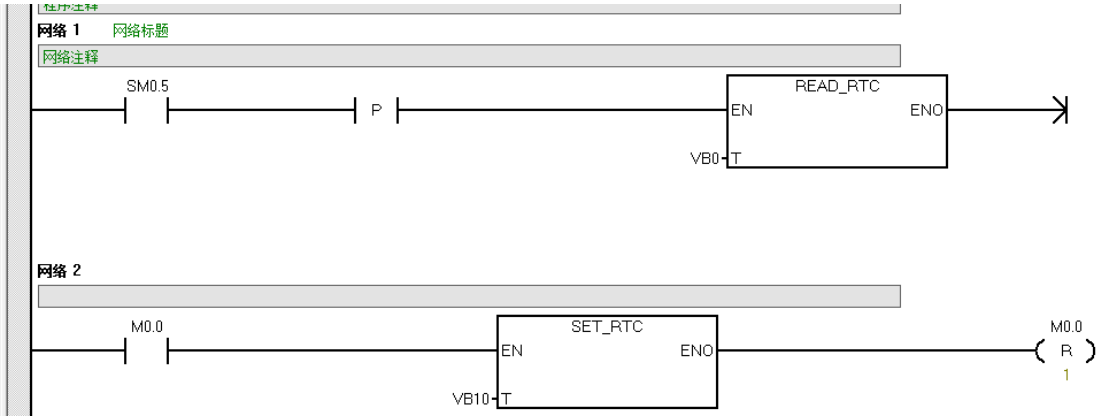


B, To set 7 numeric display or numeric input display in the engineering picture and set their address as VW100 to VW112 respectively, which mean time units as year, month, day, time, minute, second, week correspondingly.

C, Monitor the PLC address VM100 to VM112, and adjust the corresponding format to sixteen hexadecimal to display the time.

②PLC has a real time clock and updates the clock through one bit.

A, Add clock addresses to PLC, such as the VB0



B, Add 8 numerical inputs in Uniface as PLC time display, the data type is 16 bit BCD code, address is VB0~VB7.

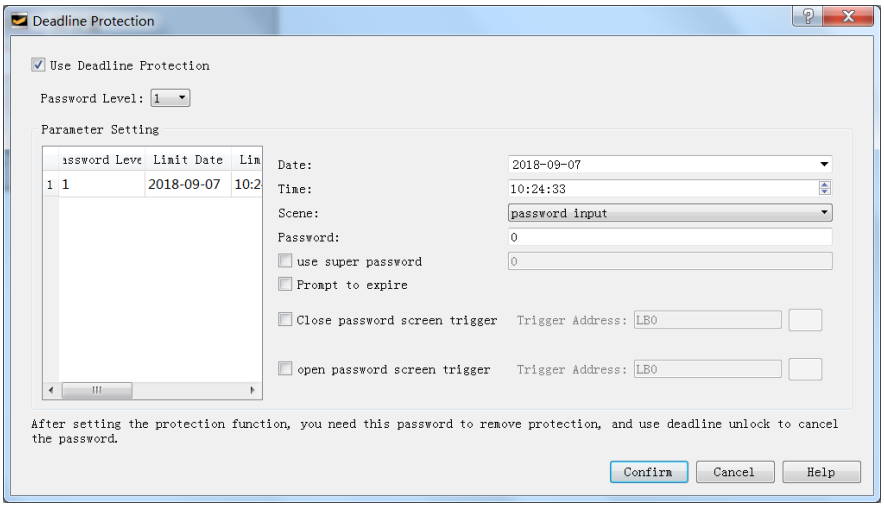
C, Add 8 numerical inputs in Uniface as PLC time setting address, the data type is 16 bit BCD code, address is VB10~VB17.

D, Add a bit button, the address is M0.0, set it as the trigger switch of the clock.

Payment by instalments

Function introduction

The installment function is mainly: the user is able to use HMI within a certain period of time, if the time exceeds the time specified by the user, then HMI will jump to the specified specified screen of the user, so that the HMI cannot continue to use it. If you want to reuse the HMI, the user has to pass through The deadline protection control unlocks it and enters the correct unlock password to use the HMI.



1、Term protection call

In the project window, the deadline protection settings can be checked by using the deadline protection, and the default is not checked. If you want to use click Check, you can make the deadline protection settings.

2、Duration protection settings

Password level: up to 12 levels, the number of popups that are set according to actual needs.

Date: the date of expiration prompt under the current selected password level.

Time: the time of expiration prompt under the current selected password level.

Image: pop up screen with expiration prompt under current password level. (multilevel password level can share a deadline protection screen).

Password: password required to be completed at the current password level.

When the date and time of the corresponding password level arrive, the automatic pop-up period unlocks the picture, and the input password can withdraw from the time

frame and return to the original picture automatically. Otherwise, continue to stay in the current time frame.

3、Super cipher

Set up super password. It's aim to use the super password to untie all stages protection.

4、Prompt overdue

When the expiration date is checked, when the expiry date of the distance is 1 days, 2 days and 3 days, the expiry of the distance period is due to a few days. The pop-up window can be closed directly.

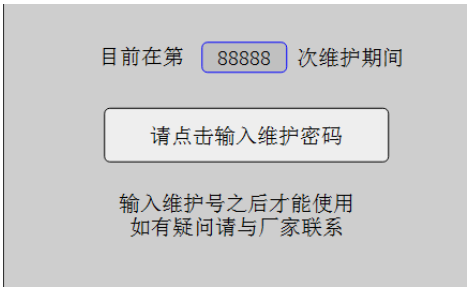
5、Screen trigger notification address

When you close the trigger on the password screen and check the trigger on the password screen, you can place the PLC or HMI address on the notification list.

Remarks: modifying the system time will not affect the expiration date. The expiration date is based on the downtime of the project. That is, there is still 1 days before the expiration date. At this time, the time of system modification will still be triggered on the second day.

6、User expiration pop out

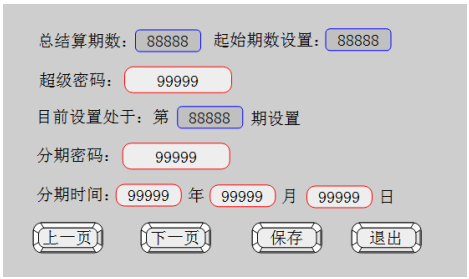
When the new deadline is protected, there will be two windows in the window screen bar, of which password input is the expiration pop-up window. When the deadline arrives, the window is popped up automatically, and the password of the response is required to exit the window for operation. The window screen can be edited and input custom information.



7、Time limit management window

Password edit, another window that automatically pops out, is the deadline management window, using the screen button to click out the window, in which the

expiration date of the corresponding level and the corresponding password can be set on the touch screen.



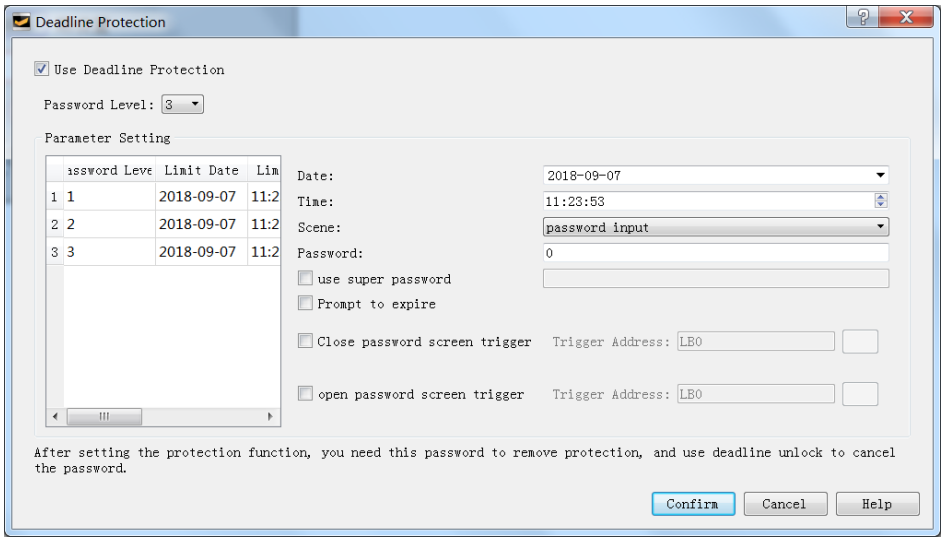
For example

1、Engineering objectives

A project can have three levels of password, respectively, at three different time pop-up time frames, indicating that the client's trial time has arrived, and the payment of the related equipment should be paid. When a part of the money is provided by the customer, the next level password is given, and the next time limit is reached again. When the customer provides all the money, give the highest password permissions and unlock all renewals.

2、Sample operation design

A、In the left side of the project window, click the deadline protection, pop-up deadline protection settings window. Check the duration of protection, select 3 in the password level, select the corresponding date and password respectively. When the setting is completed, click OK.



B、Click on the password input window, set the corresponding manufacturer information and contacts in the page, and put the corresponding payment two-dimensional code. The image of this window screen can be custom edited.

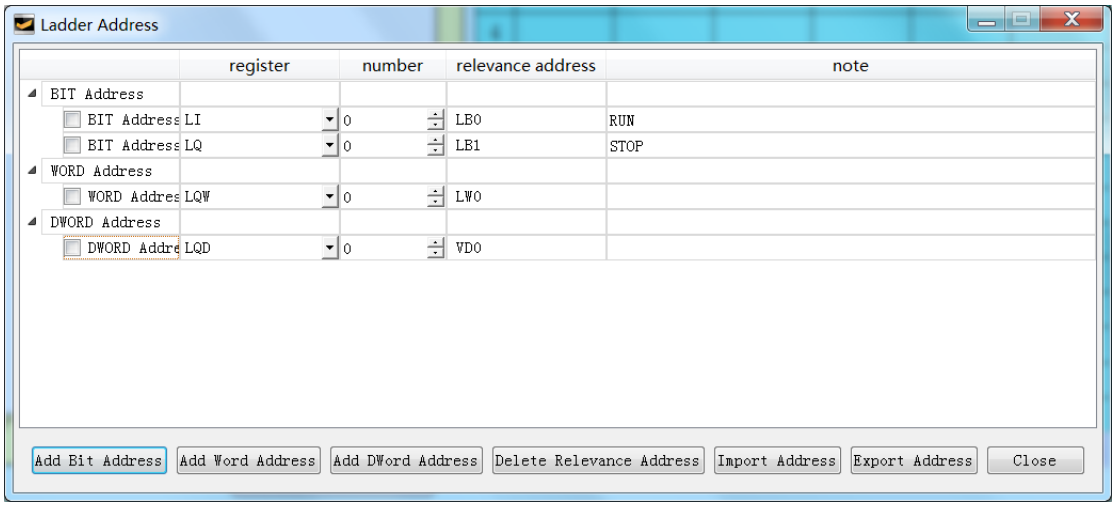
C、To save the above two steps then complete the set up of installment payment.

Ladder chart

Function abstract

Support for ladder logic control in Uniface software. The address of the associated external or internal address is corresponding to the address dedicated to the ladder diagram, and the ladder diagram is programmed by the special address of the ladder diagram. The ladder diagram instruction contains the standard instruction of the IEC61131/1 international ladder diagram. The editing mode of trapezoidal graph is similar to that of daily PLC.

Ladder map address mapping: you can add bit address, word address, double word address. The register is the address type, numbering the address number of the trapezoid map, and the notes can write the actual meaning information of the address. For example, LQD0 is the register LQD+ number 0, the associated address VD100, VD100=LQD0. You can import and export addresses, which can be reused in other projects.



Ladder diagram editing: the left is a ladder diagram instruction set, in the ladder diagram editing screen, as long as clicking on the position of instructions to be placed, click the corresponding instructions, input address information, then the edit screen corresponding ladder diagram instructions. The editing method is basically the same as PLC. Among them, there are commonly used instructions on the ladder bar menu bar, which can be directly clicked on the call. In order to insert the line, to insert the structure vertical line, to delete the structure vertical line, to clear the instruction (equivalent to delete), to display / close the associated address, to import the ladder diagram, to export the ladder diagram. After the completion of the ladder diagram, it will automatically detect the correctness of the compilation. If it is not correct, it will prompt the conversion of the ladder diagram. The ladder diagram automatically saves the ladder diagram project when clicking is determined.

Note: timer instruction, timer base is 10ms.

For example

1、Engineer objective

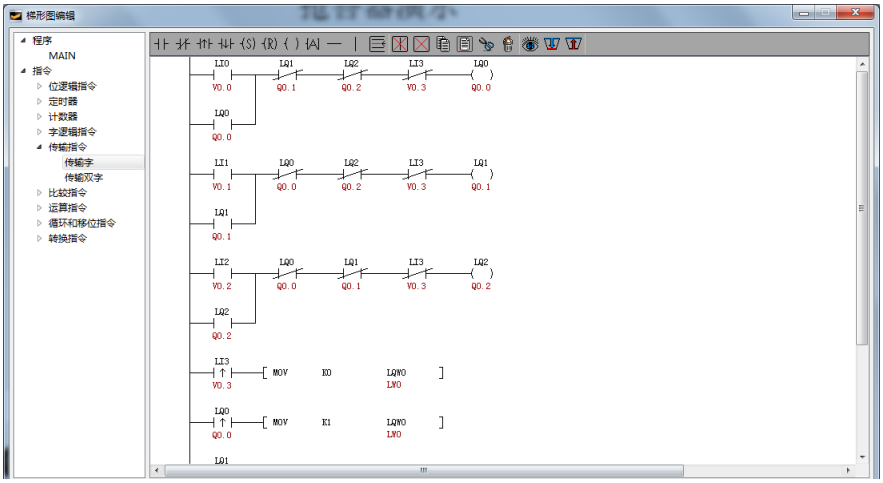
Design a three person responder, when one of the first in the first and second position is pressed to the corresponding seat light, the other players are not effective according to the lamp, the screen shows the name of the player who grabs the lamp. The host button can extinguish all the lights.

2、Engineer design

A、Establish the address corresponding table. Establish the address of the demand separately, and connect the ladder diagram address according to the actual address of the demand. The project contains 7 switch addresses (4 inputs, 3 outputs) and 1 multi state display (word addresses). Add the address name to the note.

Remarks: the address of the ladder diagram can be numbered without any connection. Register LI and LQ can be set aside without regard to actual input and output. For example, V0.0 can be associated with LQ10.

B、Ladder diagram programming based on trapezoidal address. During programming, click to display the associated address for easy writing.



C、After editing the ladder diagram, the relevant controls can be placed in the picture, and the relevant logic is already being executed.

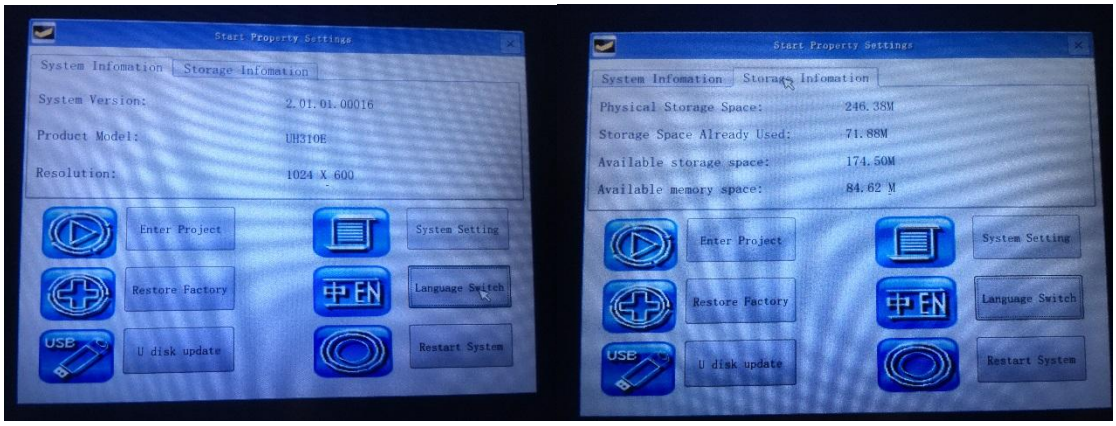
参考样例

梯形图示例.rar　　抢答器样例.rar

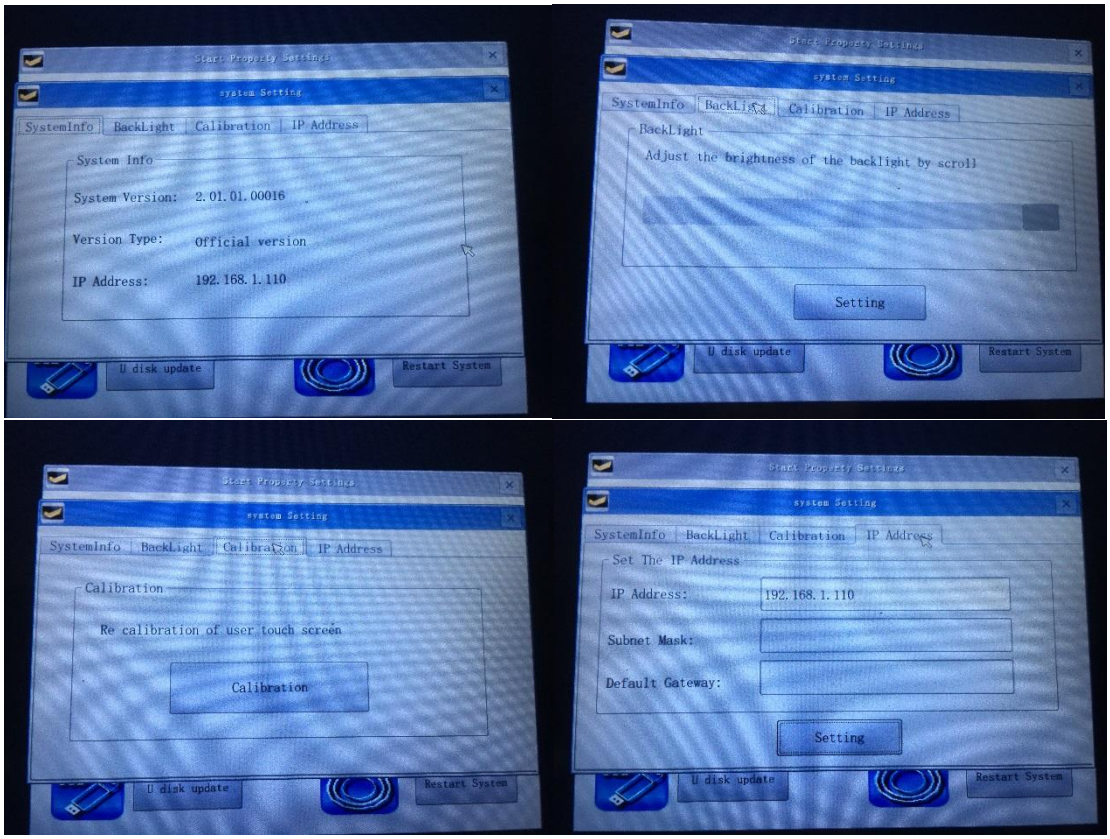
System setup

Function abstract

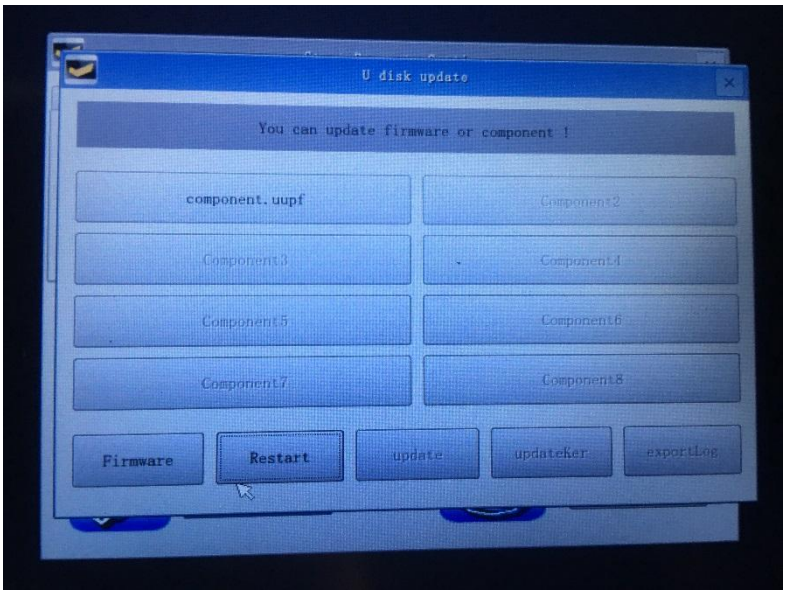
During the boot process, a progress bar will appear, and click the progress bar to enter the boot property interface. The touch screen device system can be set up at the boot interface, and the storage information can be viewed.



System settings, in the system settings, you can view the current system information, including the current application software version number, version type, and the IP address of the machine (if no Ethernet shows no support); can adjust the backlight brightness through a scroll bar; in calibration, the touch screen can be calibrated; IP The address can set the IP of the Ethernet HMI.



U disk update, in the interface, plug in the U disk in the interface can identify the corresponding engineering files and firmware, click the corresponding update file to click the update, after the update is completed, click restart and pull out the U disk to complete the U disk update operation.



Internal register of the system

Function abstract

The internal registers of the system mainly display and control some special functions with the system address, which is convenient for users to trigger relevant system operation through conditions.

Bit Register		
address	illustration	R/W
LB60104	Communication state, ON means communication is abnormal but OFF vice versa	R
LB60105	Communication state, ON means communication is abnormal but OFF vice versa	R
LB60106	Communication state, ON means communication is not normal, OFF vice versa	R
LB60107	Communication abnormal window, when set it being ON, no exception window is allowed to pop out, but set it being OFF then allow the exception window to pop out.	W/R
LB60112	Download the formula. when set it being ON means to download formula to the device and reset automatically.	W/R
LB60113	Formula upload. set it being ON upload formula to HMI and reset automatically.	W/R
LB60114	Save formula, set it being ON to save formula to flash & reset automatically.	W/R
LB60115	Formula download instructions, when formula is being written to the device, this is ON. when download finished, it is OFF.	W/R
LB60116	Formula upload instructions, when formula is being read to the device, this is ON. when upload finished, it is OFF.	W/R
LB60126	Setting staging passwords for duration protection.	W/R
LB60900	Level A automatic reset	W/R
LB60901	Level B automatic reset	W/R
LB60902	Level C automatic reset	W/R
LB60903	Level D automatic reset	W/R

LB60904	Level E automatic reset	W/R
LB60905	Level F automatic reset	W/R
LB60906	Level G automatic reset	W/R
LB60907	Level H automatic reset	W/R
LB60908	New User button, automatic reset	W/R
LB60909	Delete User button and reset automatically	W/R
LB60910	Modify Password button, automatic reset	W/R
LB60911	Modify Grade button, automatic reset	W/R
LB60920	Export History Daily Report Data to U disk, automatic reset.	W/R
LB60921	Export History Monthly Report Data to U disk, automatic reset.	W/R
LB60922	Export History Summary Report Data to U disk, automatic reset.	W/R
LB60970	Link1 Shield Station No. 0	W/R
LB60971	Link1 Shield Station No. 1	W/R
LB60972	Link1 Shield Station No. 2	W/R
LB60973	Link1 Shield Station No. 3	W/R
LB60974	Link1 Shield Station No. 4	W/R
LB60975	Link1 Shield Station No. 5	W/R
LB60976	Link1 Shield Station No. 6	W/R
LB60977	Link1 Shield Station No. 7	W/R
LB60978	Link1 Shield Station No. 8	W/R
LB60979	Link1 Shield Station No. 9	W/R
LB60980	Link2 Shield Station No. 0	W/R
LB60981	Link2 Shield Station No. 1	W/R
LB60982	Link2 Shield Station No. 2	W/R
LB60983	Link2 Shield Station No. 3	W/R
LB60984	Link2 Shield Station No. 4	W/R
LB60985	Link2 Shield Station No. 5	W/R
LB60986	Link2 Shield Station No. 6	W/R
LB60987	Link2 Shield Station No. 7	W/R

LB60988	Link2 Shield Station No. 8	W/R
LB60989	Link2 Shield Station No. 9	W/R
LB60990	Link3 Shield Station No. 0	W/R
LB60991	Link3 Shield Station No. 1	W/R
LB60992	Link3 Shield Station No. 2	W/R
LB60993	Link3 Shield Station No. 3	W/R
LB60994	Link3 Shield Station No. 4	W/R
LB60995	Link3 Shield Station No. 5	W/R
LB60996	Link3 Shield Station No. 6	W/R
LB60997	Link3 Shield Station No. 7	W/R
LB60998	Link3 Shield Station No. 8	W/R
LB60999	Link3 Shield Station No. 9	W/R
Word Register		
address	illustration	R/W
LW60000	16bit-bcd Local time: second, effective range 0-59	R
LW60001	16bit-bcd Local time: minute, effective range 0-59	R
LW60002	16bit-bcd Local time: hour, effective range 0-23	R
LW60003	16bit-bcd Local time: Daily, effective range 1-31	R
LW60004	16bit-bcd Local time: Month valid range 1-12	R
LW60005	16bit-bcd Local time: Year valid range 0-9999	R
LW60006	16bit-bcd Local time: Week valid range 1-7	R
LW60007	Total System Running time: hour	R
LW60008	Total System Running time: minute	R
LW60009	Total System Running time: second	R
LW60010	Touch status 1: touch, 0: no touch at present.	R
LW60011	Touch coordinate: X axis, the coordinate value of X axis when it is in touch.	R
LW60012	Touch coordinate: Y axis, the coordinate value of Y axis when it is in touch.	R
LW60013	Touch off coordinate: X, the coordinate value of X axis when	R

	touch off.	
LW60014	Touch off coordinate: Y, the coordinate value of Y axis when touch off.	R
LW60802	Index for group formula: search one formula group from some groups formula.	W/R
LW60803	Index for the present formula: search one formula from present formula group.	W/R
LW60900	Account name	W/R
LW60930	Old password (new user: password modified password: old password)	W/R
LW60960	New password (new user: confirm password. Change Password: new password)	W/R
LW60990	Administrator password (new user: administrator password. change password: confirm password)	W/R
LW61000	Staging passwords, 32 bits	W/R
LW61002	Current stages	W/R
LW61003	Current edit stage	W/R
LW61004	Total stages	W/R
LW61005	Initial stages	W/R
LW61006	Super Password, 32 bit	W/R
LW61008	Staging time for YEAR	W/R
LW61009	Staging time for MONTH	W/R
LW61010	Staging time for DAY	W/R