InoTouchPad Guidance

V1.1_Oct 18, 2022_PMTS

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IT7000 Controls
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IT7000 Products

Development Platform

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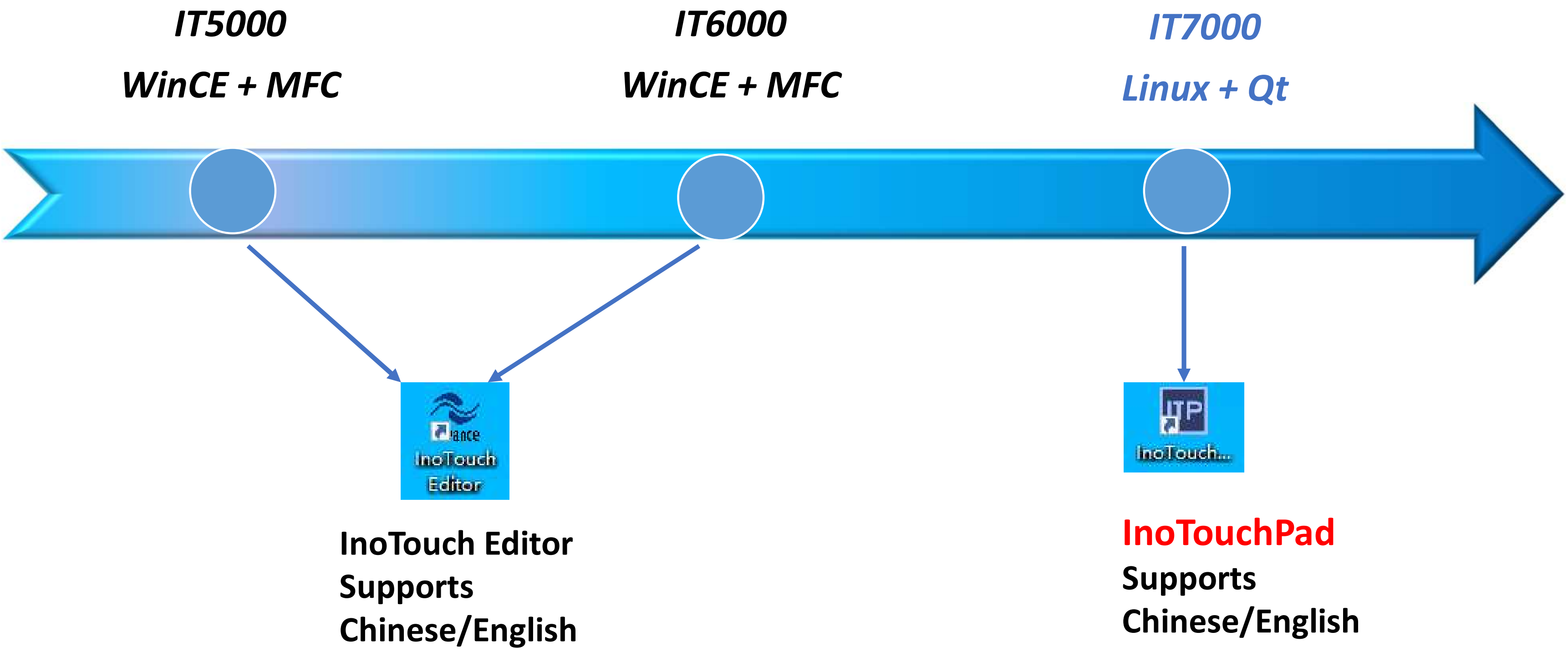

ance
InoTouch Editor
ITP
InoTouch...

IT5000

WinCE + MFC

IT6000

WinCE + MFC

IT7000

Linux + Qt

InoTouch Editor
Supports
Chinese/English

InoTouchPad
Supports
Chinese/English

*** Please note that IT6000 project cannot be converted to IT7000 project**

*** Qt is a cross-platform C++ GUI library**

Models

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IT7070T	IT7070E	IT7100E	IT7150E
7′ T: Standard Configuration	**7′** E: With Ethernet Port	**10′** E: With Ethernet Port	**15′** E: With Ethernet Port

Models

INOVANCE

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Configuration	IT7070E/T	IT7100E	IT7150E
CPU	Cortex A8 600MHz	Cortex A8 1GHz	Cortex A8 1GHz
Flash	128M	256M	256M
DRAM	128M DDR3	256M DDR3	256M DDR3
SD card slot	√(only IT7070E)	√	√
Serial port	COM1 COM2 COM3(only IT7070E)	COM1 COM2 COM3	COM1 COM2 COM3
Ethernet port	√(only IT7070E)	√	√
Mini USB B-type	√	√	√
USB B-type	--	--	--
USB A-type	√	√	√
Input voltage	24VDC±20%	24VDC±20%	24VDC±20%
Rated input current	250mA	300mA	800mA
Protection level	Front panel IP65, back cover IP20	Front panel IP65, back cover IP20	Front panel IP65, back cover IP20
Display size	7 inch	10.1 inch	15 inch
Resolution	800*480	1024*600	1024*768

INOVANCE

InoTouchPad UI framework

UI Introduction

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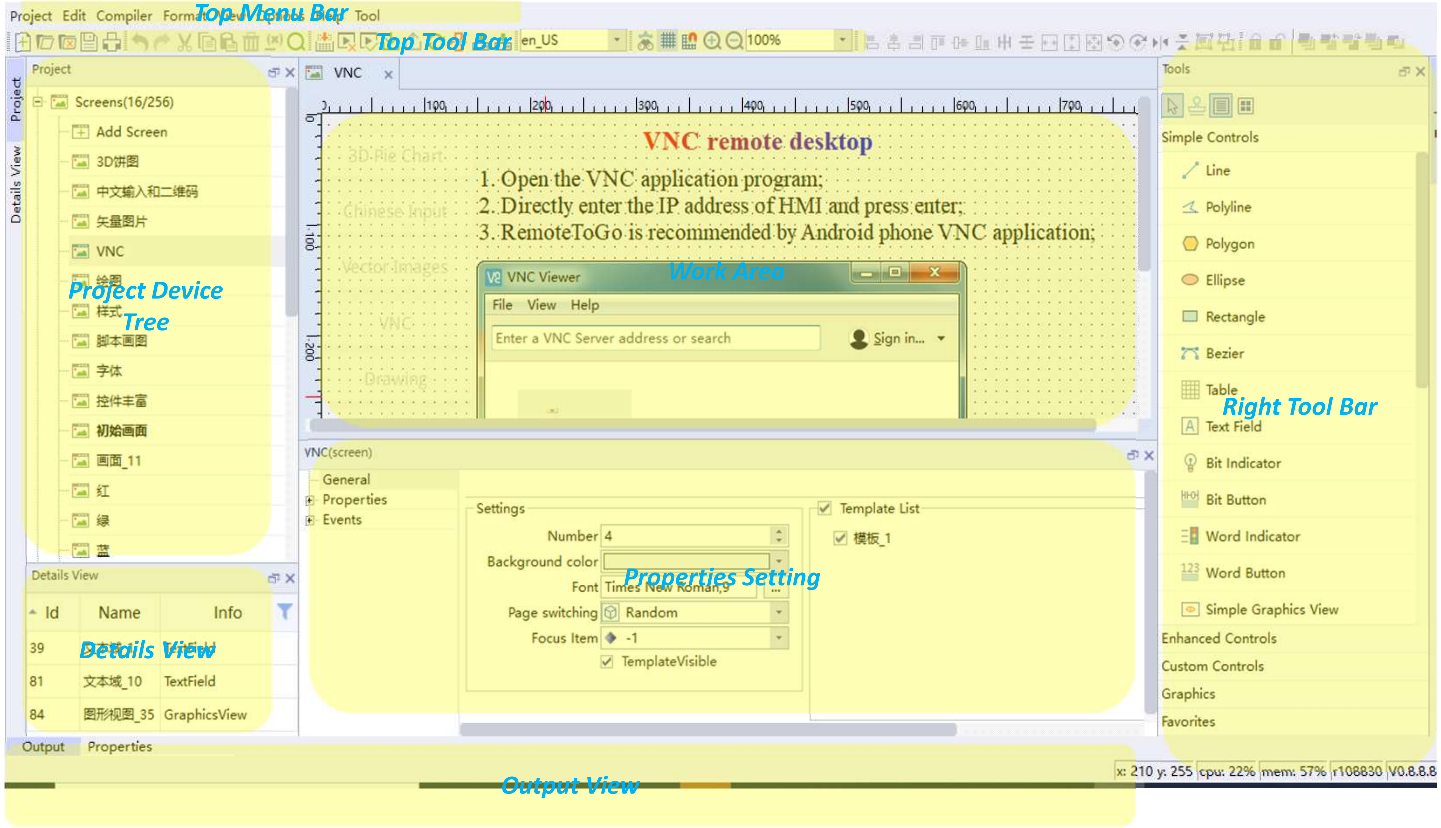
Top Menu Bar
Top Tool Bar
Project Device Tree
Work Area
Properties Setting
Details View
Right Tool Bar
Output View
Project
Edit
Compiler
Format
View
Tool
en_US
100%
Screens(16/256)
Add Screen
3D饼图
中文输入和二维码
矢量图片
VNC
绘图
样式
脚本画图
字体
控件丰富
初始画面
画面_11
红
绿
蓝
Details View
Id
Name
Info
Tools
Simple Controls
Line
Polyline
Polygon
Ellipse
Rectangle
Bezier
Table
Text Field
Bit Indicator
Bit Button
Word Indicator
Word Button
Simple Graphics View
Enhanced Controls
Custom Controls
Graphics
Favorites
VNC(screen)
General
Properties
Events
Output
Properties
VNC Viewer
File
View
Help
Enter a VNC Server address or search
Sign in...

VNC remote desktop

1. Open the VNC application program;
2. Directly enter the IP address of HMI and press enter;
3. RemoteToGo is recommended by Android phone VNC application;

Id	Name	Info
39		TextField
81	文本域_10	TextField
84	图形视图_35	GraphicsView

Settings
Number 4
Background color
Font Times New Roman,9
Page switching Random
Focus Item -1
☑ TemplateVisible

☑ Template List
☑ 模板_1

x: 210 y: 255 cpu: 22% mem: 57% r108830 V0.8.8.8

- ➢ Multiple function areas
- ➢ Visual display
- ➢ Convenient Operation

UI Introduction

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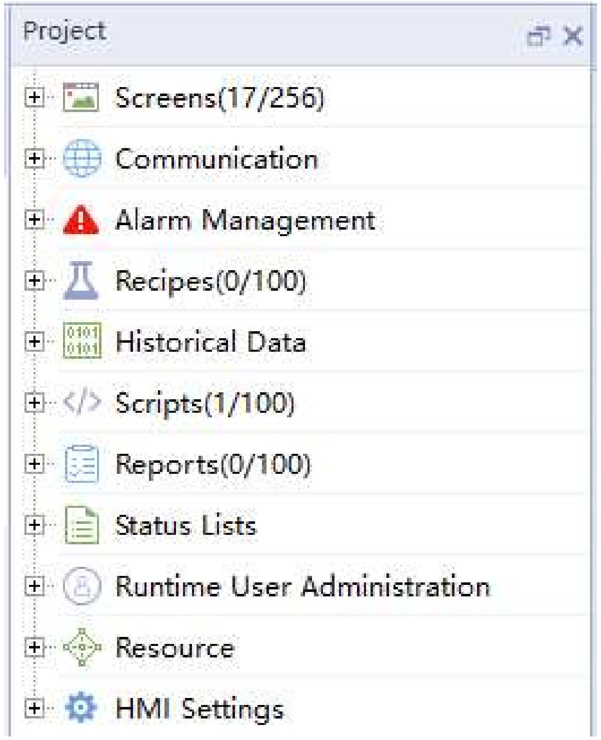
Project Device Tree



Project

- Screens(17/256)
- Communication
- Alarm Management
- Recipes(0/100)
- Historical Data
- Scripts(1/100)
- Reports(0/100)
- Status Lists
- Runtime User Administration
- Resource
- HMI Settings

- **Screens:** Create/Delete users' screen or templates
- **Communication:** Create/Delete communication connection/variants
- **Alarm Management:** Create alarm item, set alarm condition, content and display mode
- **Recipes:** Create recipes and recipe data
- **Historical Data:** Create historical data record
- **Scripts:** Create script program file
- **Reports:** Set table view display
- **Status List:** Create graphical/text lists for controls with state transitions
- **Runtime User Administration:** Create users/user group and user authority management
- **Resource:** Set project language
- **HMI Settings:** Project management and setting

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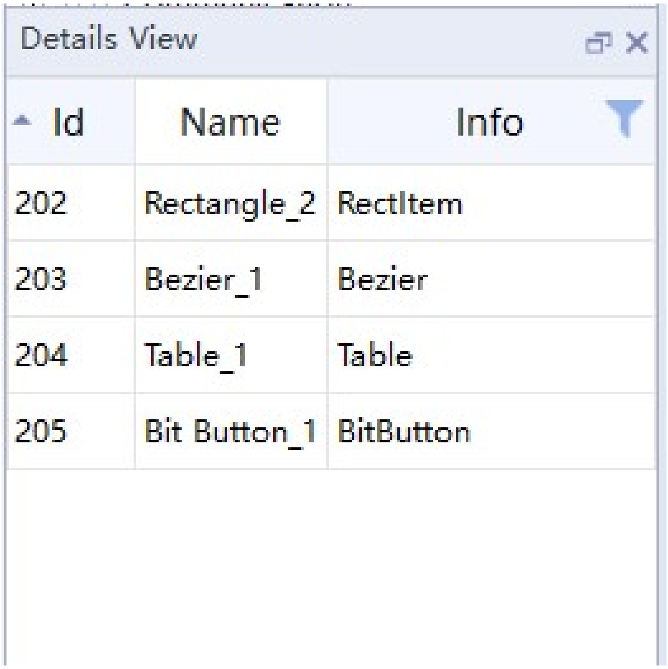
➢ Details View



Id	Name	Info
202	Rectangle_2	RectItem
203	Bezier_1	Bezier
204	Table_1	Table
205	Bit Button_1	BitButton

- **Display all controls in current screen, when there are too many controls in the screen, users can select specified controls in details view**
- **Display all single controls of a combination control, when users need modify specified control of a combination control, they can select in details view**
- **Display variants of a variant group. You can drag/drop the variants in details view to work area directly**

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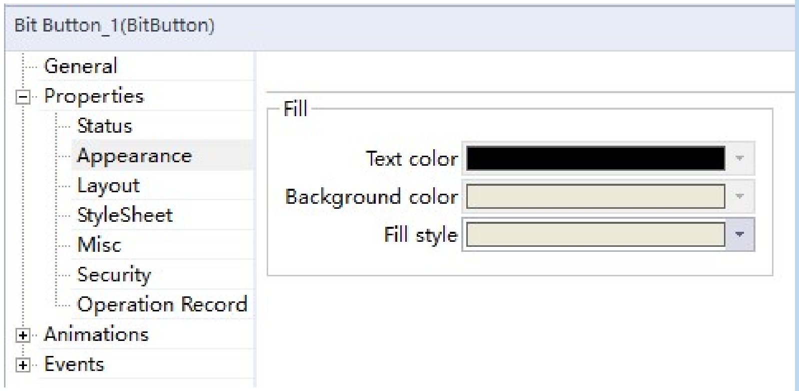
Properties Setting



Bit Button_1(BitButton)

- General
- Properties
  - Status
  - Appearance
  - Layout
  - StyleSheet
  - Misc
  - Security
  - Operation Record
- Animations
- Events

Fill

Text color

Background color

Fill style

- **General:** General Settings
- **Properties:** Including status, appearance, style, operation authority etc.
- **Animations:** Sets the controls to move according to setting conditions
- **Events:** Different operation of controls can map to system event(functions) to operate project objects.

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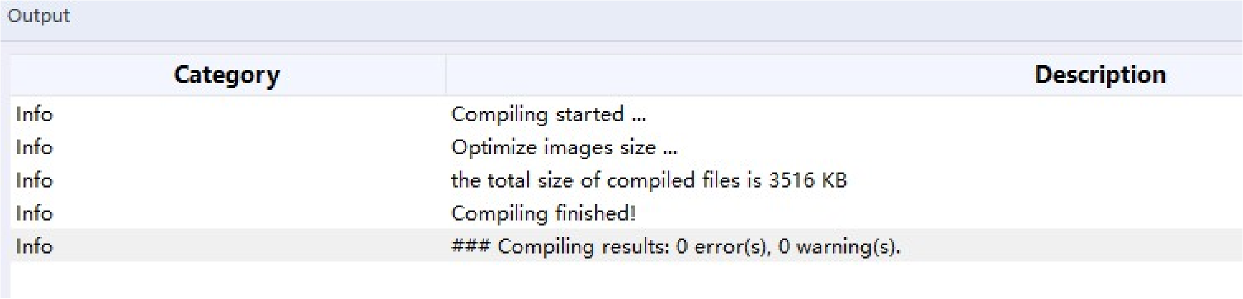
➢ Output View



Output

Category	Description
Info	Compiling started ...
Info	Optimize images size ...
Info	the total size of compiled files is 3516 KB
Info	Compiling finished!
Info	### Compiling results: 0 error(s), 0 warning(s).

- **Display the compile result of software configurations**

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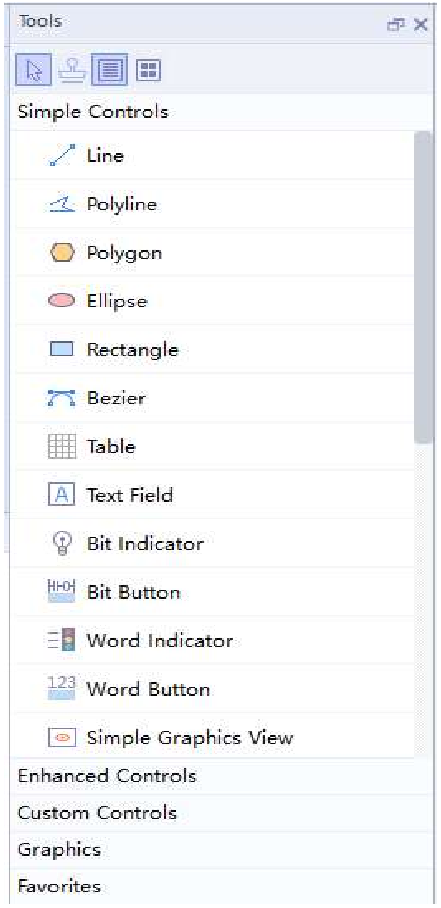
Tool Bar


Tools
Simple Controls
Line
Polyline
Polygon
Ellipse
Rectangle
Bezier
Table
Text Field
Bit Indicator
Bit Button
Word Indicator
Word Button
Simple Graphics View
Enhanced Controls
Custom Controls
Graphics
Favorites

- Tool navigation window, containing system-supported configuration controls and gallery, can be dragged directly to the work area.
- **Simple Controls:** Vector drawing controls, buttons, switches, image display controls, numerical input and display, text input and display, etc.
- **Enhanced Controls:** Functional Controls like bars, slider, alarm view, data view, etc.
- **Custom Controls:** It is an extensible function supported by the system. Users can develop specified controls by using QT development environment(third party).
- **Graphics:** Vector graphics and various formats of pictures for graphical display of controls
- **Favorites:** Collection of good configuration of specific functions of the object, reuse directly by dragging to work area.

InoTouchPad Configurations

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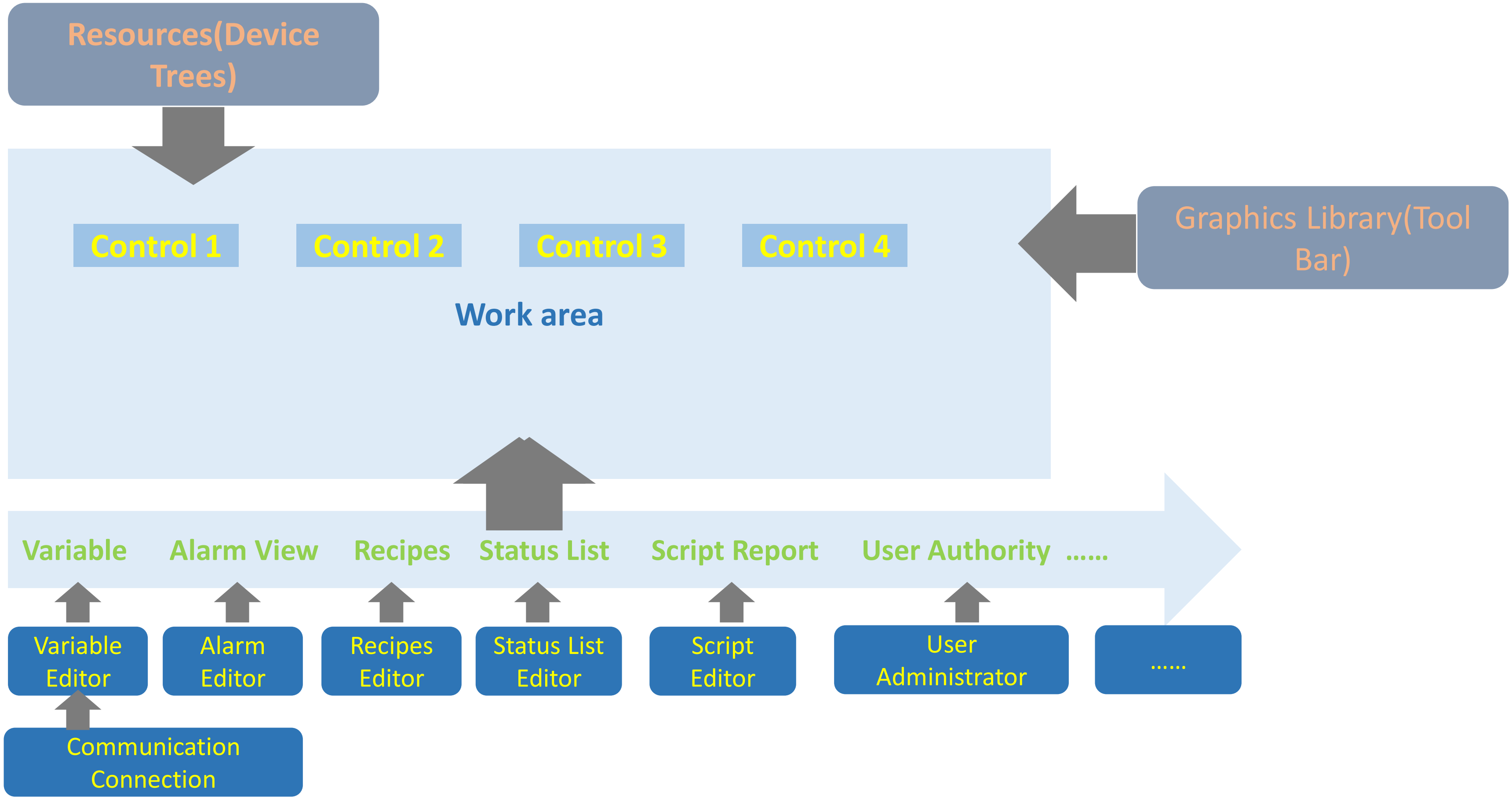
Configuration Model



Resources(Device Trees)

Control 1

Control 2

Control 3

Control 4

Work area

Graphics Library(Tool Bar)

Variable Alarm View Recipes Status List Script Report User Authority ……

Variable Editor

Alarm Editor

Recipes Editor

Status List Editor

Script Editor

User Administrator

……

Communication Connection

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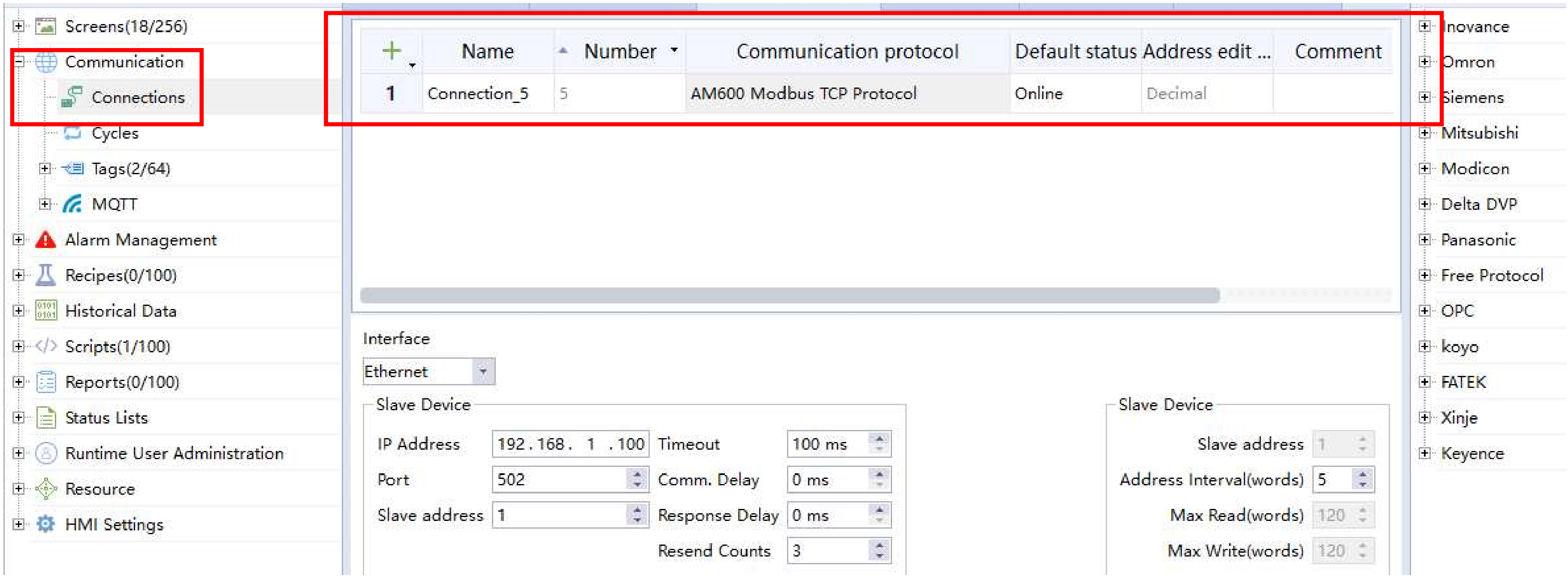
➢ Communication Connection


Screens(18/256)
Communication
Connections
Cycles
Tags(2/64)
MQTT
Alarm Management
Recipes(0/100)
Historical Data
Scripts(1/100)
Reports(0/100)
Status Lists
Runtime User Administration
Resource
HMI Settings
Inovance
Omron
Siemens
Mitsubishi
Modicon
Delta DVP
Panasonic
Free Protocol
OPC
koyo
FATEK
Xinje
Keyence

+	Name	Number	Communication protocol	Default status	Address edit ...	Comment
1	Connection_5	5	AM600 Modbus TCP Protocol	Online	Decimal	

Interface: Ethernet

Slave Device

IP Address: 192 . 168 . 1 . 100
Port: 502
Slave address: 1
Timeout: 100 ms
Comm. Delay: 0 ms
Response Delay: 0 ms
Resend Counts: 3

Slave Device

Slave address: 1
Address Interval(words): 5
Max Read(words): 120
Max Write(words): 120

Get into Communication >> Connections, then add a connection and select communication protocol. Be noted users can select the address edit mode as Decimal or Hex.

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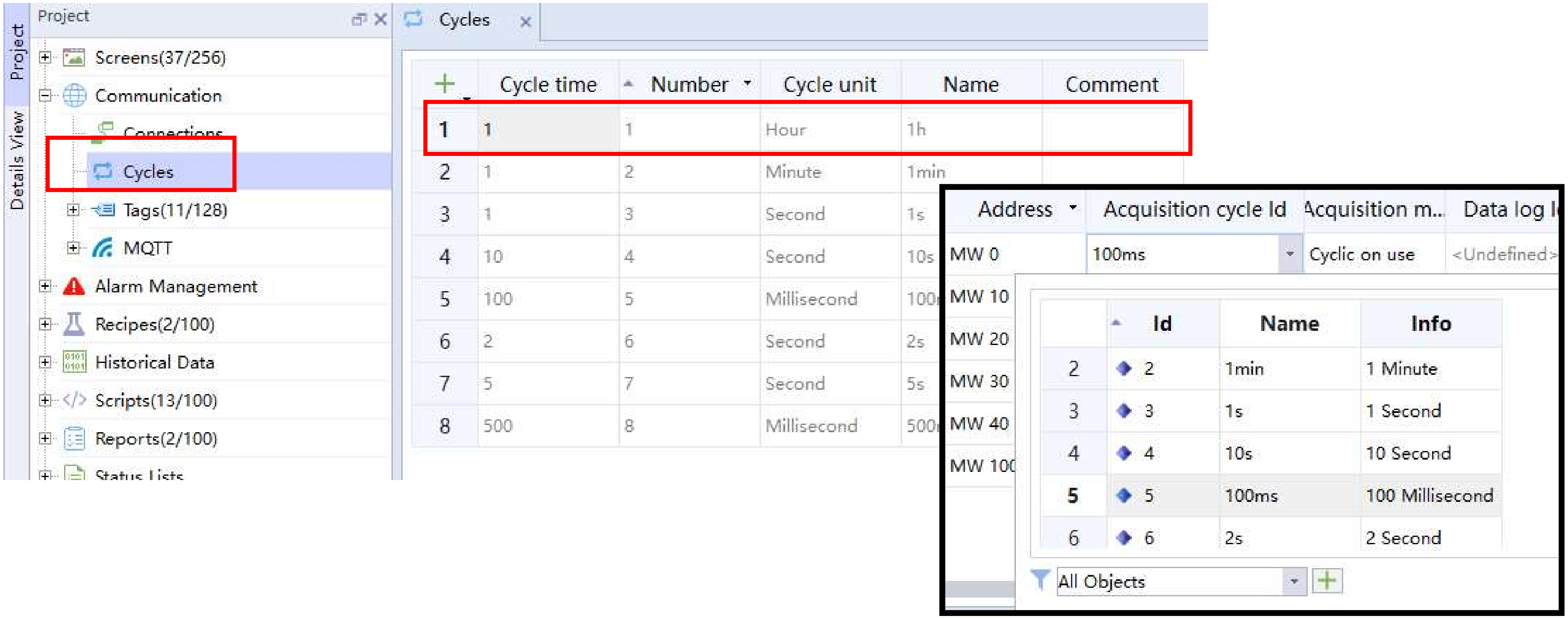
➢ Communication Cycles


Project
Details View
Project
Screens(37/256)
Communication
Connections
Cycles
Tags(11/128)
MQTT
Alarm Management
Recipes(2/100)
Historical Data
Scripts(13/100)
Reports(2/100)
Status Lists
Cycles

	Cycle time	Number	Cycle unit	Name	Comment
1	1	1	Hour	1h	
2	1	2	Minute	1min	
3	1	3	Second	1s	
4	10	4	Second	10s	
5	100	5	Millisecond	100	
6	2	6	Second	2s	
7	5	7	Second	5s	
8	500	8	Millisecond	500	

Address	Acquisition cycle Id	Acquisition m...	Data log l
MW 0	100ms	Cyclic on use	<Undefined>
MW 10			
MW 20			
MW 30			
MW 40			
MW 10			

	Id	Name	Info
2	2	1min	1 Minute
3	3	1s	1 Second
4	4	10s	10 Second
5	5	100ms	100 Millisecond
6	6	2s	2 Second

All Objects

A ‘cycle’ is a pre-defined time for tag(variable) capture(or refresh) cycle which can be used in ‘Tags’. There are some built in cycle time(100ms, 500ms, 1s, 1 min, etc.), Users can add customized cycle time as they want.

Variables(Tags)

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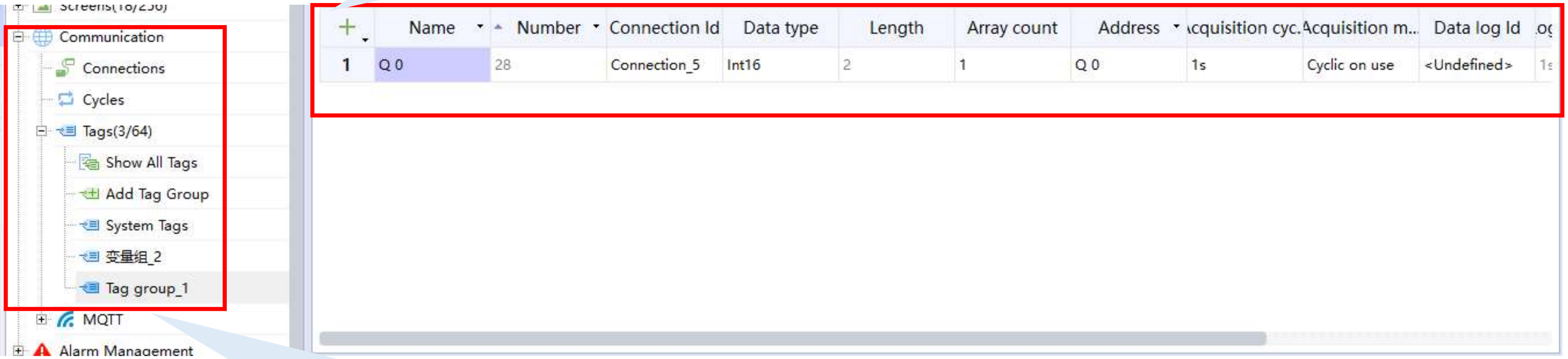
➢ Variables

Add Variable >> Set ‘Name’, ‘Connection Id’, ‘Address’ ……


Screens(18/256)
Communication
Connections
Cycles
Tags(3/64)
Show All Tags
Add Tag Group
System Tags
变量组_2
Tag group_1
MQTT
Alarm Management

	Name	Number	Connection Id	Data type	Length	Array count	Address	cquisition cyc.	Acquisition m...	Data log Id	og
1	Q 0	28	Connection_5	Int16	2	1	Q 0	1s	Cyclic on use	<Undefined>	1s

Communication >> Tags >> Add Tag Group >> Select specified Tag Group

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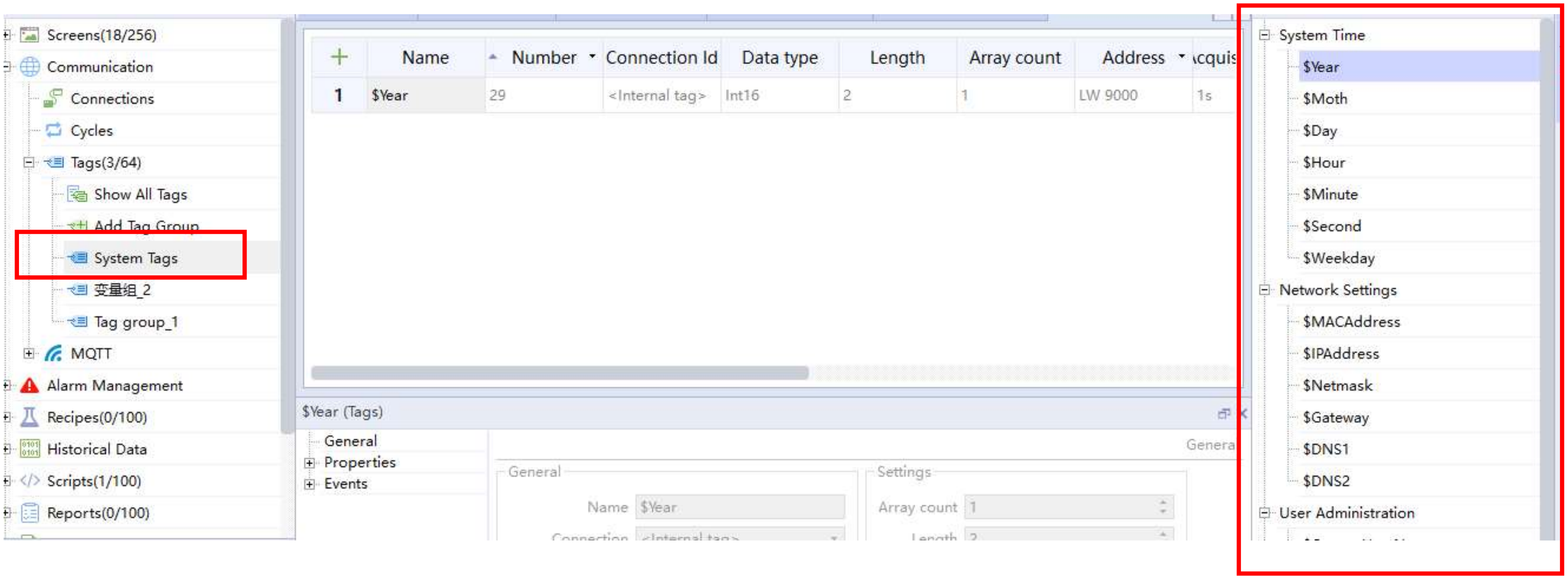
System Variable



	Name	Number	Connection Id	Data type	Length	Array count	Address	cquis
1	$Year	29	<Internal tag>	Int16	2	1	LW 9000	1s

Screens(18/256)
Communication
Connections
Cycles
Tags(3/64)
Show All Tags
Add Tag Group
System Tags
变量组_2
Tag group_1
MQTT
Alarm Management
Recipes(0/100)
Historical Data
Scripts(1/100)
Reports(0/100)
$Year (Tags)
General
Properties
Events
General
Name $Year
Settings
Array count 1
System Time
$Year
$Moth
$Day
$Hour
$Minute
$Second
$Weekday
Network Settings
$MACAddress
$IPAddress
$Netmask
$Gateway
$DNS1
$DNS2
User Administration

System Tags are built in variable which can be directly used by users.

Variables(Tags)

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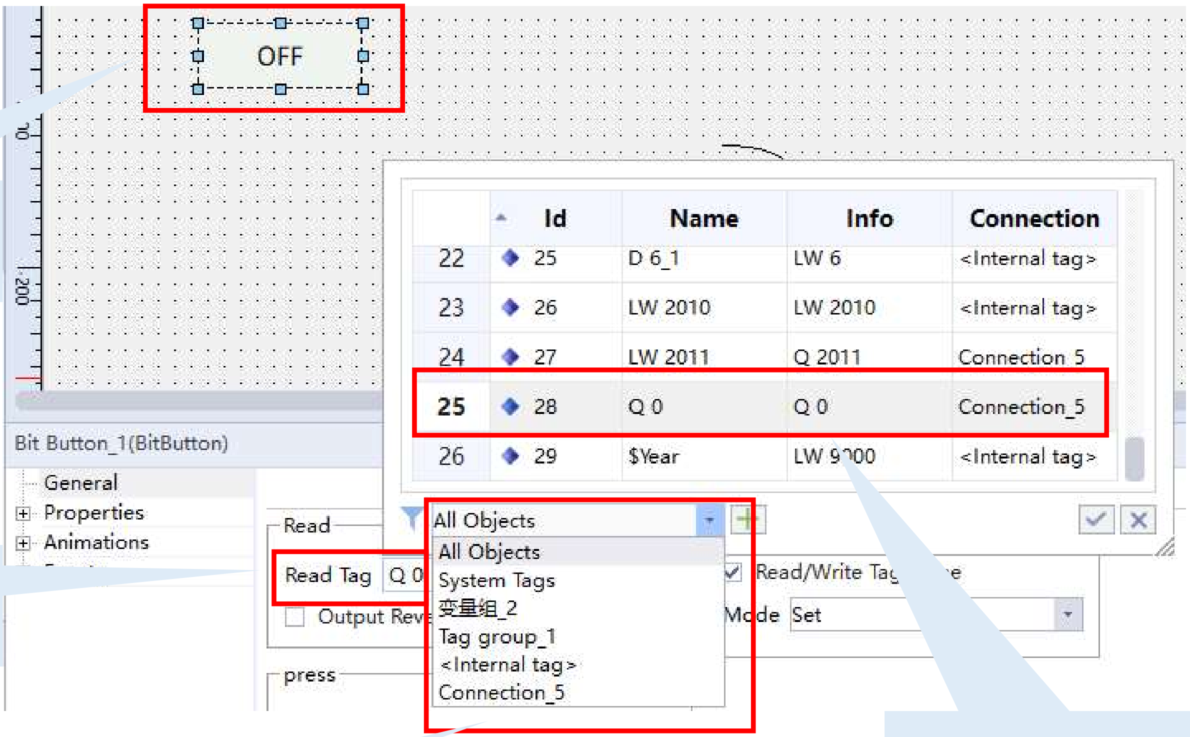
➢ Map Variables to Controls


OFF
Bit Button_1(BitButton)
General
Properties
Animations
Read
Output Reve
press
Read/Write Tag

	Id	Name	Info	Connection
22	25	D 6_1	LW 6	<Internal tag>
23	26	LW 2010	LW 2010	<Internal tag>
24	27	LW 2011	Q 2011	Connection_5
25	28	Q 0	Q 0	Connection_5
26	29	$Year	LW 9000	<Internal tag>

All Objects

- All Objects
- System Tags
- 变量组_2
- Tag group_1
- <Internal tag>
- Connection_5

Read Tag Q 0

Mode Set

1. Click specified Control

2. Read Tag

3. Select Tag Group.('All Objects' as default)

4. Select Variable

Variables(Tags)

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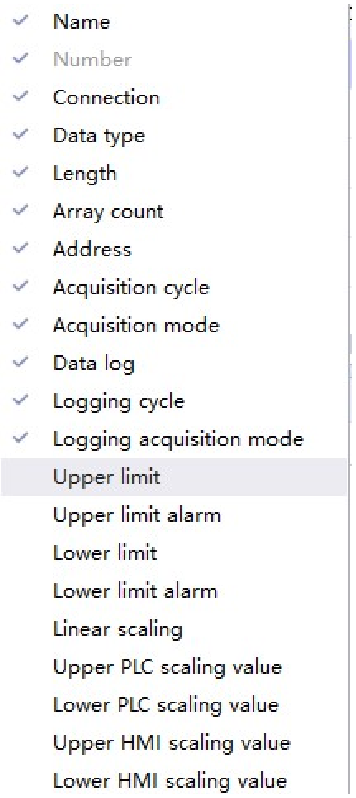
➢ Variables Properties



- ✓ Name
- ✓ Number
- ✓ Connection
- ✓ Data type
- ✓ Length
- ✓ Array count
- ✓ Address
- ✓ Acquisition cycle
- ✓ Acquisition mode
- ✓ Data log
- ✓ Logging cycle
- ✓ Logging acquisition mode
- Upper limit
- Upper limit alarm
- Lower limit
- Lower limit alarm
- Linear scaling
- Upper PLC scaling value
- Lower PLC scaling value
- Upper HMI scaling value
- Lower HMI scaling value

1	Number	Tag ID, assigned automatically
2	Connection	Tag Connection:select tap map to certain connection(or device)
3	DataType	Data type:int16,int32,uint16,uint32,float,double, string,bool,datetime,wstring
4	Length	Tag length(byte), calculate automatically according to data type and arry count
5	ArrayCount	while array count >1, am array will be create and can be access via format like tag[array index]
6	Address	Tag map address
7	AcquisitionCycle	Refresh time of tag
8	AcquisitionMode	Cyclic on use: update when use tag in current screen On demand: update via invoke function 'UpdateTag' cyclic continue: keep updating
9	DataLog	Data log of tag, undefined as default, if need record tag value, need select certain datalog
10	LoggingCycle	capture time of tag
11	LoggingAcquisitionMode	On change: capture when value change On demand: capture via invoke function 'LogTag' cyclic continue: keep capturing

12	UpperLimit	Upper limit
13	UppeLlimitAlarm	Optional, if selected while over uppper limit there is an alram occur
14	LowerLimit	Lower limit
15	LowerLimitAlarm	Optional, if selected while below lower limit there is an alarm occur
16	LinearScaling	Enable linear scaling
17	UpperPLCScalingValue	if upperPLCscalingvalue=100/lowerPLCscaling value=0 and upperHMIscalingvalue=10/lowerHMIscaling value=0, then when PLC(or other device) register value=50, the tag display in HMI=5
18	LowerPLCScalingValue	
19	UpperHMIScalling Value	
20	LowerHMIScalingValue	
21	StartValue	Original value of tag
22	TagGroup	TagGroup
23	Comment	variable comment, no more than 500 characters

Variables(Tags)

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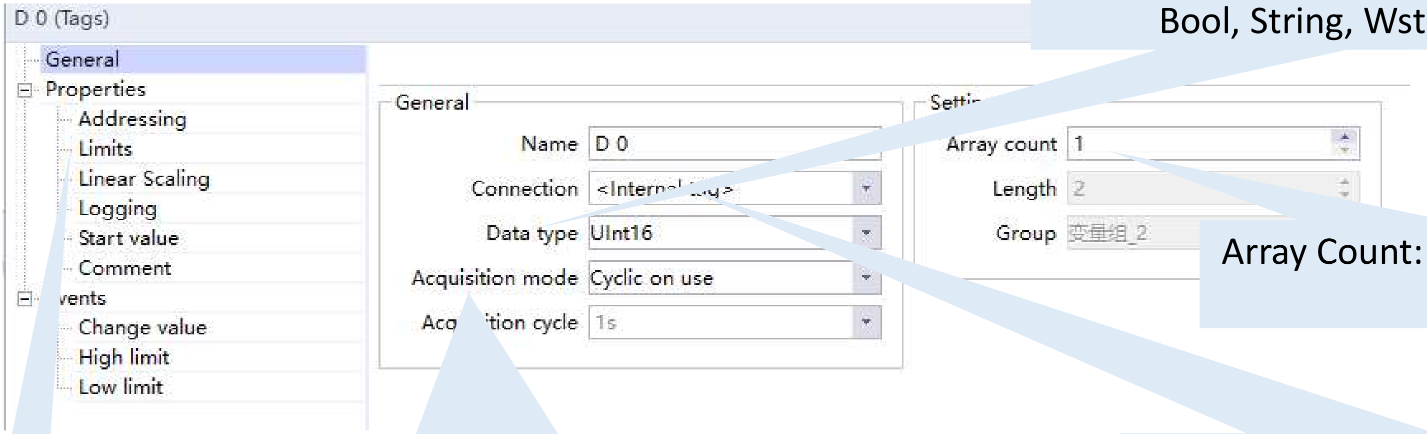
➢ Variable Properties



D 0 (Tags)

General
Properties
Addressing
Limits
Linear Scaling
Logging
Start value
Comment
vents
Change value
High limit
Low limit

General

Name D 0

Connection <Intern g>

Data type UInt16

Acquisition mode Cyclic on use

Aco ition cycle 1s

Setti

Array count 1

Length 2

Group 变量组_2

Data Type: Int/Uint(16/32), Double, Float, Bool, String, Wstring, DataTime

Array Count: When > 1, variable is an array.

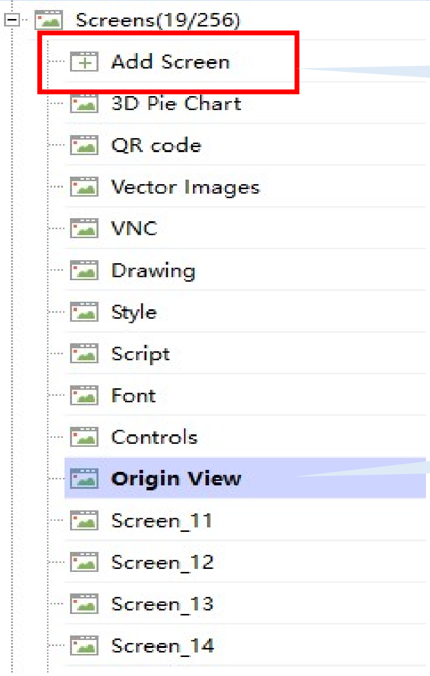
Connection: select connections between HMI and other device(PLCs, Servo, AC drives)

Acquisition Mode: Cyclic on use, Cyclic continuous, On demand

High Limit/Low Limit

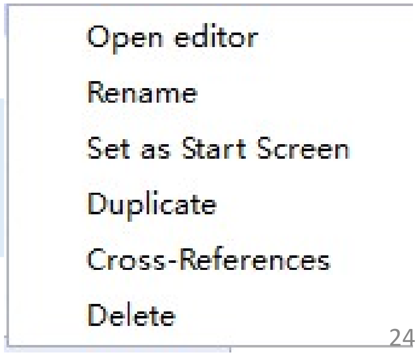
Screen

Screen is the basic unit of HMI runtime display. The screen can be divided into basic screens, embed screens, pop-up screens and template screens. The contents of the template screen are generally public controls and objects in user projects. For example, the menu buttons designed in the template are available for every screen.

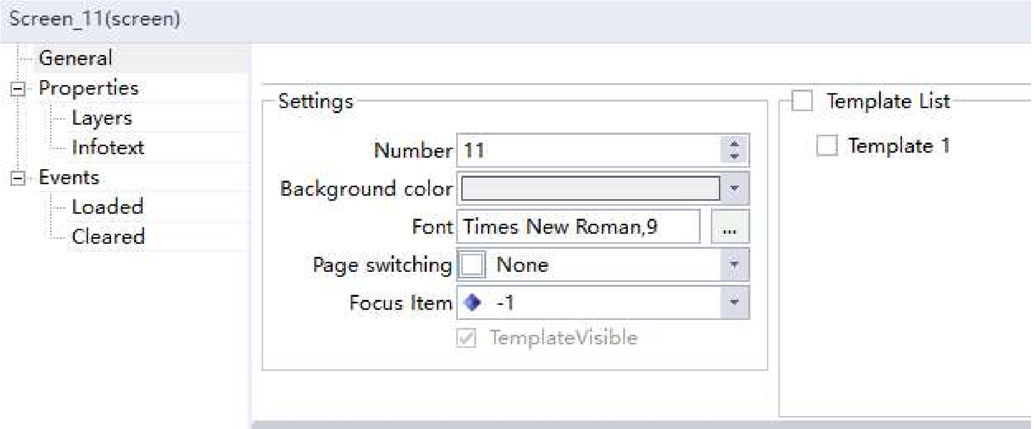

Screens(19/256)
Add Screen
3D Pie Chart
QR code
Vector Images
VNC
Drawing
Style
Script
Font
Controls
Origin View
Screen_11
Screen_12
Screen_13
Screen_14

Double click to add a screen

Select a screen then right click to modify/operate screen


Open editor
Rename
Set as Start Screen
Duplicate
Cross-References
Delete

➢ Screen Normal Properties


Screen_11(screen)
General
Properties
Layers
Infotext
Events
Loaded
Cleared
Settings
...

Number 11

Background color

Font Times New Roman,9

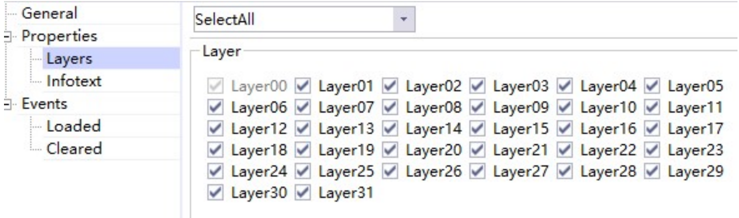
Page switching ☐ None

Focus Item -1

☑ TemplateVisible

☐ Template List

☐ Template 1


General
Properties
Layers
Infotext
Events
Loaded
Cleared
Layer

SelectAll

☑ Layer00 ☑ Layer01 ☑ Layer02 ☑ Layer03 ☑ Layer04 ☑ Layer05
☑ Layer06 ☑ Layer07 ☑ Layer08 ☑ Layer09 ☑ Layer10 ☑ Layer11
☑ Layer12 ☑ Layer13 ☑ Layer14 ☑ Layer15 ☑ Layer16 ☑ Layer17
☑ Layer18 ☑ Layer19 ☑ Layer20 ☑ Layer21 ☑ Layer22 ☑ Layer23
☑ Layer24 ☑ Layer25 ☑ Layer26 ☑ Layer27 ☑ Layer28 ☑ Layer29
☑ Layer30 ☑ Layer31

Number: Set screen number(Numbers are not repeatable)
Background color: Set screen background color
Page Switching: Set the effect of switching screen
Template: Select a template screen(reuse the public controls in template screen)
Layers: InoTouchPad support up to 32 layers. Users can define the specified layer of each control in the screen, When there are too many controls in a screen users can assign them to different layer to have a better management. For example, when selecting layer00 and layer01, only controls of layer00/layer01 display in the work area.

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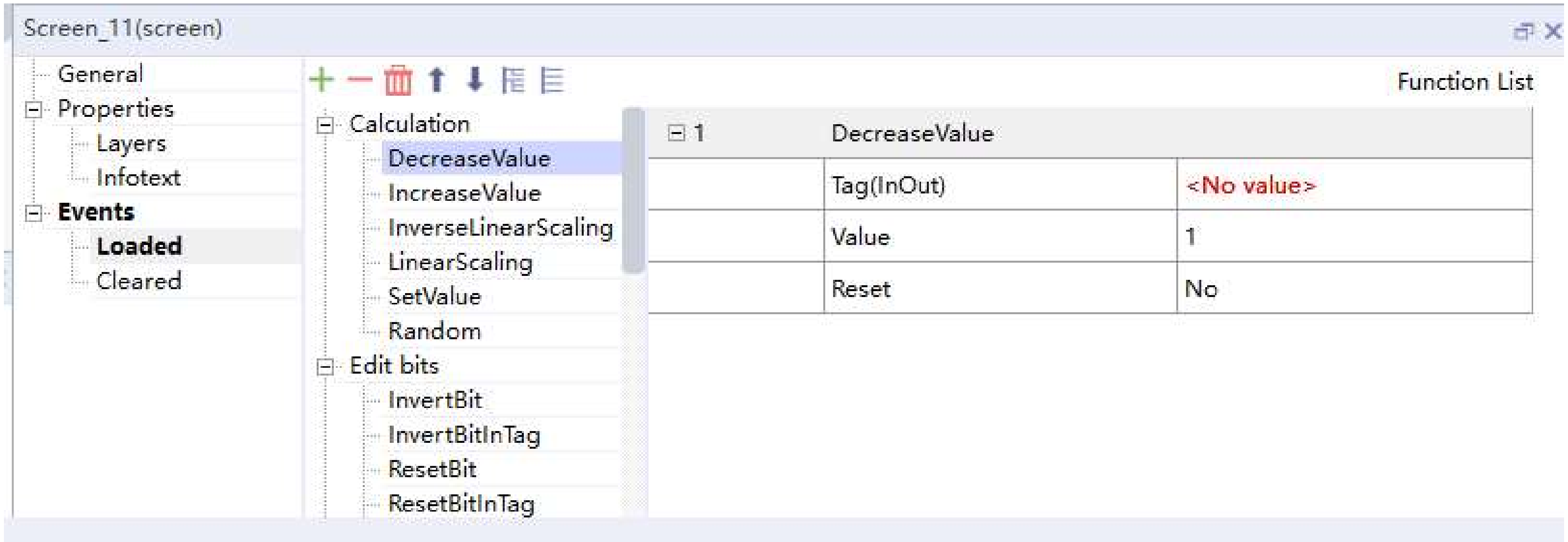
➢ Screen Normal Properties

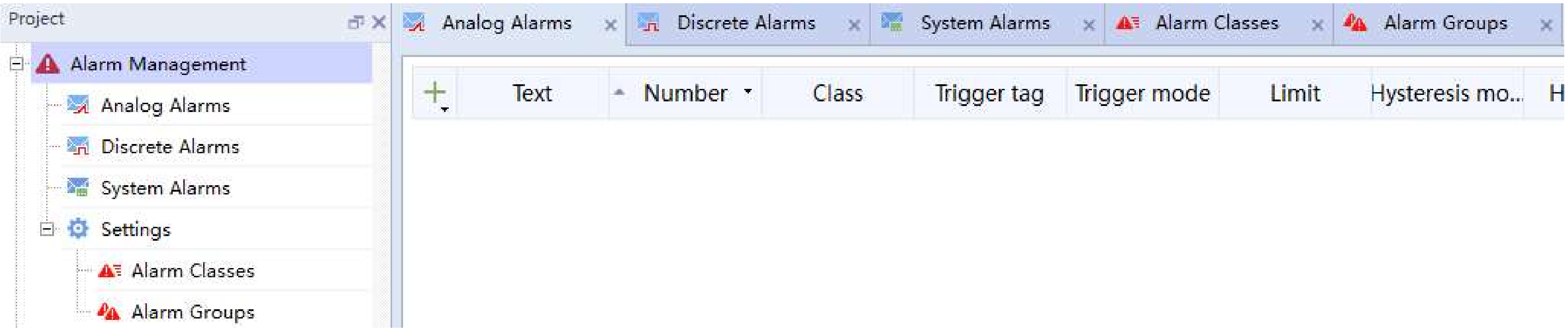

Screen_11(screen)
General
Properties
Layers
Infotext
Events
Loaded
Cleared
Function List
Calculation
DecreaseValue
IncreaseValue
InverseLinearScaling
LinearScaling
SetValue
Random
Edit bits
InvertBit
InvertBitInTag
ResetBit
ResetBitInTag

⊟ 1	DecreaseValue	
	Tag(InOut)	<No value>
	Value	1
	Reset	No

Events: Each screen has 2 events——Loaded and Cleared. When events occurred, the pre-configured functions(system functions or user scripts) will be triggered to execute.

Alarm Management

Alarm Management contains Analog Alarms, Discrete Alarms, System Alarms, Alarm Classes and Alarm Groups


Project
Alarm Management
Analog Alarms
Discrete Alarms
System Alarms
Settings
Alarm Classes
Alarm Groups
Analog Alarms
Discrete Alarms
System Alarms
Alarm Classes
Alarm Groups
Text
Number
Class
Trigger tag
Trigger mode
Limit
Hysteresis mo...
H

Alarm Data

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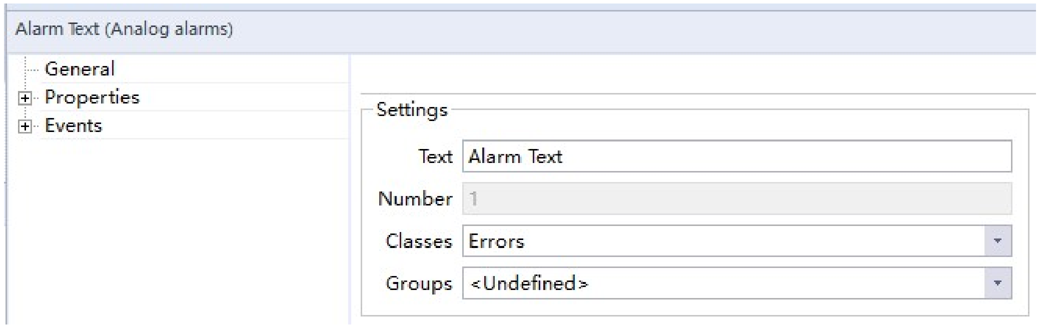
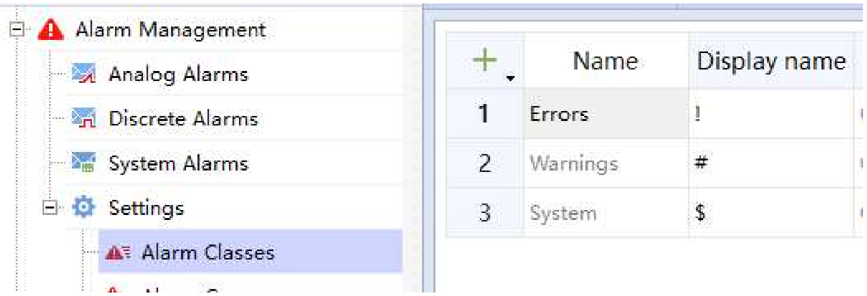
Analog Alarms: The analog alarm is bound to the analog variable, and alarm will be triggered when the analog variable value meets the set conditions
Discrete Alarms: The discrete alarm is bound to the discrete BOOL variable, and alarm will be triggered when the state transition of the discrete variable meets the set conditions

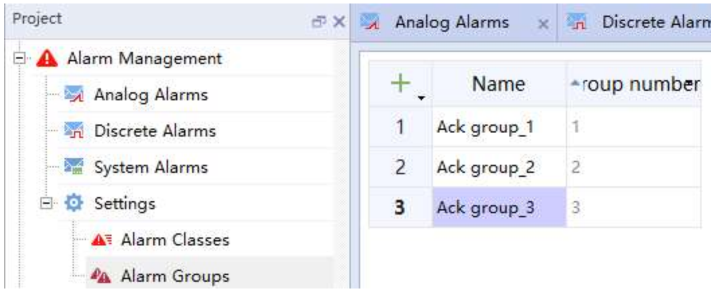

Alarm Text (Analog alarms)
General
Properties
Events
Settings

Text: Alarm Text
Number: 1
Classes: Errors
Groups: <Undefined>

Text: Text displayed when alarm occurred
Number: Alarm number assigned by system
Classes: Alarm type(defined by users)
Groups: Alarm group(defined by users)


Alarm Management
Analog Alarms
Discrete Alarms
System Alarms
Settings
Alarm Classes

	Name	Display name
1	Errors	!
2	Warnings	#
3	System	$

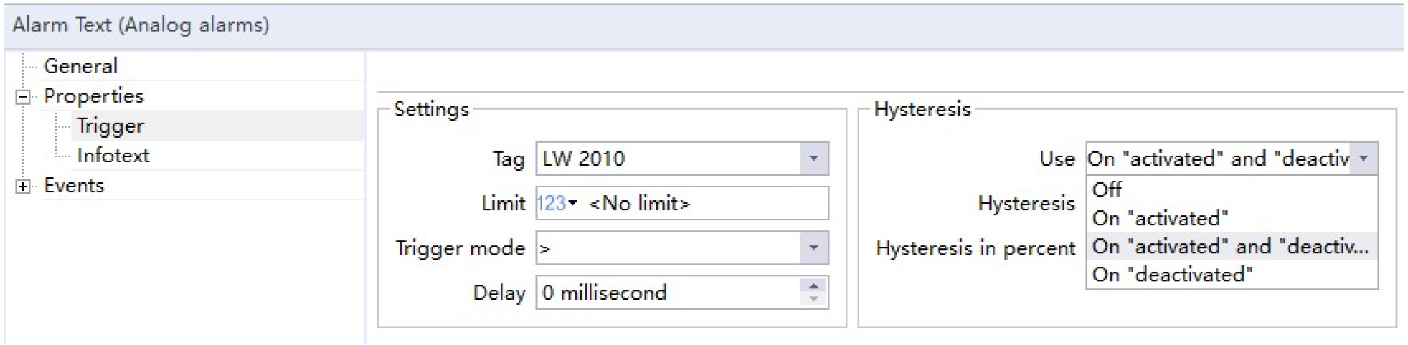

Project
Analog Alarms
Discrete Alarm
Alarm Management
Analog Alarms
Discrete Alarms
System Alarms
Settings
Alarm Classes
Alarm Groups

	Name	roup number
1	Ack group_1	1
2	Ack group_2	2
3	Ack group_3	3

Alarm Data

Back to Contents

➢ Analog alarm Properties


Alarm Text (Analog alarms)

General
Properties
Trigger
Infotext
Events
Settings
Hysteresis
Off
On "activated"
On "activated" and "deactiv...
On "deactivated"

Tag: LW 2010
Limit: 123 <No limit>
Trigger mode: >
Delay: 0 millisecond

Use: On "activated" and "deactiv
Hysteresis:
Hysteresis in percent:

Setting:

Tag: Variable
Limit: Alarm limitation
Triger mode: >, <, ==,>=,<=
Delay: Alarm delay time

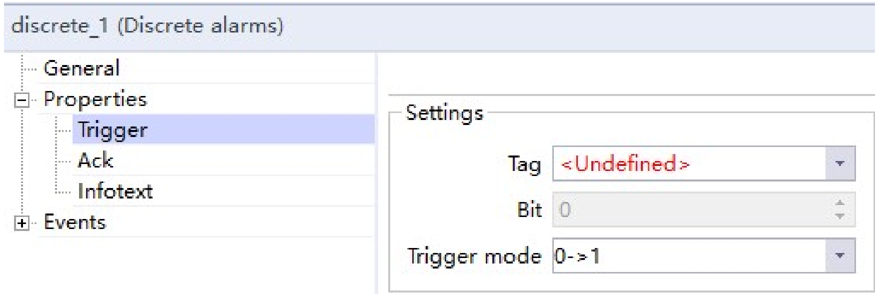
Hysteresis:

Use: use hysteresis or not
activated: alarm value = Limit + Hysteresis
deactivated: alarm value = Limit – Hysteresis
Hysteresis: hysteresis value

Alarm Data

Back to Contents

➢ Discrete alarm Properties


discrete_1 (Discrete alarms)

General
Properties
Trigger
Ack
Infotext
Events

Settings

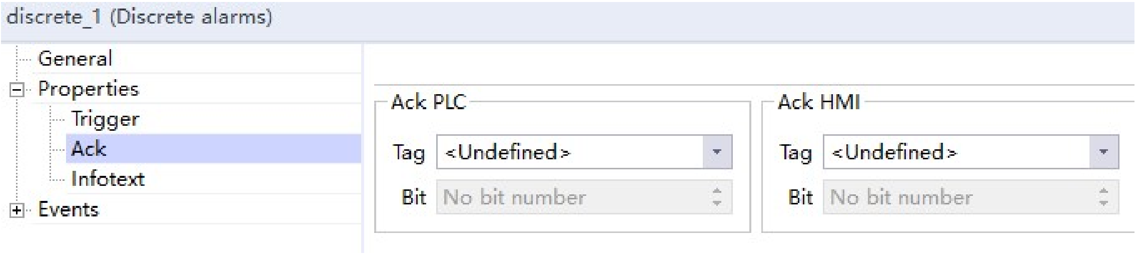
Tag: <Undefined>

Bit: 0

Trigger mode: 0->1

Trigger: set trigger condition

Ack: set the variable to confirm the alarm, while variable set ON the alarm confirmed


discrete_1 (Discrete alarms)

General
Properties
Trigger
Ack
Infotext
Events

Ack PLC

Tag: <Undefined>

Bit: No bit number

Ack HMI

Tag: <Undefined>

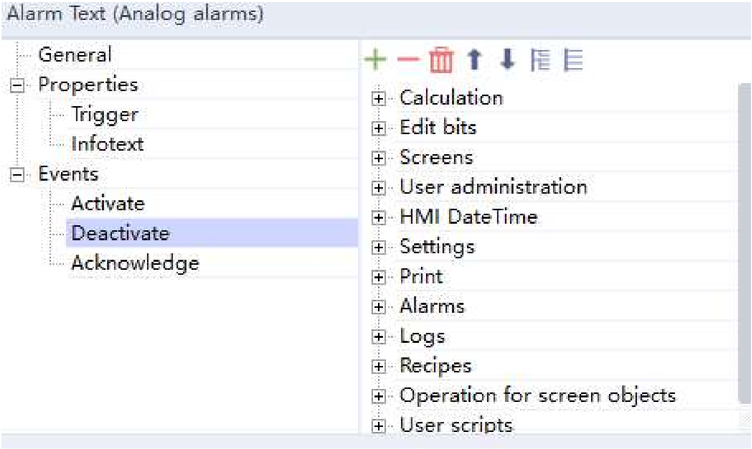
Bit: No bit number

Alarm Data

INOVANCE

Back to Contents

➢ Alarm Events



Alarm Text (Analog alarms)

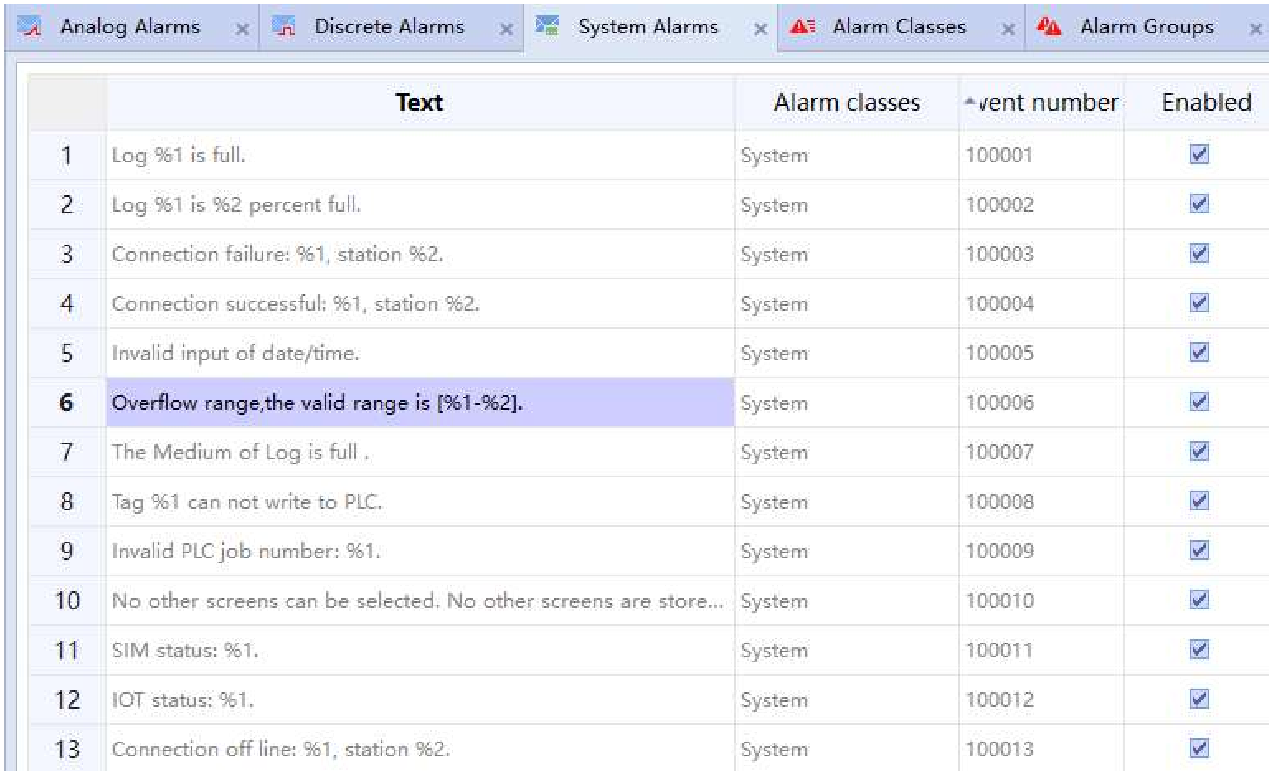
- General
- Properties
  - Trigger
  - Infotext
- Events
  - Activate
  - Deactivate
  - Acknowledge

- Calculation
- Edit bits
- Screens
- User administration
- HMI DateTime
- Settings
- Print
- Alarms
- Logs
- Recipes
- Operation for screen objects
- User scripts

Alarm have 3 status corresponding 3 events: Activate, Deactivate and Acknowledge. Every event can be bound to system functions/user scripts to achieve special requirements.

Back to Contents

System Alarm



	Text	Alarm classes	vent number	Enabled
1	Log %1 is full.	System	100001	☑
2	Log %1 is %2 percent full.	System	100002	☑
3	Connection failure: %1, station %2.	System	100003	☑
4	Connection successful: %1, station %2.	System	100004	☑
5	Invalid input of date/time.	System	100005	☑
6	Overflow range,the valid range is [%1-%2].	System	100006	☑
7	The Medium of Log is full .	System	100007	☑
8	Tag %1 can not write to PLC.	System	100008	☑
9	Invalid PLC job number: %1.	System	100009	☑
10	No other screens can be selected. No other screens are store...	System	100010	☑
11	SIM status: %1.	System	100011	☑
12	IOT status: %1.	System	100012	☑
13	Connection off line: %1, station %2.	System	100013	☑

System Alarm: Only reflects the state of system storage space, peripherals and ports. System alarm can not be changed but can set whether to enable this alarm.

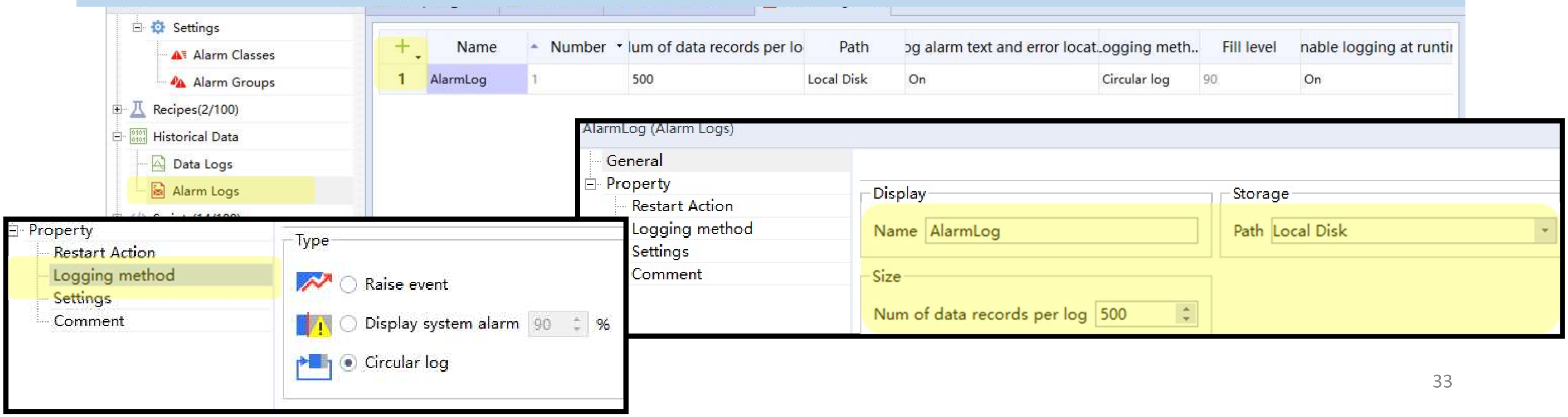
Alarm Data

Back to Contents

There are 2 controls used for display alarm. Alarm bar is used to display real time alarm whereas alarm view is used to display real time alarm or historical alarm.

➢ Historical Alarm view

Step 1: Get into ‘Historical Data’ >> ‘Alarm Logs’ and add an alarm log. Users can set the name, record number and save path for this log. Besides, there are 3 logging method available:
Raise event: while alarm records over limit, the ‘Overflow’ event triggered
Display system alarm: While alarm records over ** % of limit, a system error will occur to remind users
Circular log: cyclic record. While records over limit, remove the earlier records


Settings
Alarm Classes
Alarm Groups
Recipes(2/100)
Historical Data
Data Logs
Alarm Logs
AlarmLog (Alarm Logs)
General
Property
Restart Action
Logging method
Settings
Comment
Display
Storage
Size
Type

	Name	Number	Ium of data records per lo	Path	ɔg alarm text and error locat.	.ogging meth..	Fill level	nable logging at runtii
1	AlarmLog	1	500	Local Disk	On	Circular log	90	On

Name AlarmLog

Path Local Disk

Num of data records per log 500

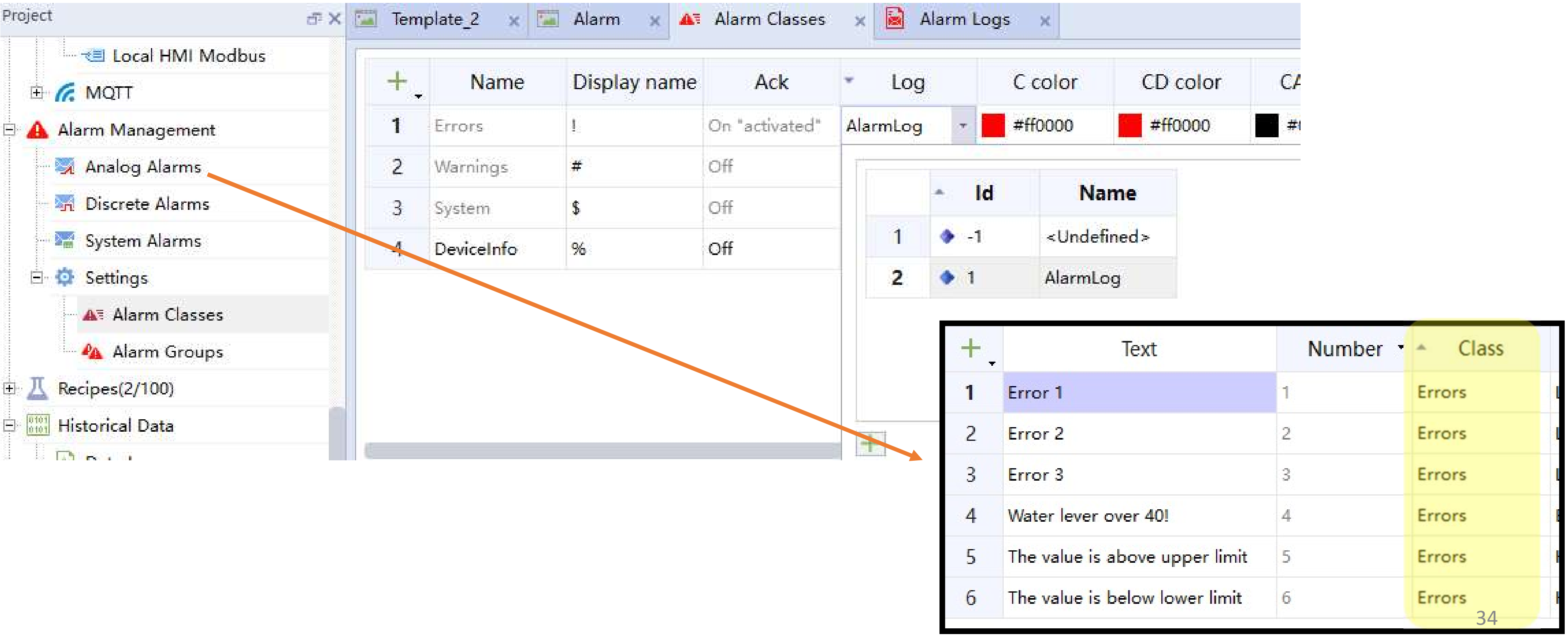
○ Raise event

○ Display system alarm 90 %

● Circular log

Alarm Data

Step 2: Back to ‘Alarm Classes’, select the alarm log. In this way all alarms of this class will be added to the alarm log.


Project
Local HMI Modbus
MQTT
Alarm Management
Analog Alarms
Discrete Alarms
System Alarms
Settings
Alarm Classes
Alarm Groups
Recipes(2/100)
Historical Data
Template_2
Alarm
Alarm Classes
Alarm Logs

	Name	Display name	Ack	Log	C color	CD color	CA
1	Errors	!	On "activated"	AlarmLog	🟥 #ff0000	🟥 #ff0000	■ #(
2	Warnings	#	Off				
3	System	$	Off				
4	DeviceInfo	%	Off				

	Id	Name
1	-1	<Undefined>
2	1	AlarmLog

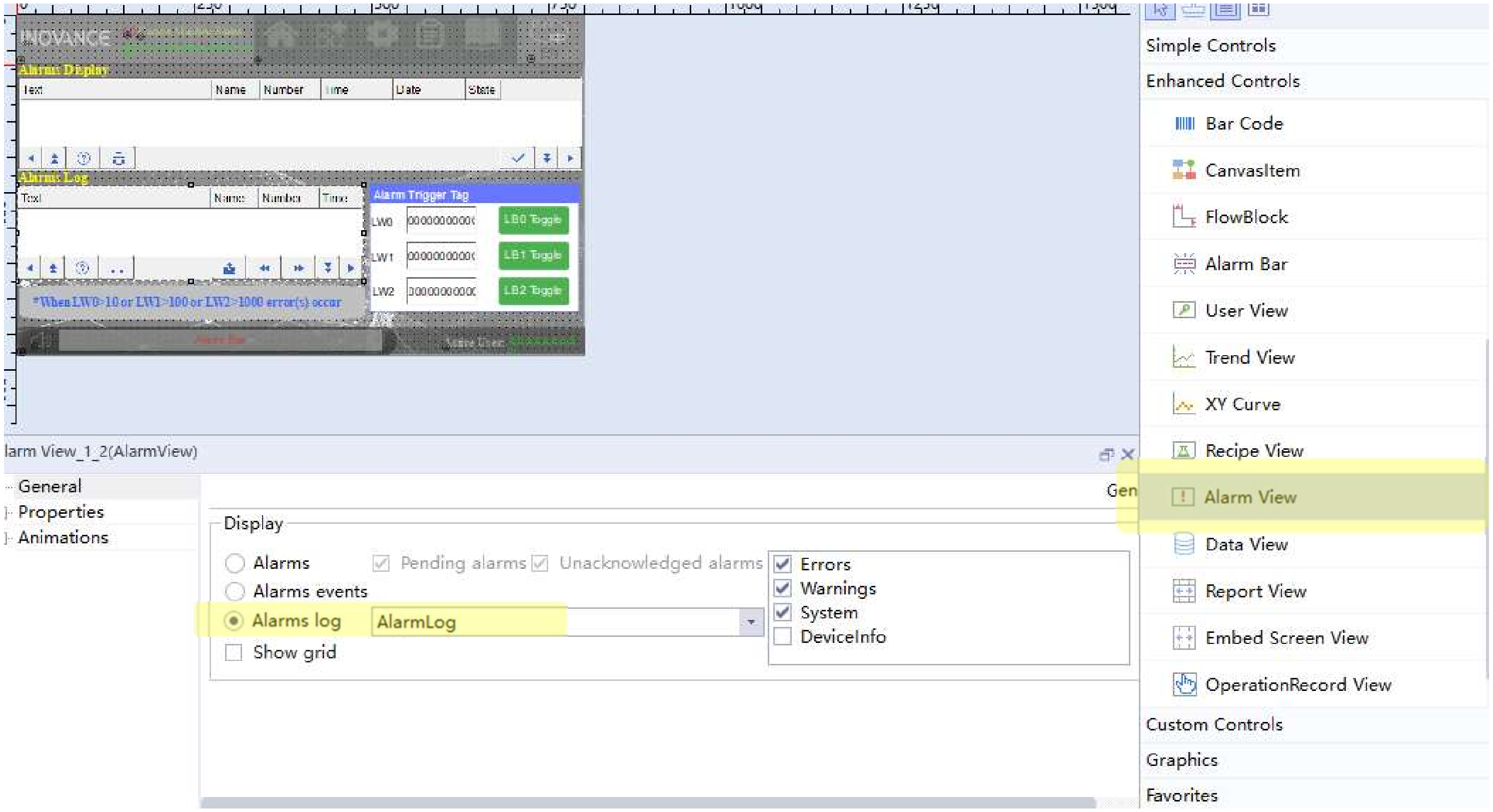
	Text	Number	Class
1	Error 1	1	Errors
2	Error 2	2	Errors
3	Error 3	3	Errors
4	Water lever over 40!	4	Errors
5	The value is above upper limit	5	Errors
6	The value is below lower limit	6	Errors

Alarm Data

Back to Contents

Step 3: Add an alarm view to screen and select ‘Alarms log’ display.

***Note:** if want to display real time(current error), select ‘Alarms’.


larm View_1_2(AlarmView)

General

Display

○ Alarms ☑ Pending alarms ☑ Unacknowledged alarms

○ Alarms events

● Alarms log AlarmLog

☐ Show grid

☑ Errors

☑ Warnings

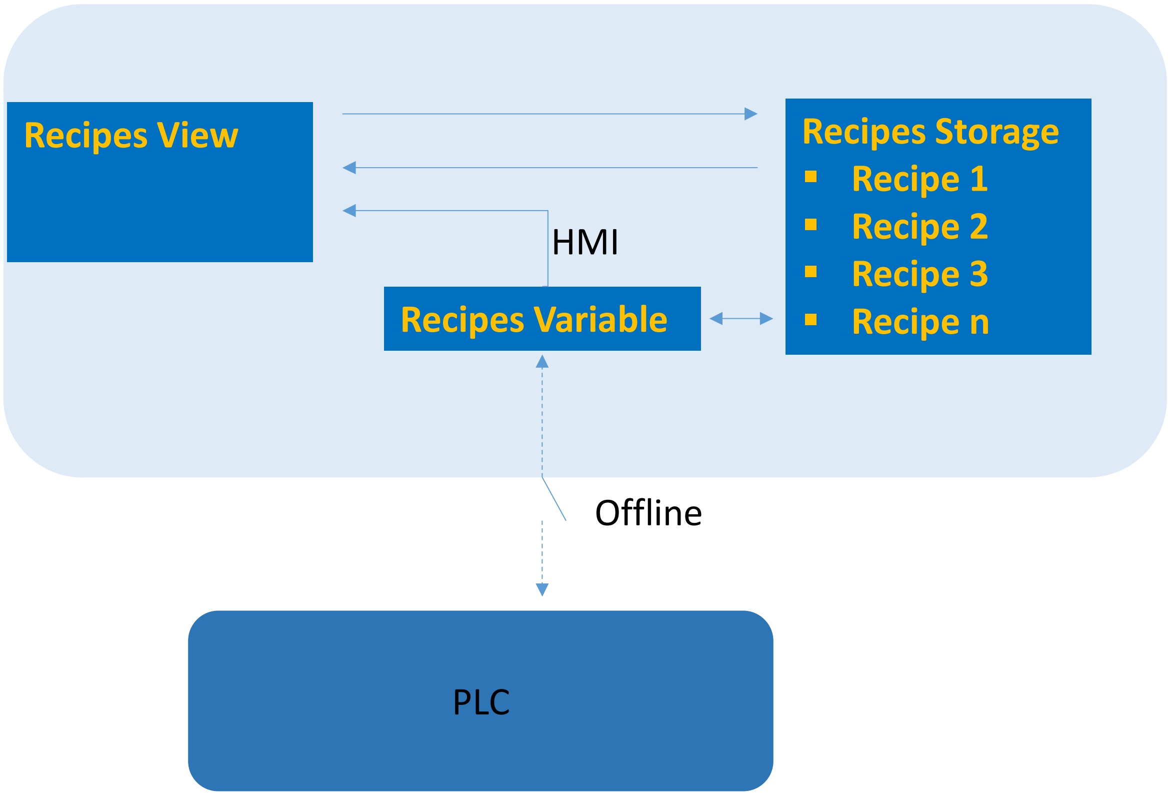
☑ System

☐ DeviceInfo

Alarms Display
Text
Name
Number
Time
Date
State
Alarms Log
Alarm Trigger Tag
LW0
LW1
LW2
LB0 Toggle
LB1 Toggle
LB2 Toggle
*When LW0>10 or LW1>100 or LW2>1000 error(s) occur
Properties
Animations
Gen
Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen View
OperationRecord View
Custom Controls
Graphics
Favorites

Back to Contents

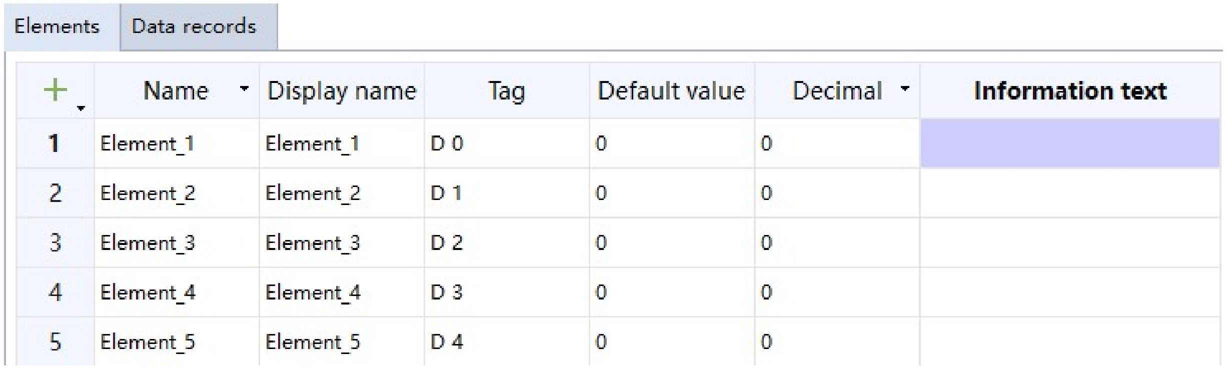
Recipes System Model


Recipes View
Recipes Storage
Recipe 1
Recipe 2
Recipe 3
Recipe n
HMI
Recipes Variable
Offline
PLC

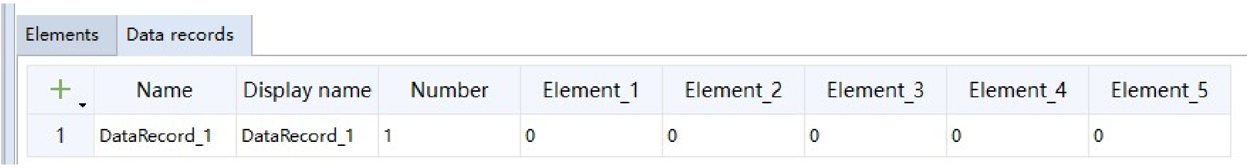
Recipe Data Object

Recipes consist of elements, each element is bound to a variable. Users can define more than 1 recipe in project

*Note: support 100 recipes in a project, each recipe support up to 32767 elements



+	Name	Display name	Tag	Default value	Decimal	Information text
1	Element_1	Element_1	D 0	0	0	
2	Element_2	Element_2	D 1	0	0	
3	Element_3	Element_3	D 2	0	0	
4	Element_4	Element_4	D 3	0	0	
5	Element_5	Element_5	D 4	0	0	



+	Name	Display name	Number	Element_1	Element_2	Element_3	Element_4	Element_5
1	DataRecord_1	DataRecord_1	1	0	0	0	0	0

Each recipe can have 1(or more) data record(s) for elements

*Note: each recipe support up to 1000 records.

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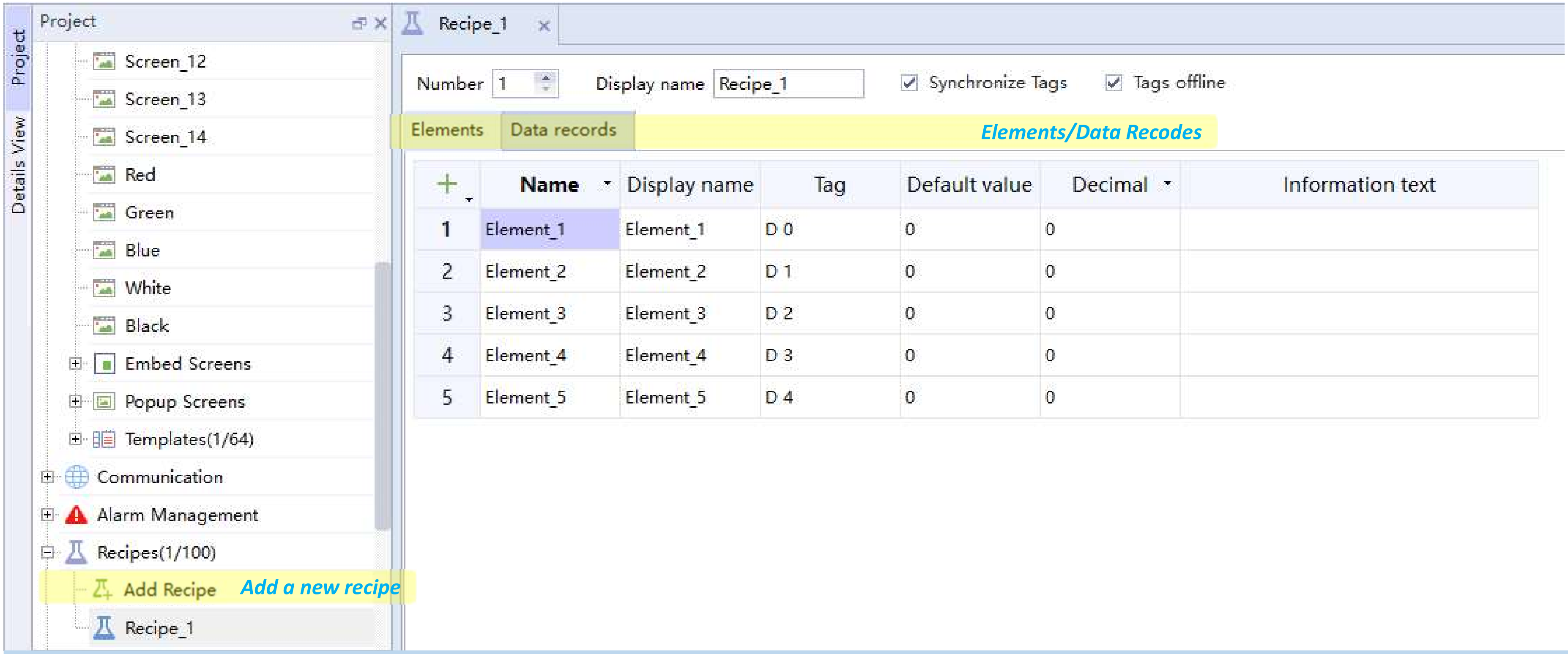
➢ Recipe Management


Project
Details View
Screen_12
Screen_13
Screen_14
Red
Green
Blue
White
Black
Embed Screens
Popup Screens
Templates(1/64)
Communication
Alarm Management
Recipes(1/100)
Add Recipe
Recipe_1
Elements
Data records

Add a new recipe

Elements/Data Recodes

Number 1 Display name Recipe_1 ☑ Synchronize Tags ☑ Tags offline

	Name	Display name	Tag	Default value	Decimal	Information text
1	Element_1	Element_1	D 0	0	0	
2	Element_2	Element_2	D 1	0	0	
3	Element_3	Element_3	D 2	0	0	
4	Element_4	Element_4	D 3	0	0	
5	Element_5	Element_5	D 4	0	0	

Synchronize Tags: while select the option, users can synchronize the recipe data record value with the recipe variable(Tag)
Tags Offline: while select this option, while HMI recipe variable change, the PLC(or other device) registers will not be impacted.

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Recipe Management

Application scenarios	Synchronize Tags	Tags Offline
A	No	No
B	Yes	Yes
C	Yes	No

Operation A: While exchange data record the PLC(or other slave device) registers will not change unless manually download to PLC.

Operation B: While exchange data record the PLC(or other slave device) registers will not change unless manually download to PLC. Besides, the data record in recipe view can be modified via recipe variable(HMI tags), users can synchronize the values by execute ‘Synchronized Tags’ command.

Operation C: while HMI recipe data record change, the PLC(or other device) registers will change directly.

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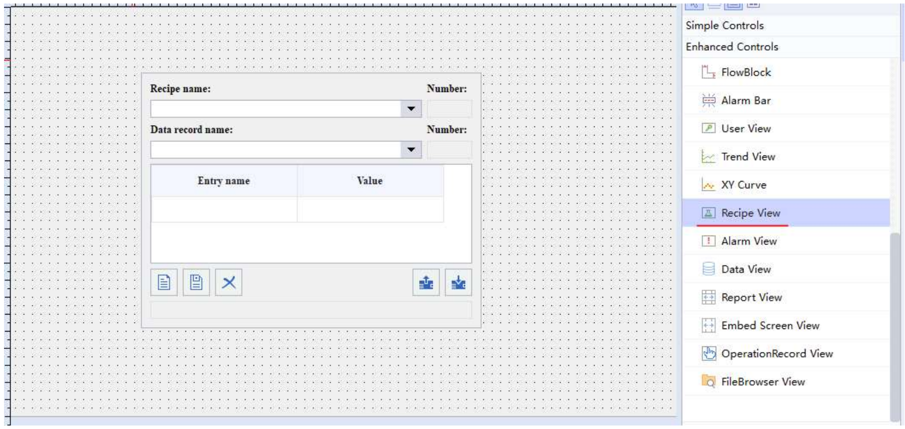
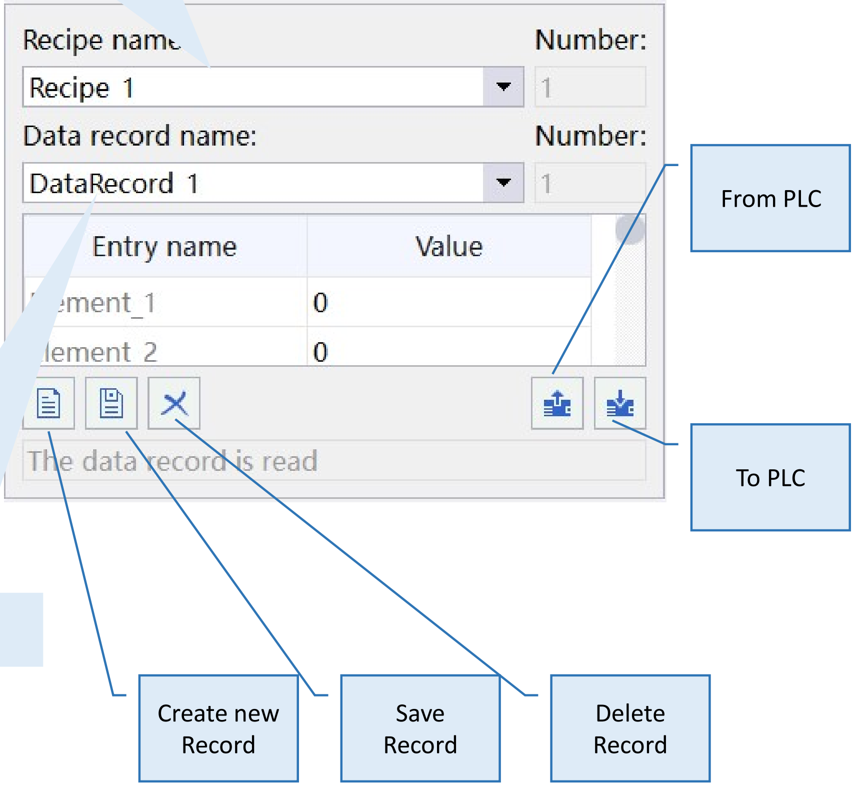
➢ Add a recipe control to screen


Recipe name:
Number:
Data record name:
Number:
Entry name
Value
Simple Controls
Enhanced Controls
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen View
OperationRecord View
FileBrowser View

Select recipe



Recipe name: Recipe 1 Number: 1

Data record name: DataRecord 1 Number: 1

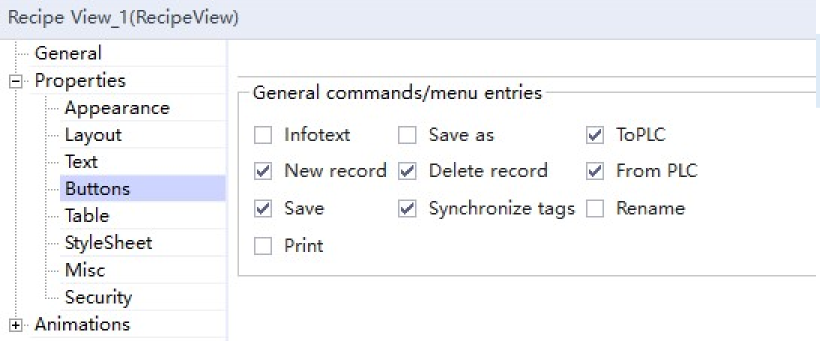
Entry name	Value
ement_1	0
lement 2	0

The data record is read

From PLC
To PLC
Create new Record
Save Record
Delete Record

Select Data Record

***Note: In the button view to select the wanted commands.**


Recipe View_1(RecipeView)
General
Properties
Appearance
Layout
Text
Buttons
Table
StyleSheet
Misc
Security
Animations

General commands/menu entries

☐ Infotext ☐ Save as ☑ ToPLC

☑ New record ☑ Delete record ☑ From PLC

☑ Save ☑ Synchronize tags ☐ Rename

☐ Print

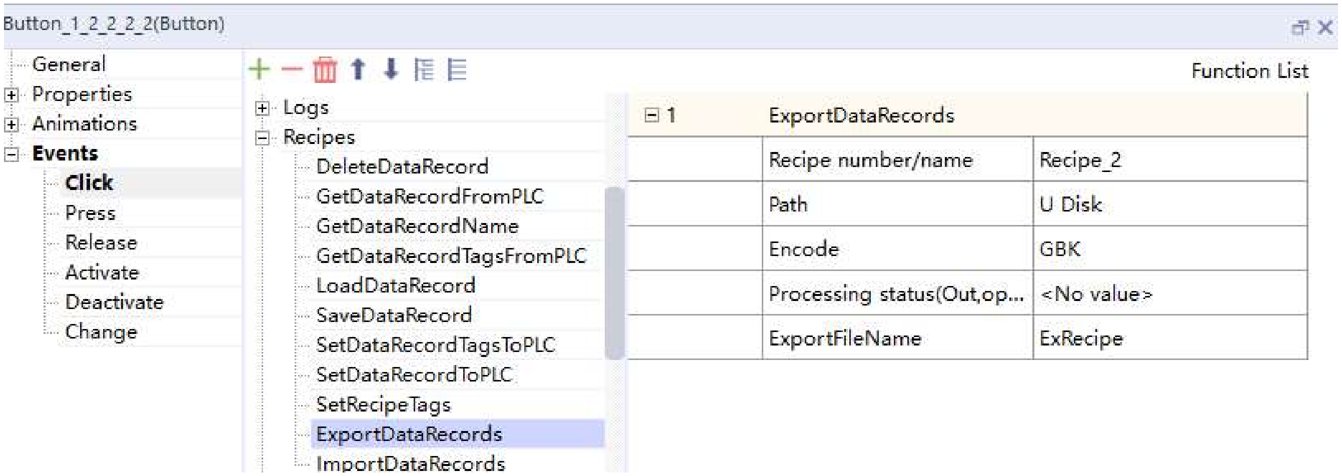
Back to Contents

➢ Export/Import Recipe

2 methods to export/import recipe:

Control Panel: Get into control panel and select “Download”, details refer to ‘**Export/Import**’ Function

SystemFunction: Using system function ‘ExportDataRecords’ and ‘ImportDataRecords’, refer to the example project.



Button_1_2_2_2_2(Button)

- General
- Properties
- Animations
- **Events**
  - **Click**
  - Press
  - Release
  - Activate
  - Deactivate
  - Change

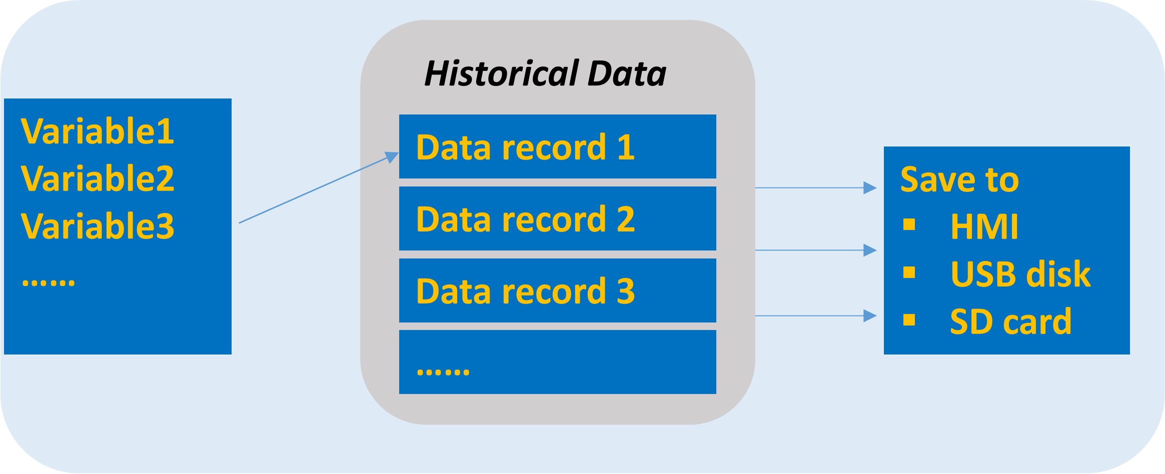
- Logs
- Recipes
  - DeleteDataRecord
  - GetDataRecordFromPLC
  - GetDataRecordName
  - GetDataRecordTagsFromPLC
  - LoadDataRecord
  - SaveDataRecord
  - SetDataRecordTagsToPLC
  - SetDataRecordToPLC
  - SetRecipeTags
  - ExportDataRecords
  - ImportDataRecords

Function List

⊟ 1	ExportDataRecords	
	Recipe number/name	Recipe_2
	Path	U Disk
	Encode	GBK
	Processing status(Out,op...	<No value>
	ExportFileName	ExRecipe

Historical Data Management

IT7000 data record is used to save historical acquisition data and historical alarm data. The configuration of historical data objects is to configure the data that needs to be saved during the HMI operation.



Historical Data

Variable1
Variable2
Variable3
……

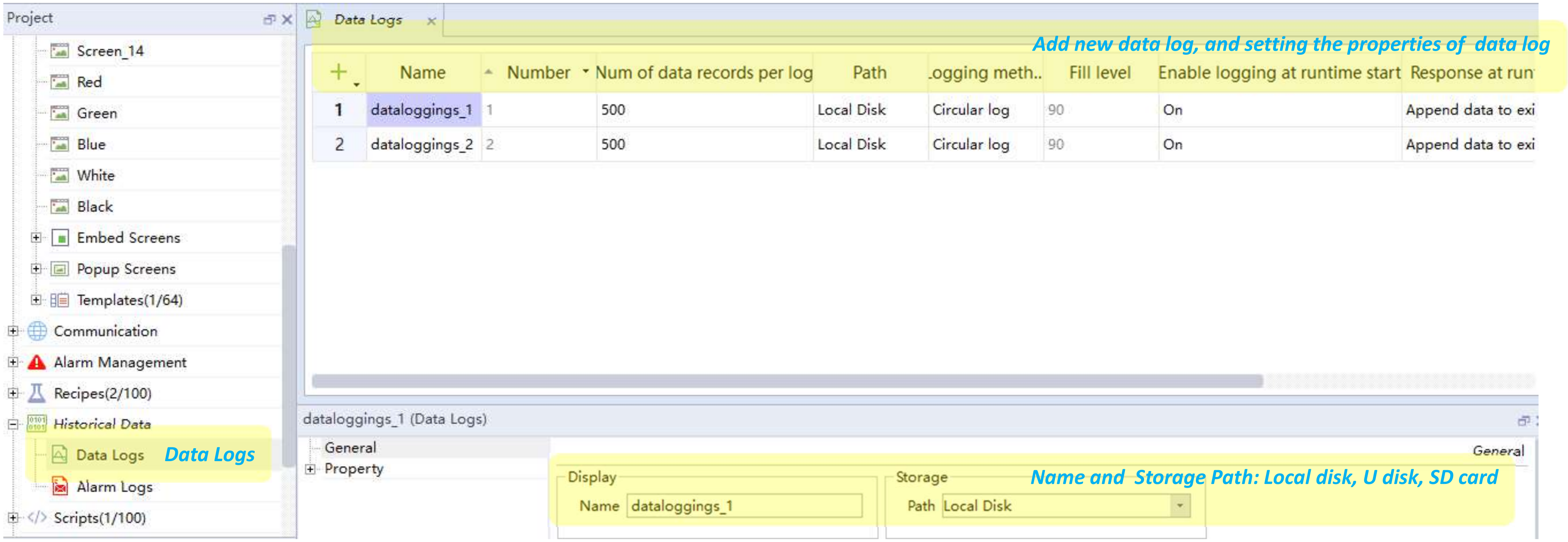
Data record 1
Data record 2
Data record 3
……

Save to
- HMI
- USB disk
- SD card

Historical Data

Back to Contents

➢ Data Logs


Project
Screen_14
Red
Green
Blue
White
Black
Embed Screens
Popup Screens
Templates(1/64)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Data Logs
Alarm Logs
Scripts(1/100)
Data Logs
General
Property
General

Add new data log, and setting the properties of data log

	Name	Number	Num of data records per log	Path	.ogging meth..	Fill level	Enable logging at runtime start	Response at run
1	dataloggings_1	1	500	Local Disk	Circular log	90	On	Append data to exi
2	dataloggings_2	2	500	Local Disk	Circular log	90	On	Append data to exi

Data Logs

dataloggings_1 (Data Logs)

Display
Name dataloggings_1

Storage
Path Local Disk

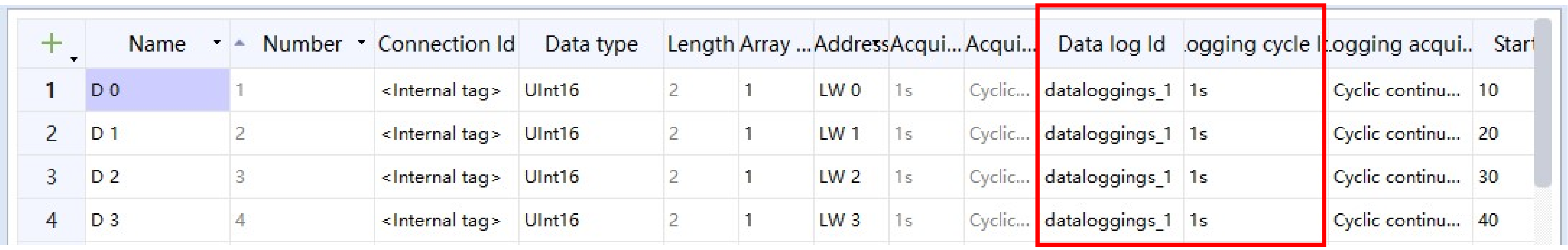
Name and Storage Path: Local disk, U disk, SD card

Historical Data

INOVANCE

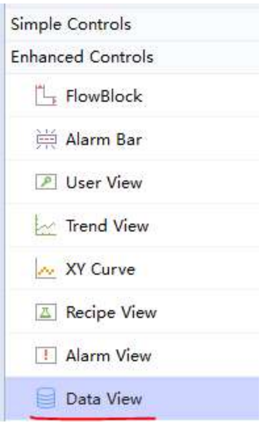
Back to Contents

➢ Select Variable

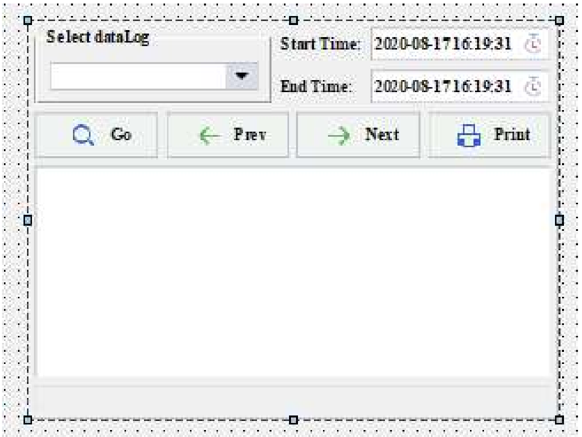


	Name	Number	Connection Id	Data type	Length	Array ...	Address	Acqui...	Acqui...	Data log Id	ogging cycle	ogging acqui..	Start
1	D 0	1	<Internal tag>	UInt16	2	1	LW 0	1s	Cyclic...	dataloggings_1	1s	Cyclic continu...	10
2	D 1	2	<Internal tag>	UInt16	2	1	LW 1	1s	Cyclic...	dataloggings_1	1s	Cyclic continu...	20
3	D 2	3	<Internal tag>	UInt16	2	1	LW 2	1s	Cyclic...	dataloggings_1	1s	Cyclic continu...	30
4	D 3	4	<Internal tag>	UInt16	2	1	LW 3	1s	Cyclic...	dataloggings_1	1s	Cyclic continu...	40

➢ Add a Data View control

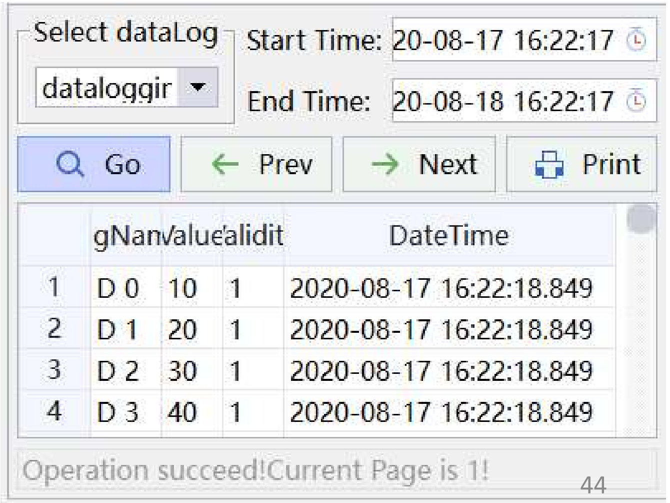

Simple Controls
Enhanced Controls
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View

Tool bar


Select dataLog
Go
Prev
Next
Print

Start Time: 2020-08-17 16:19:31

End Time: 2020-08-17 16:19:31


Select dataLog
Go
Prev
Next
Print

dataloggir

Start Time: 20-08-17 16:22:17

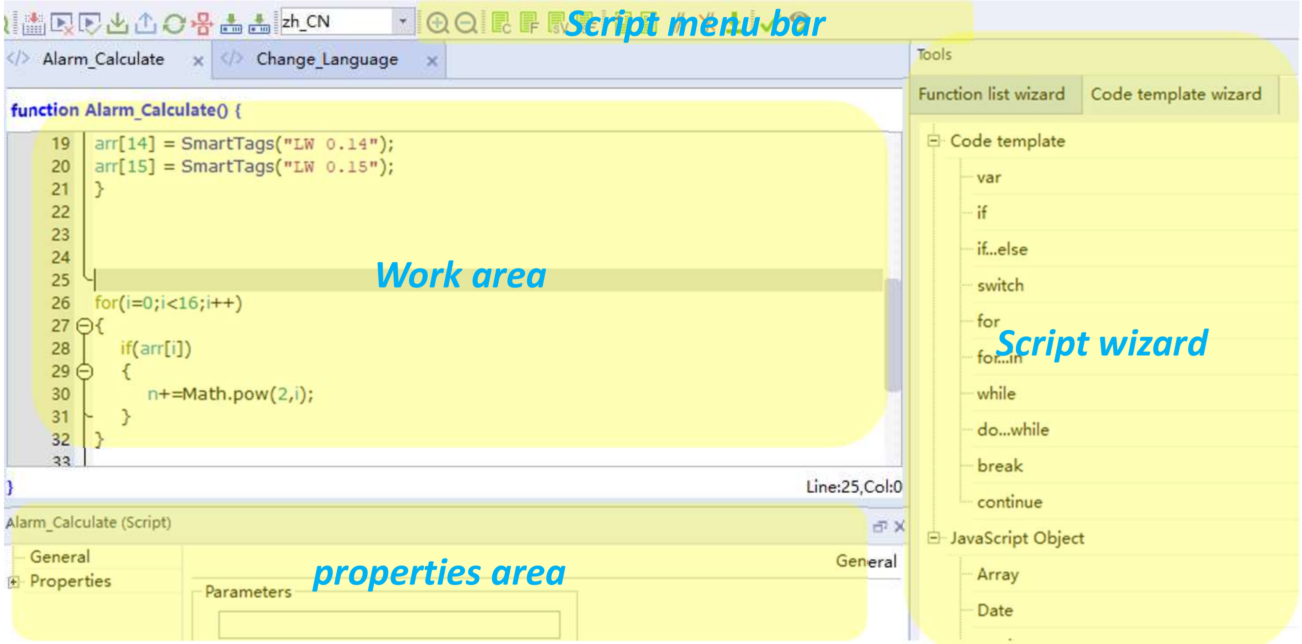
End Time: 20-08-18 16:22:17

	gNan	Value	alidit	DateTime
1	D 0	10	1	2020-08-17 16:22:18.849
2	D 1	20	1	2020-08-17 16:22:18.849
3	D 2	30	1	2020-08-17 16:22:18.849
4	D 3	40	1	2020-08-17 16:22:18.849

Operation succeed!Current Page is 1!

Script

➢ JavaScript


zh_CN
Script menu bar
Alarm_Calculate
Change_Language
Tools
Function list wizard
Code template wizard
Code template
var
if
if...else
switch
for
for...in
while
do...while
break
continue
JavaScript Object
Array
Date
Work area
Script wizard
Line:25,Col:0
Alarm_Calculate (Script)
General
Properties
General
Parameters
properties area

```
function Alarm_Calculate() {
arr[14] = SmartTags("LW 0.14");
arr[15] = SmartTags("LW 0.15");
}



for(i=0;i<16;i++)
{
   if(arr[i])
   {
      n+=Math.pow(2,i);
   }
}

}
```

* IT7000 can support JavaScript. Users can do logical operations, read and write variable values via script

* Up to 100 scripts can be created, and scripts are not allowed to call each other

Script

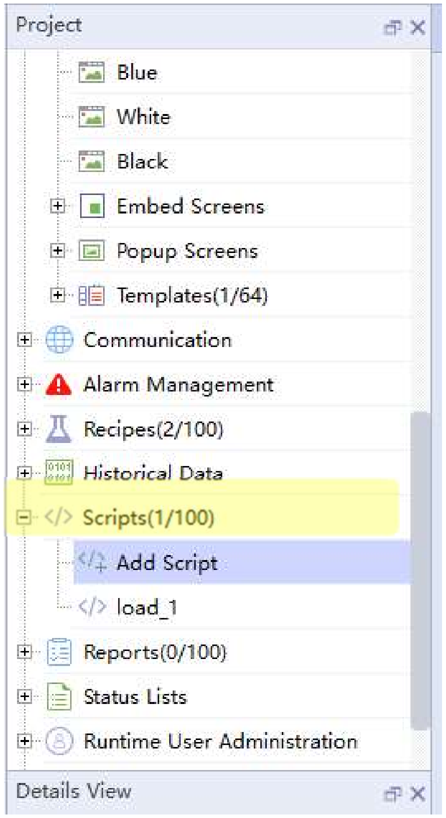
Control's Event

Scheduler of HMI setting

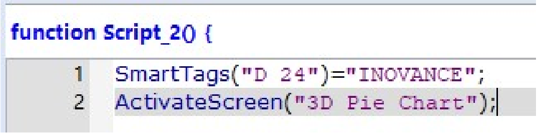
Back to Contents

➢ Map to Control’s Events

Device tree>> Scripts >> Add Script

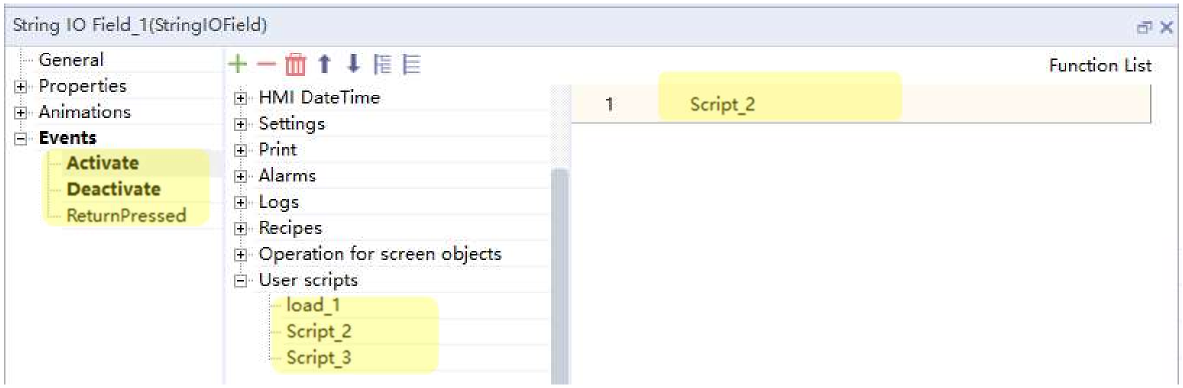

Project
Blue
White
Black
Embed Screens
Popup Screens
Templates(1/64)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Scripts(1/100)
Add Script
load_1
Reports(0/100)
Status Lists
Runtime User Administration
Details View

Add codes to operate variables/screens or do logic calculation



```
function Script_2() {
SmartTags("D 24")="INOVANCE";
ActivateScreen("3D Pie Chart");
```

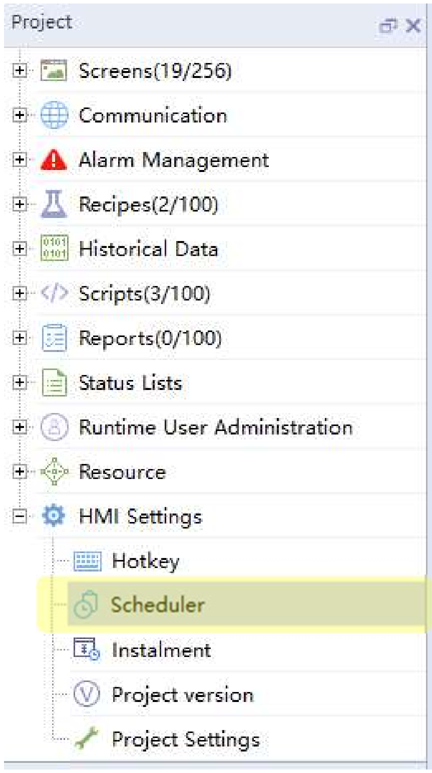
MAP to control’s events

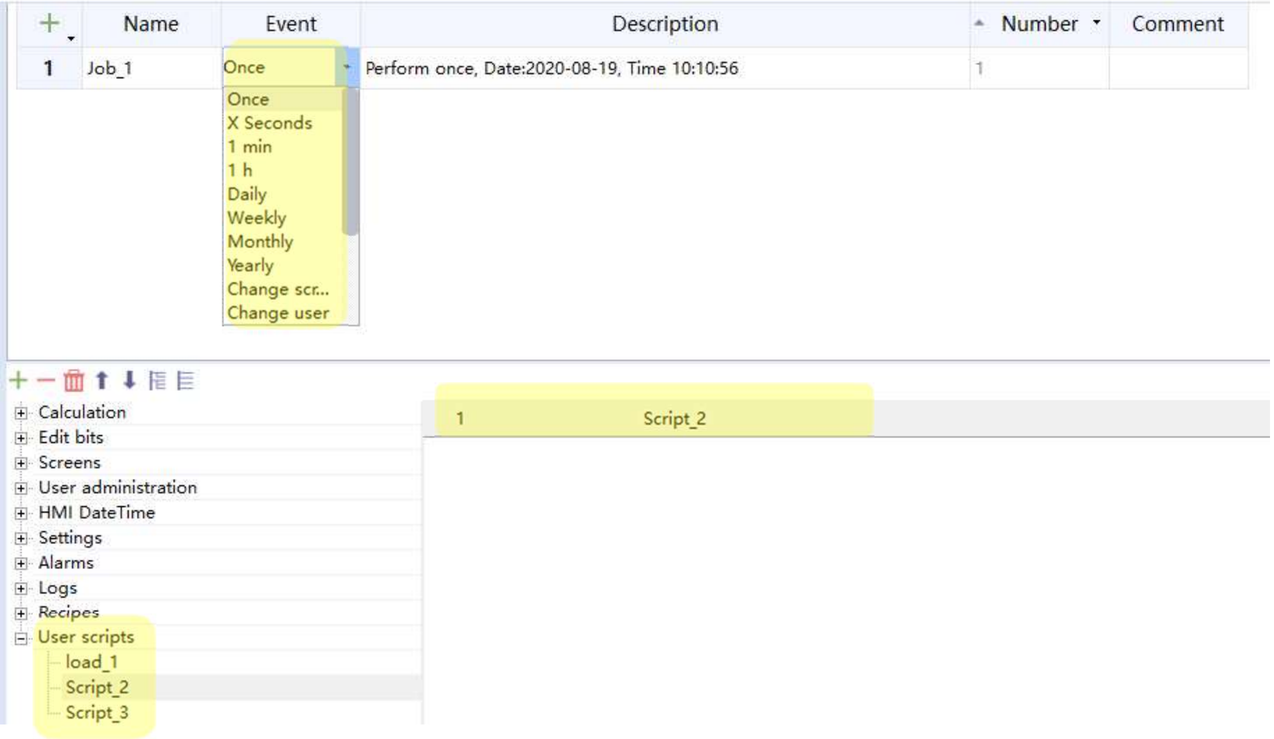

String IO Field_1(StringIOField)
General
Properties
Animations
Events
Activate
Deactivate
ReturnPressed
HMI DateTime
Settings
Print
Alarms
Logs
Recipes
Operation for screen objects
User scripts
load_1
Script_2
Script_3
Function List
1
Script_2

Arranged via Scheduler

Device tree>> HMI Settings >> Scheduler

Add a new job by clicking ‘+’ icon, and you can select event execution mode(once/X second/……)


Project
Screens(19/256)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Scripts(3/100)
Reports(0/100)
Status Lists
Runtime User Administration
Resource
HMI Settings
Hotkey
Scheduler
Instalment
Project version
Project Settings



+	Name	Event	Description	Number	Comment
1	Job_1	Once	Perform once, Date:2020-08-19, Time 10:10:56	1	

Once
X Seconds
1 min
1 h
Daily
Weekly
Monthly
Yearly
Change scr...
Change user
Calculation
Edit bits
Screens
User administration
HMI DateTime
Settings
Alarms
Logs
Recipes
User scripts
load_1
Script_2
Script_3

1	Script_2

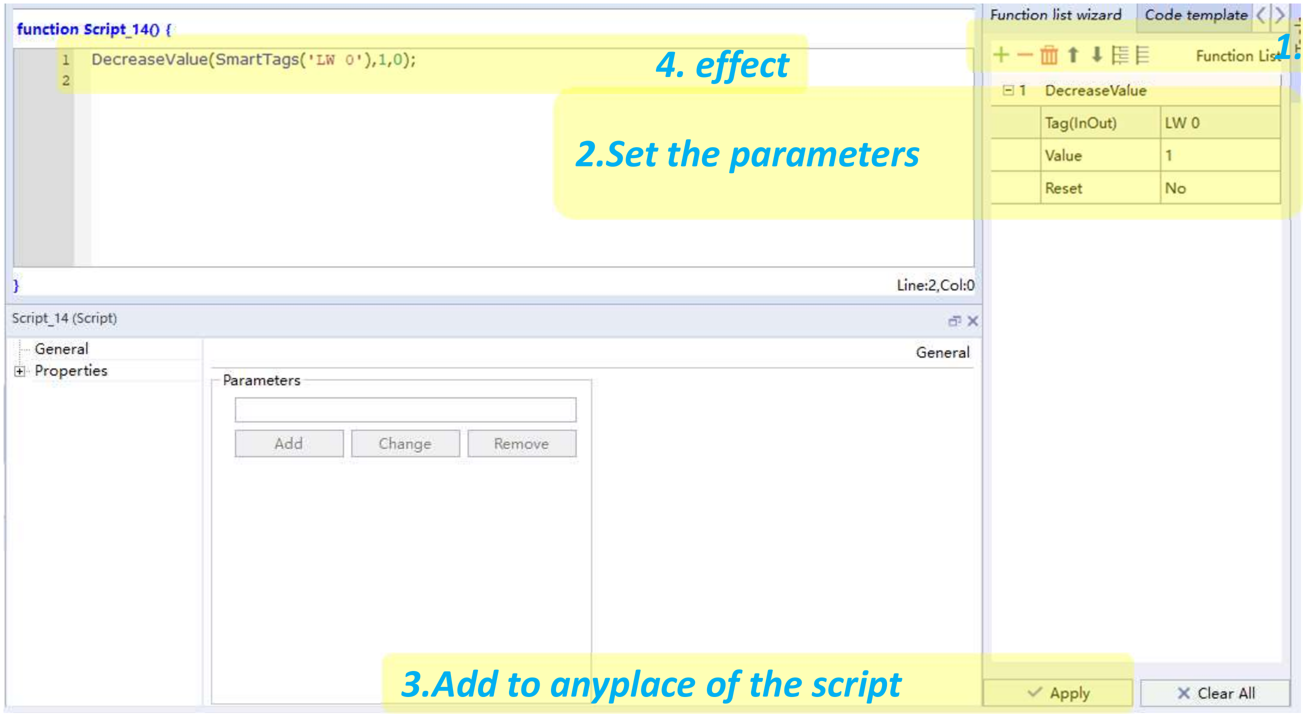
Script

INOVANCE

Back to Contents

Function list wizard

IT7000 can easily configure simple script without too much work on programming with wizard navigation, in the tool box 'Function list wizard', users can add the wanted system function to script.



```
function Script_14() {
DecreaseValue(SmartTags('LW 0'),1,0);

}
```

Tag(InOut)	LW 0
Value	1
Reset	No

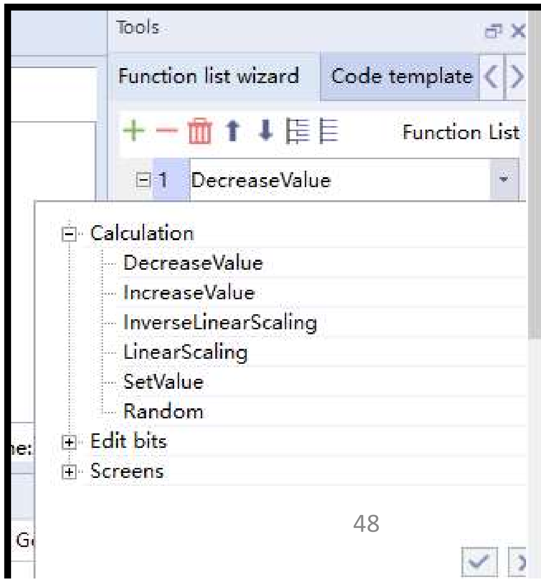
Function list wizard
Code template
Function List
1 DecreaseValue
Line:2,Col:0
Script_14 (Script)
General
Properties
General
Parameters
Add
Change
Remove
Apply
Clear All

4. effect

2.Set the parameters

3.Add to anyplace of the script

1.Add or delete a function

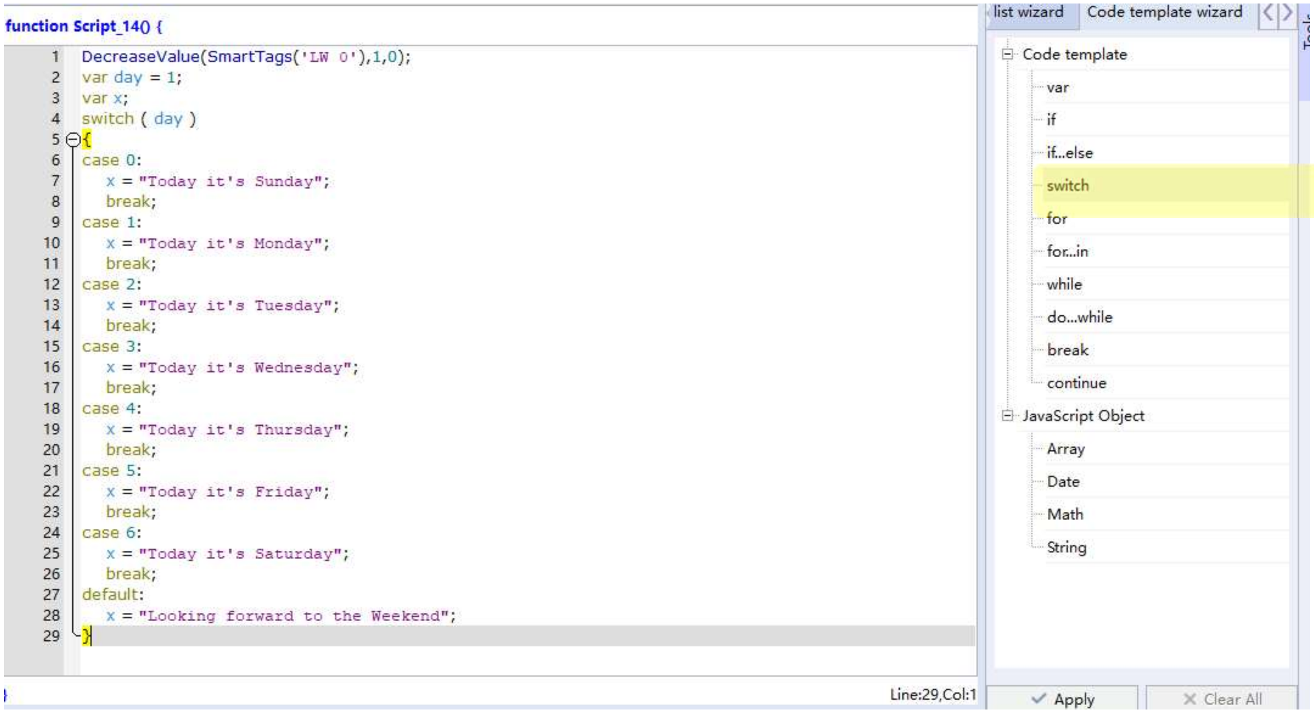


Tools
Function list wizard
Code template
Function List
1 DecreaseValue
Calculation
DecreaseValue
IncreaseValue
InverseLinearScaling
LinearScaling
SetValue
Random
Edit bits
Screens

Back to Contents

Code template wizard

There are also built in template for commonly used code in the ‘Code Template Wizard’ in the tool box. Only need click the certain item, a piece of code with comments will generated automatically.



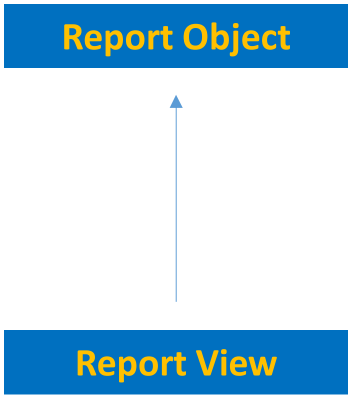
```
function Script_14() {
DecreaseValue(SmartTags('LW 0'),1,0);
var day = 1;
var x;
switch ( day )
{
case 0:
   x = "Today it's Sunday";
   break;
case 1:
   x = "Today it's Monday";
   break;
case 2:
   x = "Today it's Tuesday";
   break;
case 3:
   x = "Today it's Wednesday";
   break;
case 4:
   x = "Today it's Thursday";
   break;
case 5:
   x = "Today it's Friday";
   break;
case 6:
   x = "Today it's Saturday";
   break;
default:
   x = "Looking forward to the Weekend";
}
}
```

Line:29,Col:1
list wizard
Code template wizard
Code template
var
if
if...else
switch
for
for...in
while
do...while
break
continue
JavaScript Object
Array
Date
Math
String
Apply
Clear All

Double click

Report

A report object is used to display predefined data and text in the form of a table. Its cells can be associated with variables for display and input.



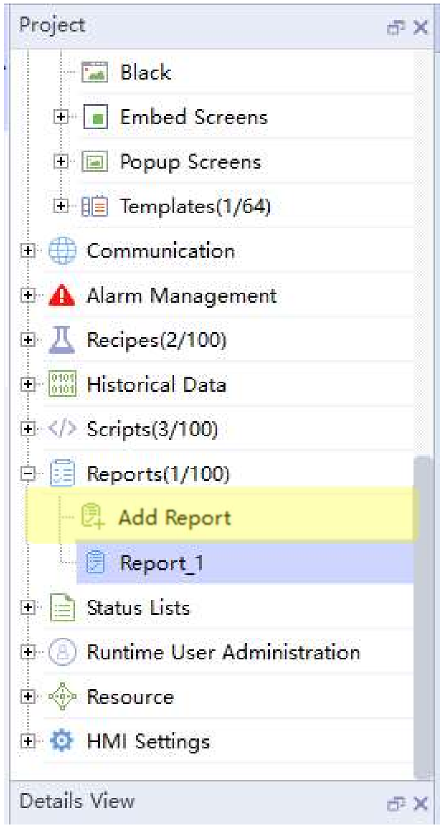
Report Object

Report View

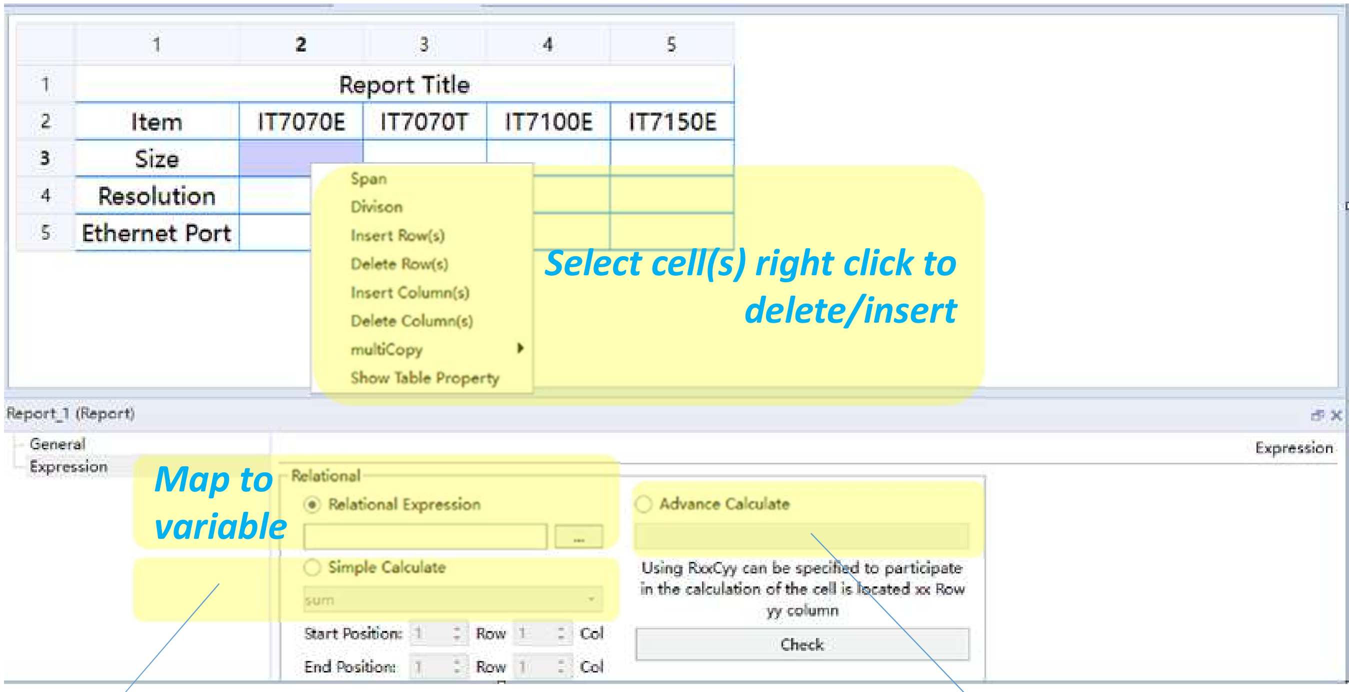
Back to Contents

➢ Create a Report

Device tree>> Reports >> Add Report


Project
Black
Embed Screens
Popup Screens
Templates(1/64)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Scripts(3/100)
Reports(1/100)
Add Report
Report_1
Status Lists
Runtime User Administration
Resource
HMI Settings
Details View

Edit Report



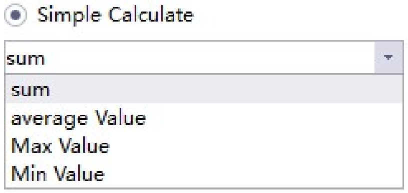
	1	2	3	4	5
1	Report Title				
2	Item	IT7070E	IT7070T	IT7100E	IT7150E
3	Size				
4	Resolution				
5	Ethernet Port				

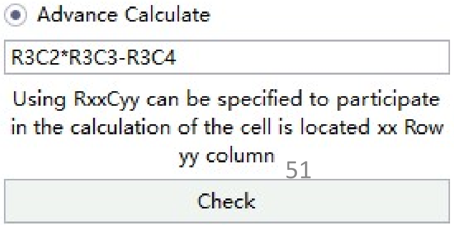
Span
Divison
Insert Row(s)
Delete Row(s)
Insert Column(s)
Delete Column(s)
multiCopy
Show Table Property
Report_1 (Report)
General
Expression
Expression
Relational
Relational Expression
Simple Calculate
sum
Start Position: 1 Row 1 Col
End Position: 1 Row 1 Col
Advance Calculate
Check

Using RxxCyy can be specified to participate in the calculation of the cell is located xx Row yy column

Select cell(s) right click to delete/insert

Map to variable


Simple Calculate
sum
sum
average Value
Max Value
Min Value

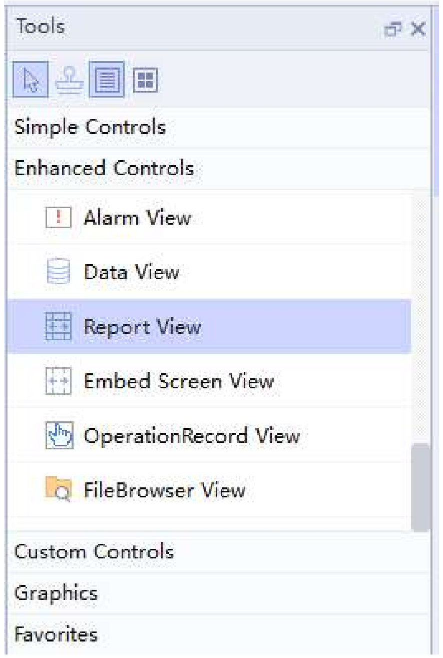

Advance Calculate
Check

● Advance Calculate: R3C2*R3C3-R3C4

Using RxxCyy can be specified to participate in the calculation of the cell is located xx Row yy column

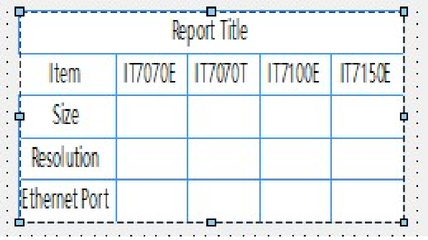
Back to Contents

➢ Add a Report View Control


Tools
Simple Controls
Enhanced Controls
Alarm View
Data View
Report View
Embed Screen View
OperationRecord View
FileBrowser View
Custom Controls
Graphics
Favorites

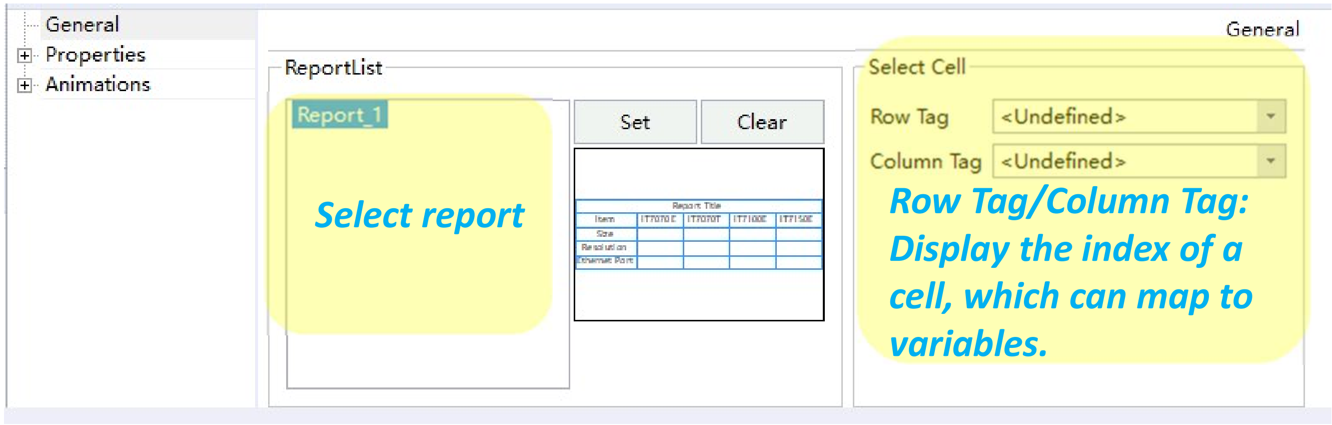
Tool bar

Control



Report Title				
Item	IT7070E	IT7070T	IT7100E	IT7150E
Size				
Resolution				
Ethernet Port				

Control Properties


General
Properties
Animations
General
ReportList
Report_1
Set
Clear
Select Cell
Report Title

Row Tag <Undefined>

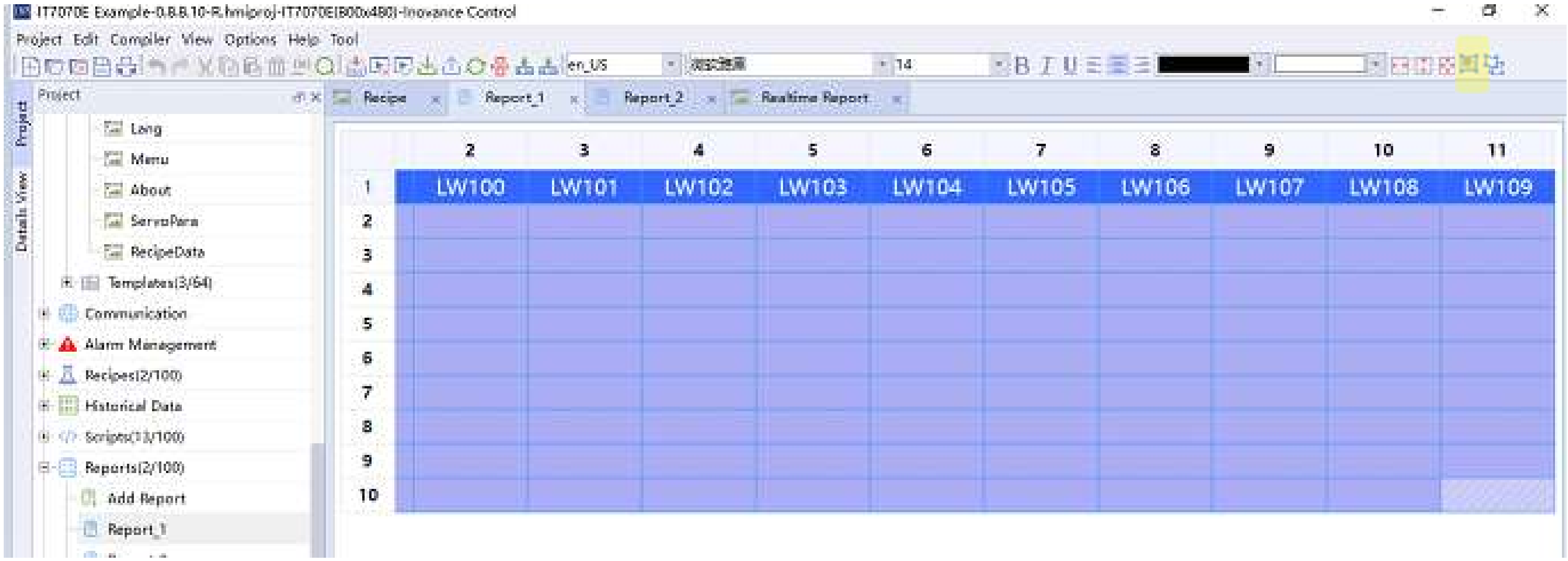
Column Tag <Undefined>

Select report

Row Tag/Column Tag: Display the index of a cell, which can map to variables.

Back to Contents

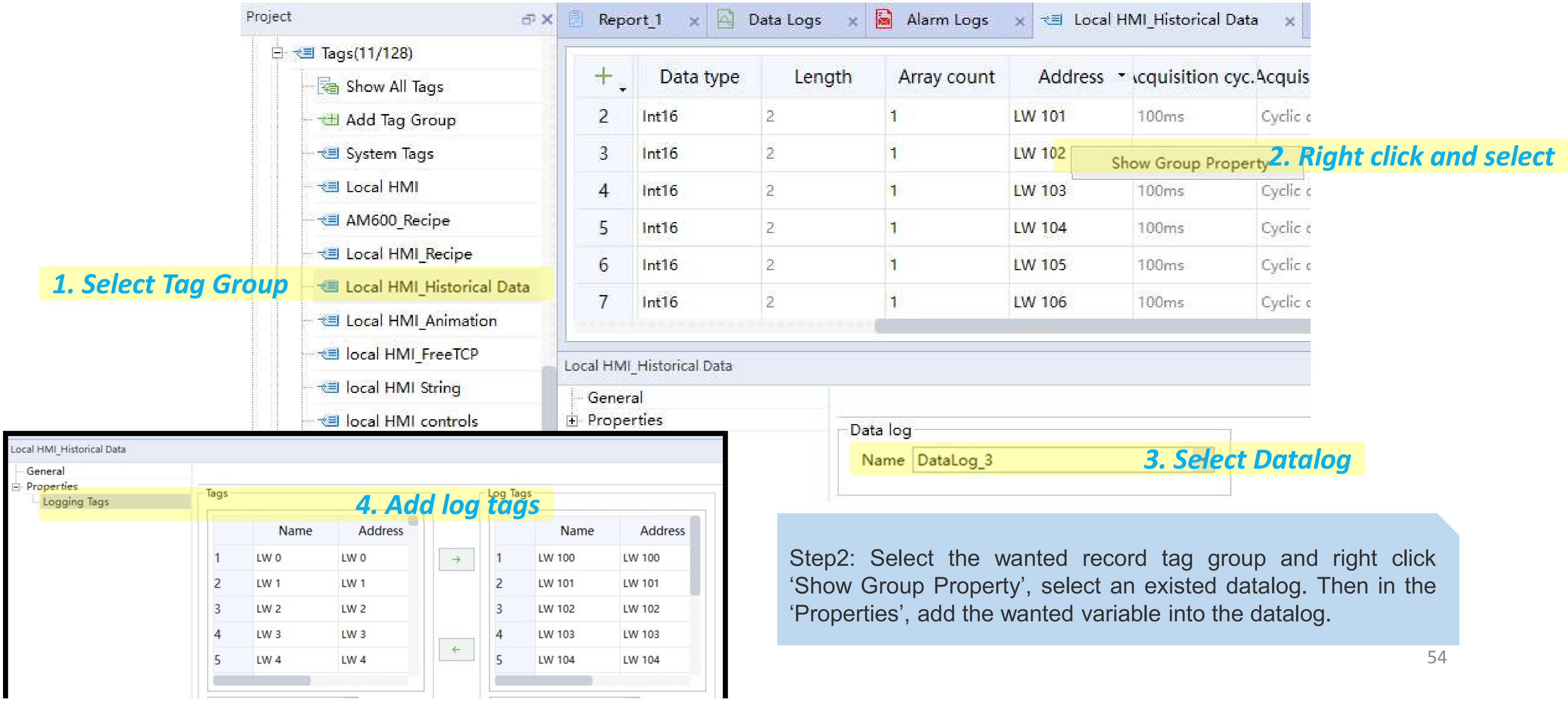
Historical Report Display


IT7070E Example-0.8.8.10-R.hmiproj-IT7070E(800x480)-Inovance Control
Project Edit Compiler View Options Help Tool
en_US
14
Project
Details View
Lang
Menu
About
ServoPara
RecipeData
Templates(3/64)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Scripts(13/100)
Reports(2/100)
Add Report
Report_1
Recipe
Report_1
Report_2
Realtime Report

	2	3	4	5	6	7	8	9	10	11
1	LW100	LW101	LW102	LW103	LW104	LW105	LW106	LW107	LW108	LW109
2										
3										
4										
5										
6										
7										
8										
9										
10										

Step1: Select the table range and then click the ‘group’ button the selected table range will be configured as historical data display area.

➢ Historical Report Display



Project

- Tags(11/128)
  - Show All Tags
  - Add Tag Group
  - System Tags
  - Local HMI
  - AM600_Recipe
  - Local HMI_Recipe
  - Local HMI_Historical Data
  - Local HMI_Animation
  - local HMI_FreeTCP
  - local HMI String
  - local HMI controls

+	Data type	Length	Array count	Address	ıcquisition cyc.	Acquis
2	Int16	2	1	LW 101	100ms	Cyclic c
3	Int16	2	1	LW 102		
4	Int16	2	1	LW 103	100ms	Cyclic c
5	Int16	2	1	LW 104	100ms	Cyclic c
6	Int16	2	1	LW 105	100ms	Cyclic c
7	Int16	2	1	LW 106	100ms	Cyclic c

1. Select Tag Group

2. Right click and select

Local HMI_Historical Data

- General
- Properties

Data log

Name: DataLog_3

3. Select Datalog

Local HMI_Historical Data

- General
- Properties
  - Logging Tags

4. Add log tags

Tags

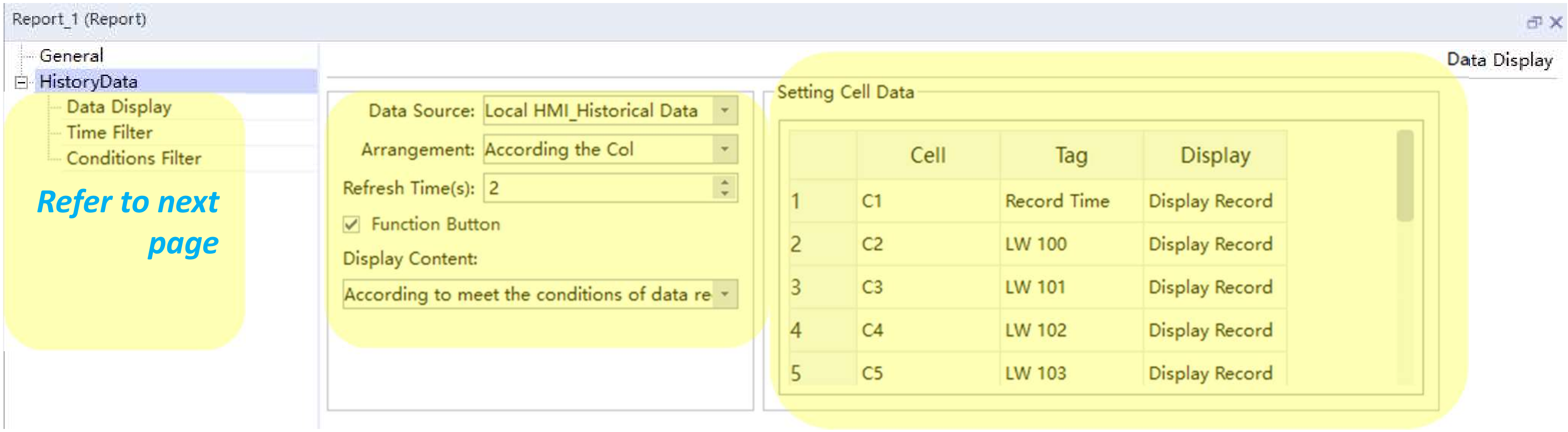
	Name	Address
1	LW 0	LW 0
2	LW 1	LW 1
3	LW 2	LW 2
4	LW 3	LW 3
5	LW 4	LW 4

Log Tags

	Name	Address
1	LW 100	LW 100
2	LW 101	LW 101
3	LW 102	LW 102
4	LW 103	LW 103
5	LW 104	LW 104

Step2: Select the wanted record tag group and right click ‘Show Group Property’, select an existed datalog. Then in the ‘Properties’, add the wanted variable into the datalog.

➢ Historical Report Display


Report_1 (Report)
General
HistoryData
Data Display
Time Filter
Conditions Filter
Data Display
Setting Cell Data

Data Source: Local HMI_Historical Data

Arrangement: According the Col

Refresh Time(s): 2

☑ Function Button

Display Content:

According to meet the conditions of data re

	Cell	Tag	Display
1	C1	Record Time	Display Record
2	C2	LW 100	Display Record
3	C3	LW 101	Display Record
4	C4	LW 102	Display Record
5	C5	LW 103	Display Record

Refer to next page

Step3: Back to the report view, select ‘Data Source’, and set the cell data.

Back to Contents

Historical Report Display

For historical report display, there are some specified properties:

Data Display:
Data Source: the specified tag group
Arrangement: sort according to column or row
Refresh time: unit: second, while set as 0, report table will not update
Function button: display multi pages
Display content: display record value or display according condition like summary/average/max value/min value etc.

Timer filter: filter according time
Sort tag: record time or a certain tag
Sort Method: descending or ascending
Filter time: filter according to record time(only one option)
Filter: filter time range select: all record/a certain recent time/a fixed time like day(month)/according to data variable

Condition filter: filter according to condition

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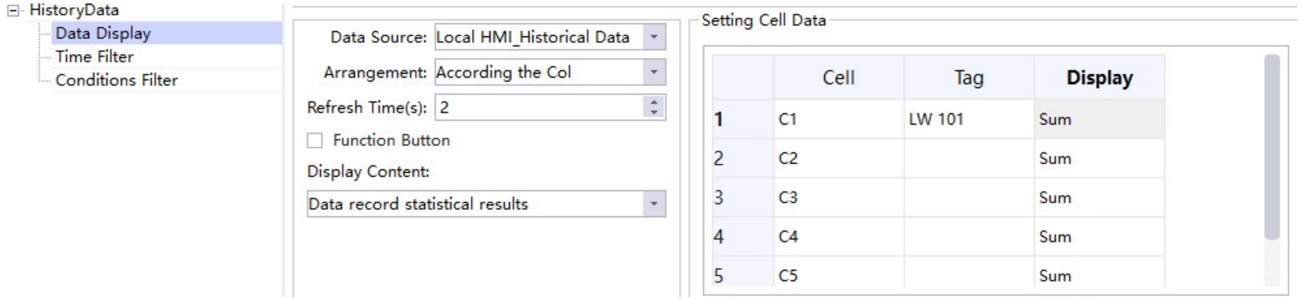
Historical Report Display

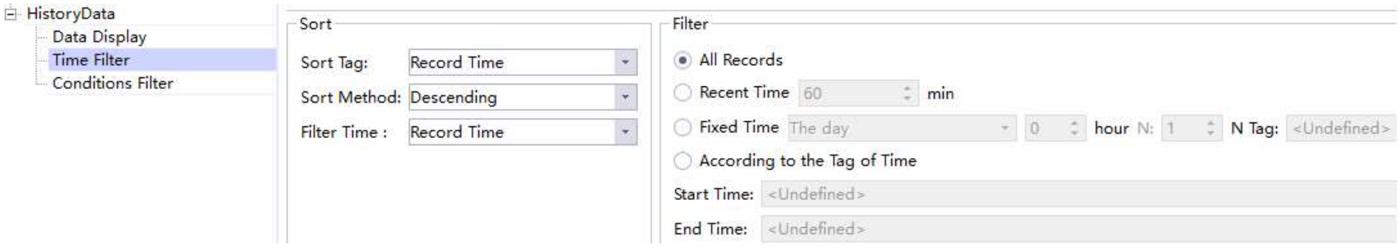


HistoryData
Data Display
Time Filter
Conditions Filter

Data Source: Local HMI_Historical Data
Arrangement: According the Col
Refresh Time(s): 2
☐ Function Button
Display Content:
Data record statistical results

Setting Cell Data

	Cell	Tag	Display
1	C1	LW 101	Sum
2	C2		Sum
3	C3		Sum
4	C4		Sum
5	C5		Sum



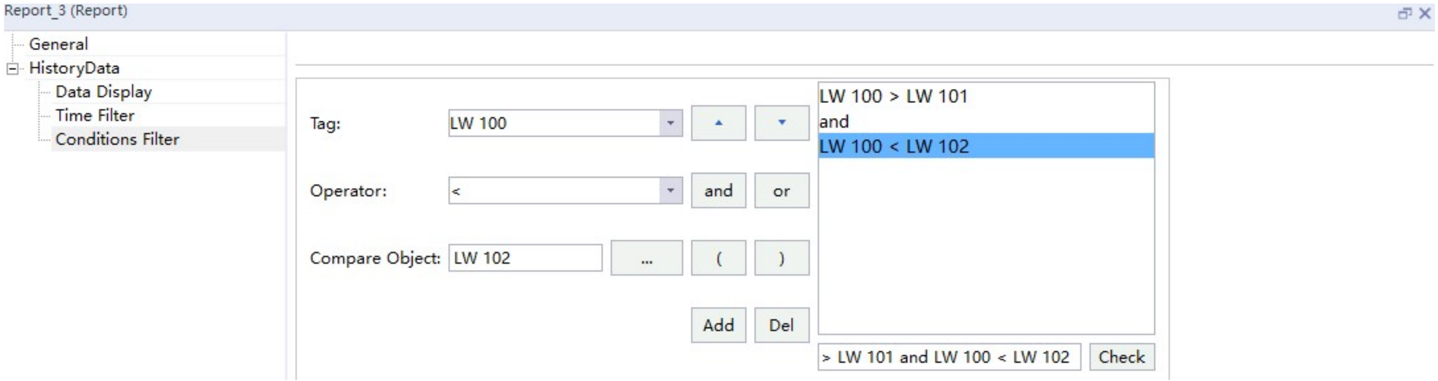
HistoryData
Data Display
Time Filter
Conditions Filter

Sort

Sort Tag: Record Time
Sort Method: Descending
Filter Time : Record Time

Filter

● All Records
○ Recent Time 60 min
○ Fixed Time The day 0 hour N: 1 N Tag: <Undefined>
○ According to the Tag of Time
Start Time: <Undefined>
End Time: <Undefined>



Report_3 (Report)
General
HistoryData
Data Display
Time Filter
Conditions Filter
▲
▼
and
or
...
(
)
Add
Del
Check

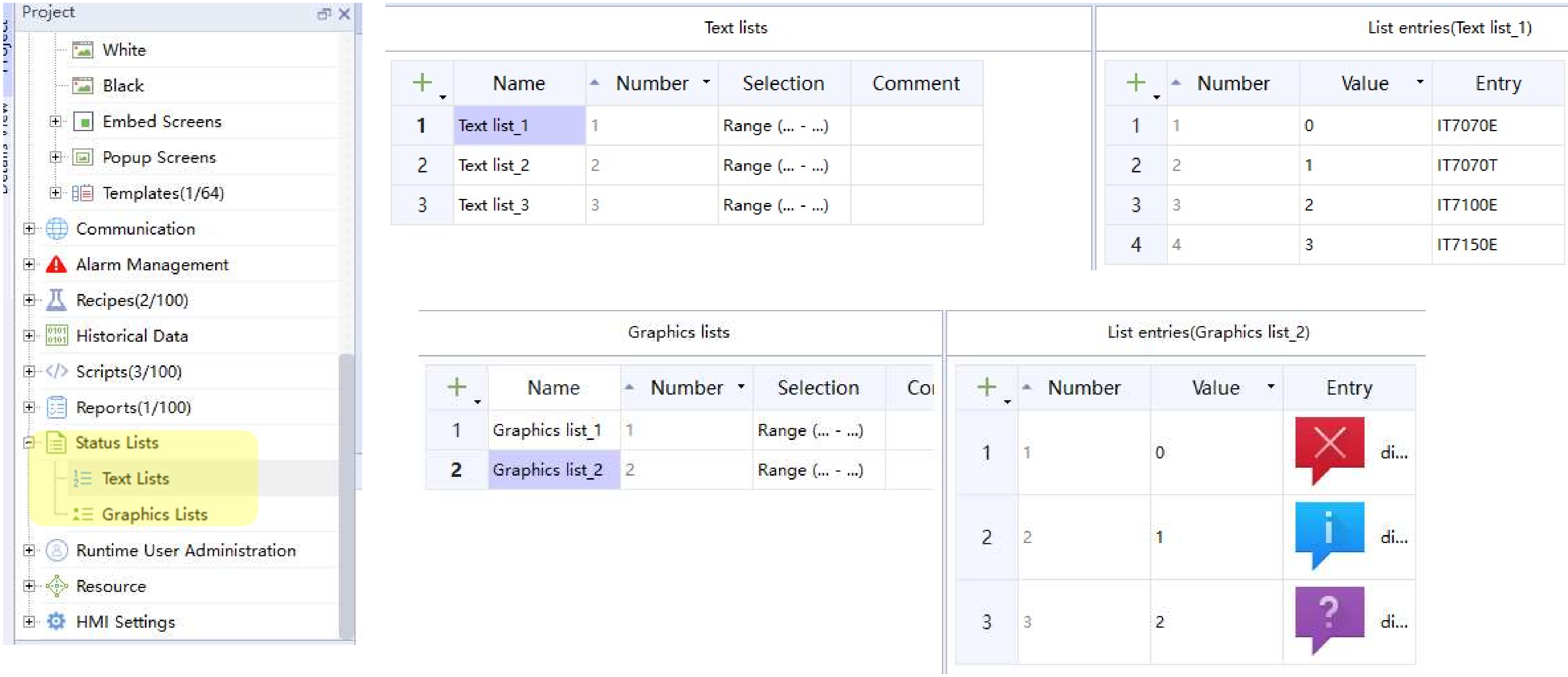
Tag: LW 100
Operator: <
Compare Object: LW 102

LW 100 > LW 101
and
LW 100 < LW 102

> LW 101 and LW 100 < LW 102

States List

Back to Contents



Project
- White
- Black
- Embed Screens
- Popup Screens
- Templates(1/64)
- Communication
- Alarm Management
- Recipes(2/100)
- Historical Data
- Scripts(3/100)
- Reports(1/100)
- Status Lists
  - Text Lists
  - Graphics Lists
- Runtime User Administration
- Resource
- HMI Settings

Text lists

+	Name	Number	Selection	Comment
1	Text list_1	1	Range (... - ...)	
2	Text list_2	2	Range (... - ...)	
3	Text list_3	3	Range (... - ...)	

List entries(Text list_1)

+	Number	Value	Entry
1	1	0	IT7070E
2	2	1	IT7070T
3	3	2	IT7100E
4	4	3	IT7150E

Graphics lists

+	Name	Number	Selection	Co
1	Graphics list_1	1	Range (... - ...)	
2	Graphics list_2	2	Range (... - ...)	

List entries(Graphics list_2)

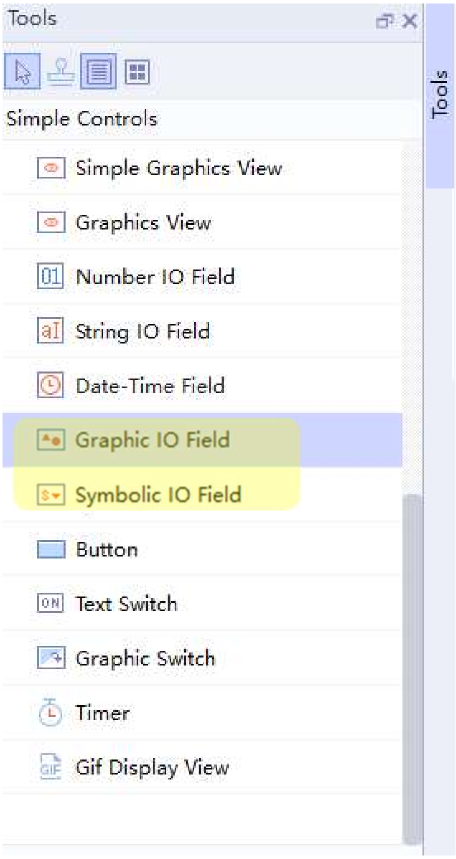
+	Number	Value	Entry
1	1	0	✕ di...
2	2	1	i di...
3	3	2	? di...

*** Text Lists: each value correspond to a text**

*** Graphics Lists: each value correspond to a image**

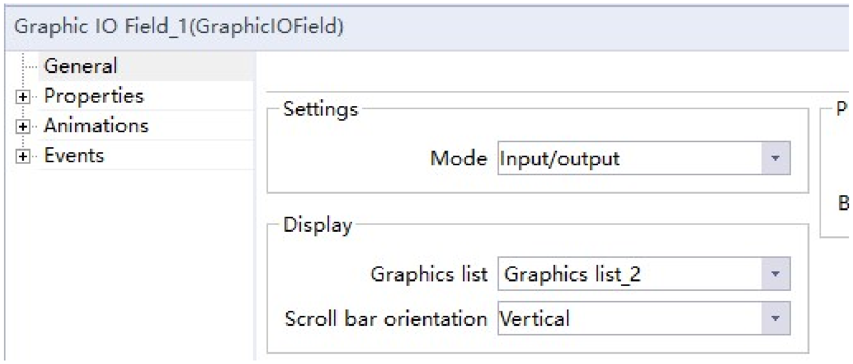
Back to Contents

➢ Add a Graphic IO field/Symbolic IO field Control to screen


Tools
Tools
Simple Controls
Simple Graphics View
Graphics View
Number IO Field
String IO Field
Date-Time Field
Graphic IO Field
Symbolic IO Field
Button
Text Switch
Graphic Switch
Timer
Gif Display View

Tool bar

Select the list in control properties setting view


Graphic IO Field_1(GraphicIOField)

General
Properties
Animations
Events
P
B

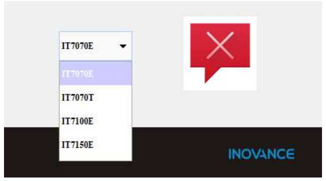
Settings

Mode: Input/output

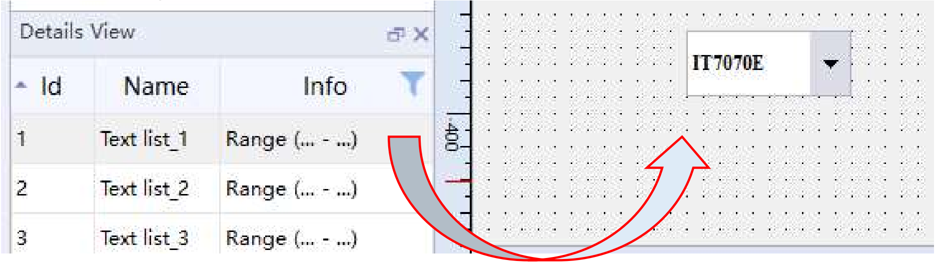
Display

Graphics list: Graphics list_2

Scroll bar orientation: Vertical


IT7070E
IT7070E
IT7070T
IT7100E
IT7150E
INOVANCE

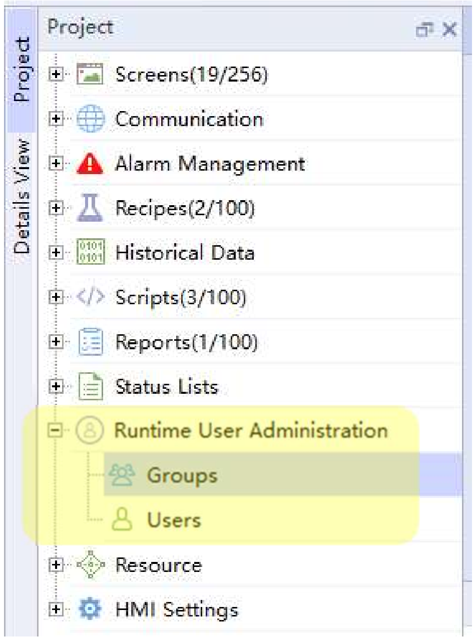
Another convenient way is to drag from details view then drop to screen


Details View

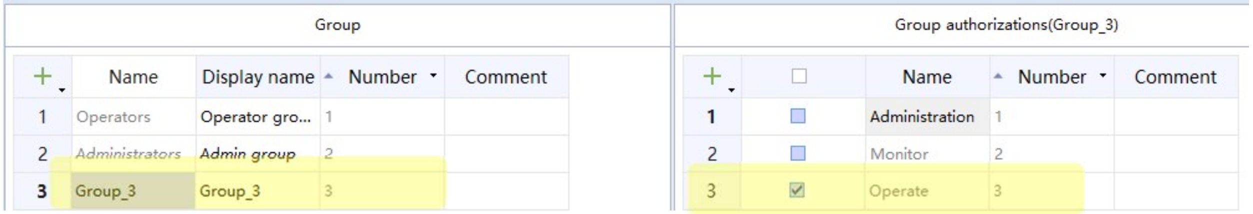
Id	Name	Info
1	Text list_1	Range (... - ...)
2	Text list_2	Range (... - ...)
3	Text list_3	Range (... - ...)

400
IT7070E

User Authority Management


Project
Details View
Project
Screens(19/256)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Scripts(3/100)
Reports(1/100)
Status Lists
Runtime User Administration
Groups
Users
Resource
HMI Settings

Groups: Define the authorizations group. For instance, we add a new group ‘Group_3’ then assign ‘Operate’ authority to ‘Group_3’.



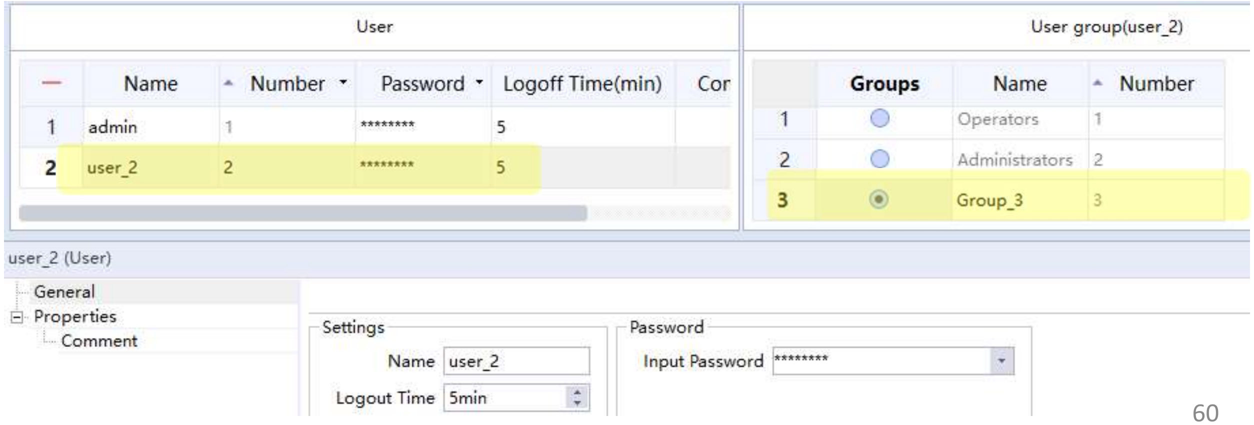
Group

	Name	Display name	Number	Comment
1	Operators	Operator gro...	1	
2	Administrators	Admin group	2	
3	Group_3	Group_3	3	

Group authorizations(Group_3)

	☐	Name	Number	Comment
1	☐	Administration	1	
2	☐	Monitor	2	
3	☑	Operate	3	

Users: Define the user, and select the group ‘Group_3’. In this case, user ‘user_2’ will be a member of ‘Group_3’ which have the authorization ‘Operate’.



User

	Name	Number	Password	Logoff Time(min)	Cor
1	admin	1	********	5	
2	user_2	2	********	5	

User group(user_2)

	Groups	Name	Number
1	○	Operators	1
2	○	Administrators	2
3	●	Group_3	3

user_2 (User)

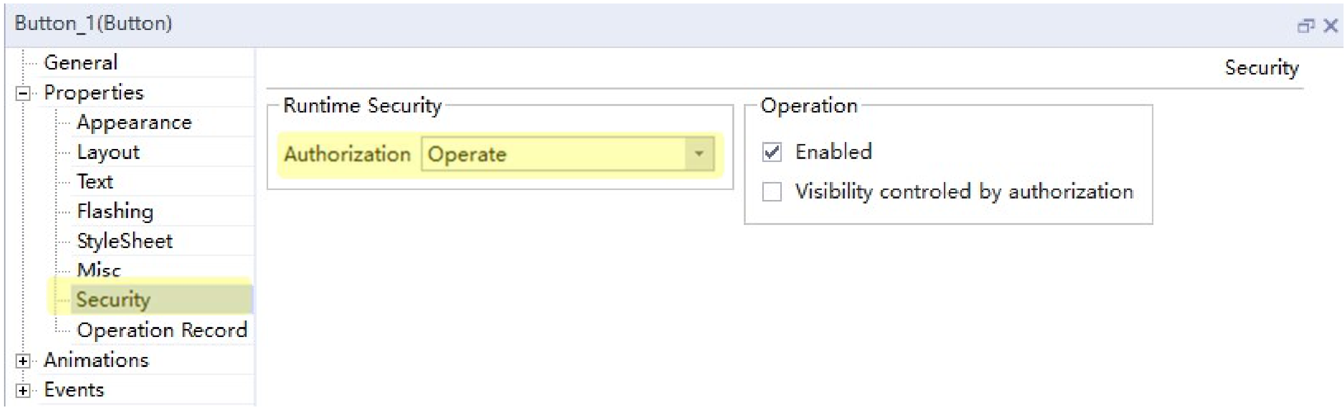
General
Properties
Comment

Settings
Name: user_2
Logout Time: 5min

Password
Input Password: ********

➢ Set Control's Authorization

When adding a button onto the screen and click this control to get into the properties setting view, find the 'security' option.



Button_1(Button)

General
Properties
Appearance
Layout
Text
Flashing
StyleSheet
Misc
Security
Operation Record
Animations
Events

Security

Runtime Security

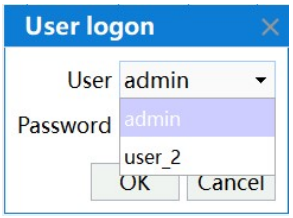
Authorization Operate

Operation

☑ Enabled

☐ Visibility controled by authorization

When clicking this button, the 'User logon' dialog box will pop up. Only if inputting the correct users/passwords you can activate this button.



User logon

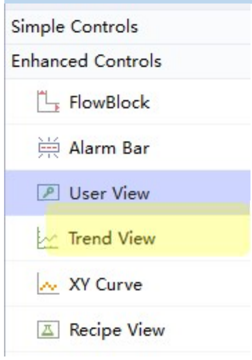
User admin

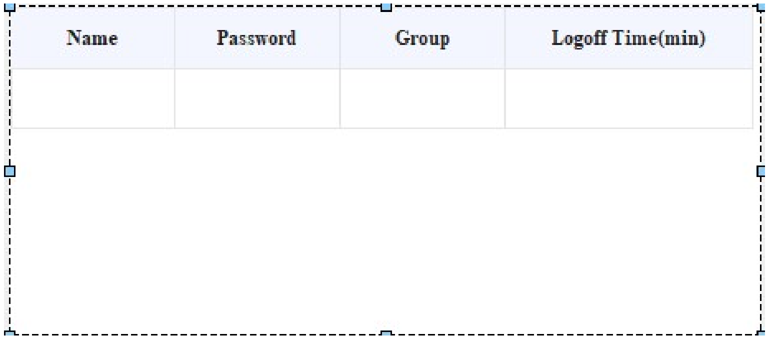
Password

admin
user_2
OK
Cancel

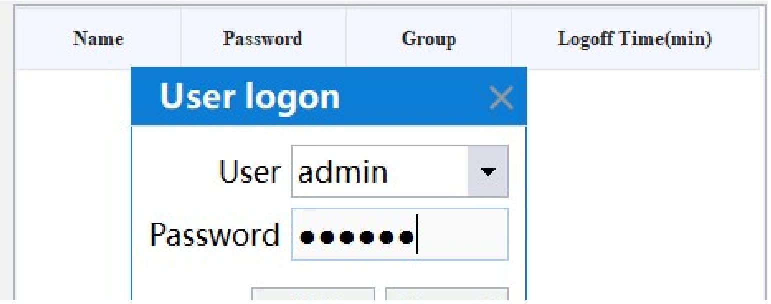
➢ How to manage user authority in HMI(modify password/authorization)

Please add a 'User View' control from tool bar.


Simple Controls
Enhanced Controls
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View

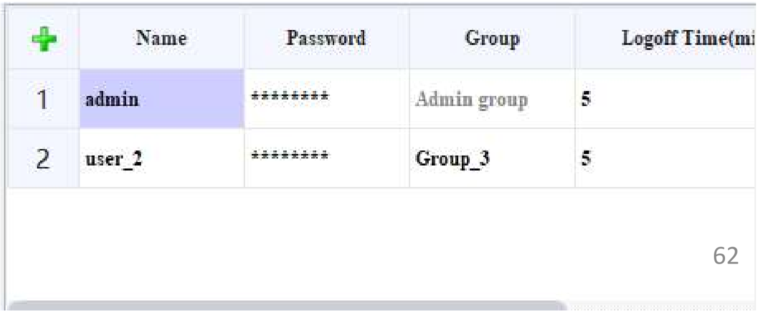

Name
Password
Group
Logoff Time(min)

When the project running in HMI, you can access to users management system via clicking this control.


Name
Password
Group
Logoff Time(min)
User logon

User admin

Password ●●●●●●

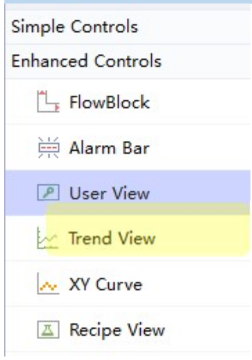


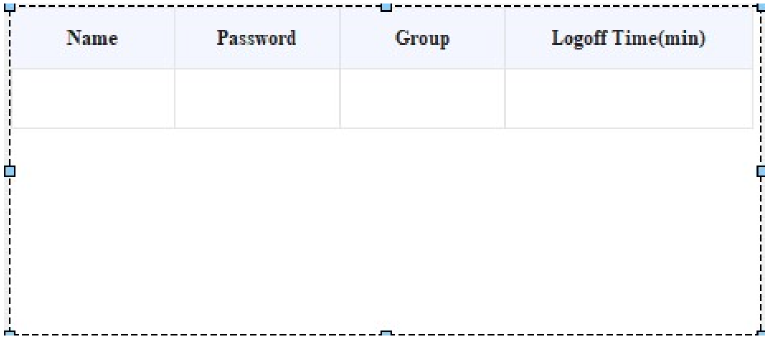
✚	Name	Password	Group	Logoff Time(mi
1	admin	********	Admin group	5
2	user_2	********	Group_3	5

User Administration

➢ How to manage user authority in HMI(modify password/authorization)

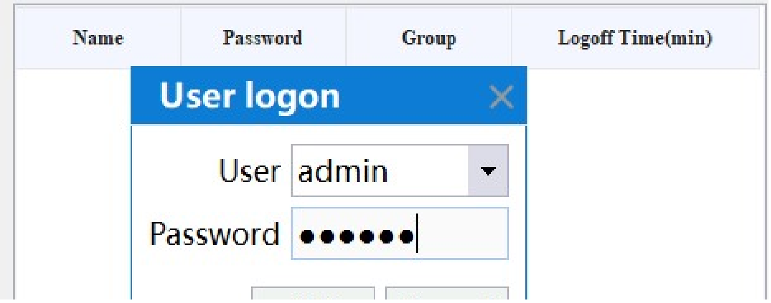
Please add a 'User View' control from tool bar.


Simple Controls
Enhanced Controls
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View



Name	Password	Group	Logoff Time(min)

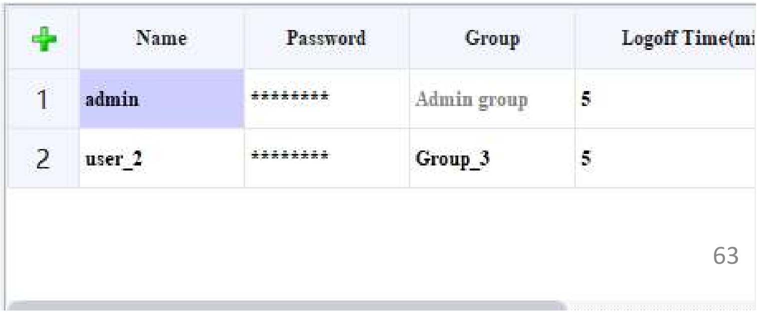
When the project running in HMI, you can access to users management system via clicking this control.



Name	Password	Group	Logoff Time(min)

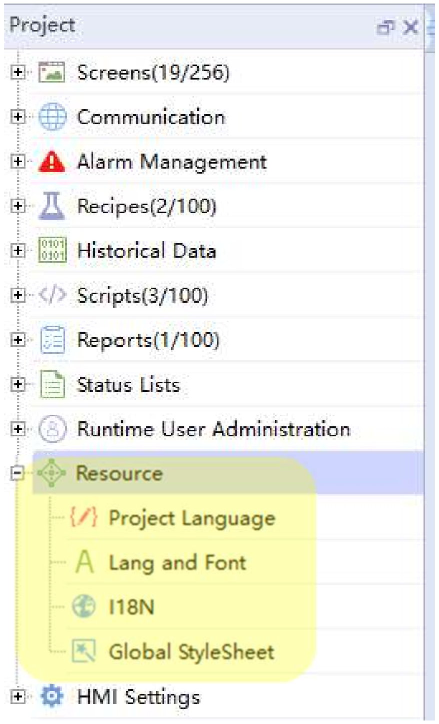
User admin

Password ●●●●●●



✚	Name	Password	Group	Logoff Time(mi
1	admin	********	Admin group	5
2	user_2	********	Group_3	5

Resources


Project
Screens(19/256)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Scripts(3/100)
Reports(1/100)
Status Lists
Runtime User Administration
Resource
Project Language
Lang and Font
I18N
Global StyleSheet
HMI Settings

Project Language: Select project language

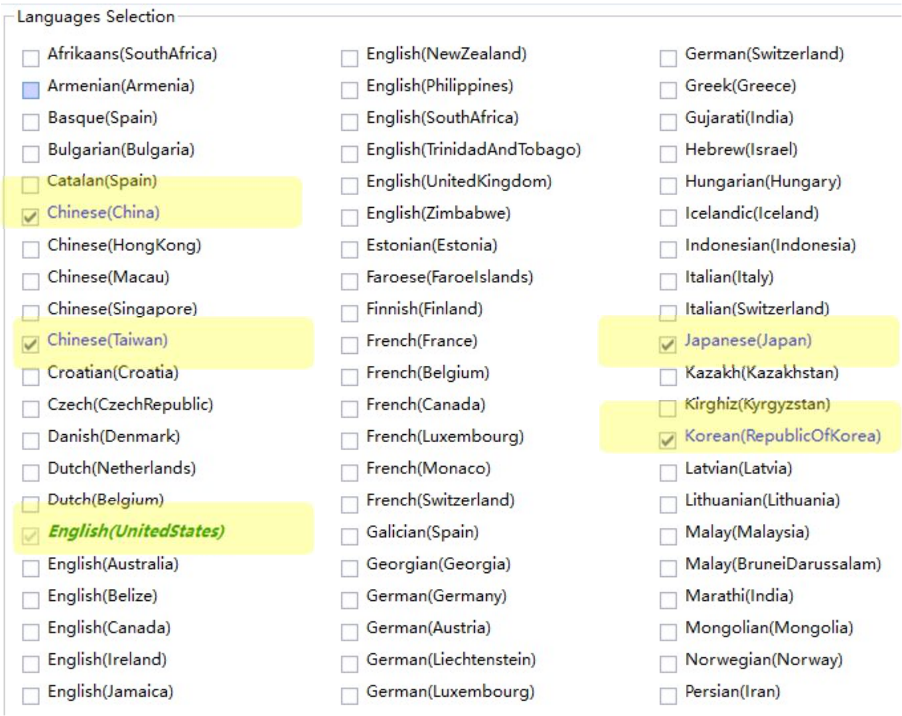
Lang and Font: Select language font

I18N: The description/text for each controls in different language

Global style sheet: setting global controls style

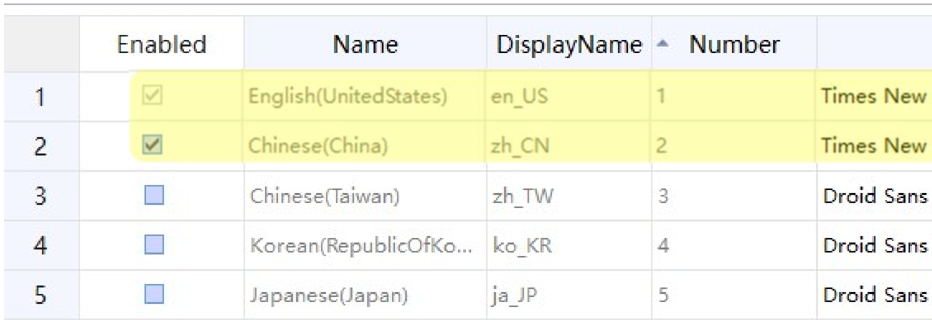
➢ How to display multi-language in HMI

1. Select the languages you need in your project in the 'Project Language'



Languages Selection

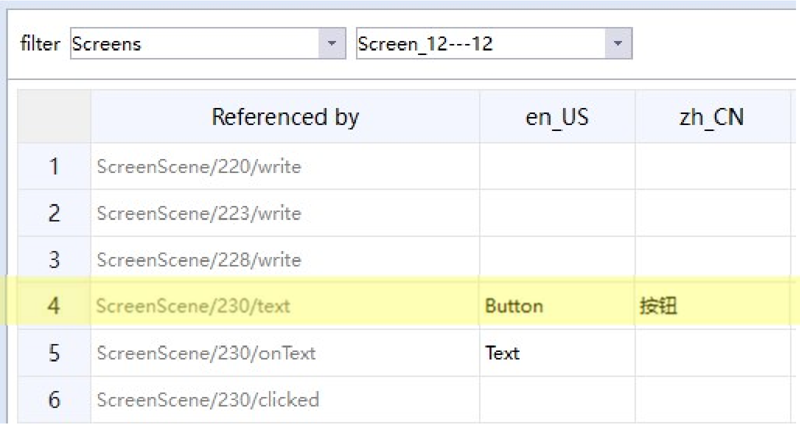
☐ Afrikaans(SouthAfrica)
☐ Armenian(Armenia)
☐ Basque(Spain)
☐ Bulgarian(Bulgaria)
☐ Catalan(Spain)
☑ Chinese(China)
☐ Chinese(HongKong)
☐ Chinese(Macau)
☐ Chinese(Singapore)
☑ Chinese(Taiwan)
☐ Croatian(Croatia)
☐ Czech(CzechRepublic)
☐ Danish(Denmark)
☐ Dutch(Netherlands)
☐ Dutch(Belgium)
☑ ***English(UnitedStates)***
☐ English(Australia)
☐ English(Belize)
☐ English(Canada)
☐ English(Ireland)
☐ English(Jamaica)
☐ English(NewZealand)
☐ English(Philippines)
☐ English(SouthAfrica)
☐ English(TrinidadAndTobago)
☐ English(UnitedKingdom)
☐ English(Zimbabwe)
☐ Estonian(Estonia)
☐ Faroese(FaroeIslands)
☐ Finnish(Finland)
☐ French(France)
☐ French(Belgium)
☐ French(Canada)
☐ French(Luxembourg)
☐ French(Monaco)
☐ French(Switzerland)
☐ Galician(Spain)
☐ Georgian(Georgia)
☐ German(Germany)
☐ German(Austria)
☐ German(Liechtenstein)
☐ German(Luxembourg)
☐ German(Switzerland)
☐ Greek(Greece)
☐ Gujarati(India)
☐ Hebrew(Israel)
☐ Hungarian(Hungary)
☐ Icelandic(Iceland)
☐ Indonesian(Indonesia)
☐ Italian(Italy)
☐ Italian(Switzerland)
☑ Japanese(Japan)
☐ Kazakh(Kazakhstan)
☐ Kirghiz(Kyrgyzstan)
☑ Korean(RepublicOfKorea)
☐ Latvian(Latvia)
☐ Lithuanian(Lithuania)
☐ Malay(Malaysia)
☐ Malay(BruneiDarussalam)
☐ Marathi(India)
☐ Mongolian(Mongolia)
☐ Norwegian(Norway)
☐ Persian(Iran)



	Enabled	Name	DisplayName	Number	
1	☑	English(UnitedStates)	en_US	1	Times New
2	☑	Chinese(China)	zh_CN	2	Times New
3	☐	Chinese(Taiwan)	zh_TW	3	Droid Sans
4	☐	Korean(RepublicOfKo...	ko_KR	4	Droid Sans
5	☐	Japanese(Japan)	ja_JP	5	Droid Sans

2. Enable corresponding language in the 'Lang and Font'

How to display multi-language in HMI

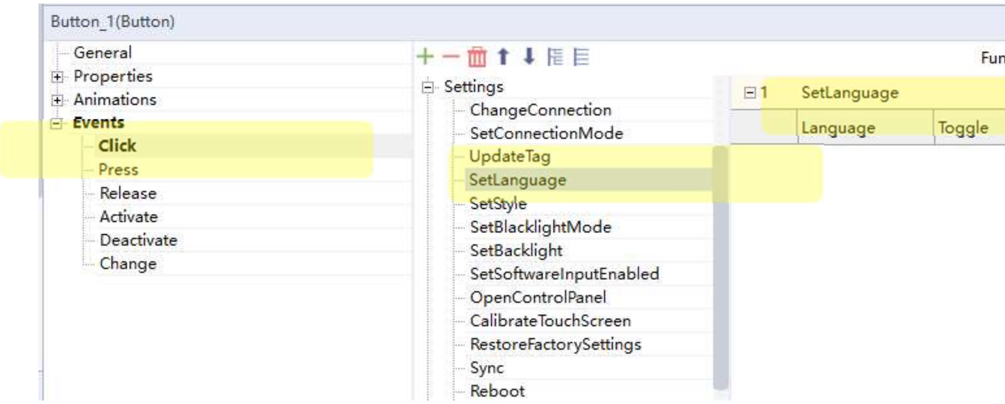


filter Screens ▾ Screen_12---12 ▾

	Referenced by	en_US	zh_CN
1	ScreenScene/220/write		
2	ScreenScene/223/write		
3	ScreenScene/228/write		
4	ScreenScene/230/text	Button	按钮
5	ScreenScene/230/onText	Text	
6	ScreenScene/230/clicked		

3. Edit the contents of each language

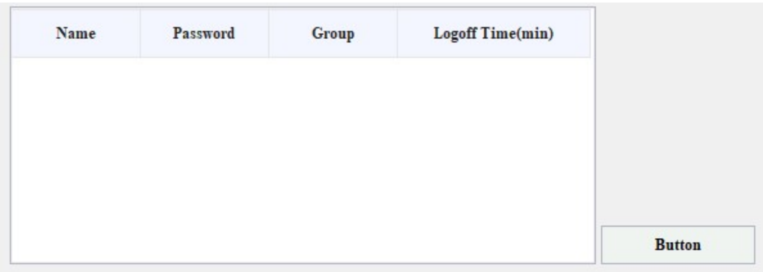
4. Map this button to system function 'SetLanguage'


Button_1(Button)
General
Properties
Animations
Events
Click
Press
Release
Activate
Deactivate
Change
Settings
ChangeConnection
SetConnectionMode
UpdateTag
SetLanguage
SetStyle
SetBlacklightMode
SetBacklight
SetSoftwareInputEnabled
OpenControlPanel
CalibrateTouchScreen
RestoreFactorySettings
Sync
Reboot
Fun

1 SetLanguage

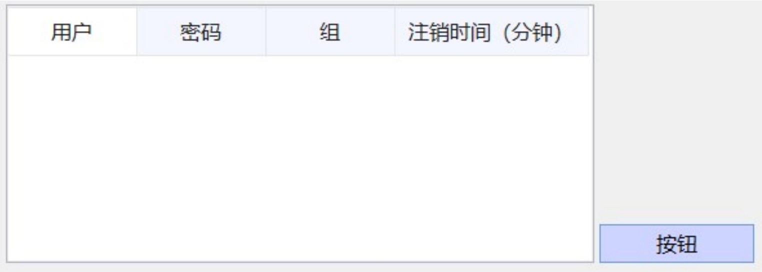
Language Toggle

Effect



Name	Password	Group	Logoff Time(min)

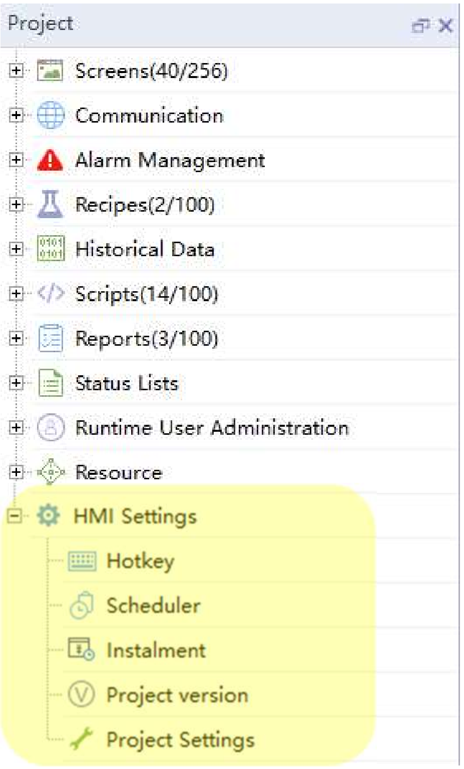
Button



用户	密码	组	注销时间（分钟）

按钮

HMI Setting


Project
Screens(40/256)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Scripts(14/100)
Reports(3/100)
Status Lists
Runtime User Administration
Resource
HMI Settings
Hotkey
Scheduler
Instalment
Project version
Project Settings

Hotkey:
Hotkey configuration, only available for AP7xx

Scheduler:
Connect system function or user script to specified event or a certain time cycle, details refer to ‘Script’ introduction

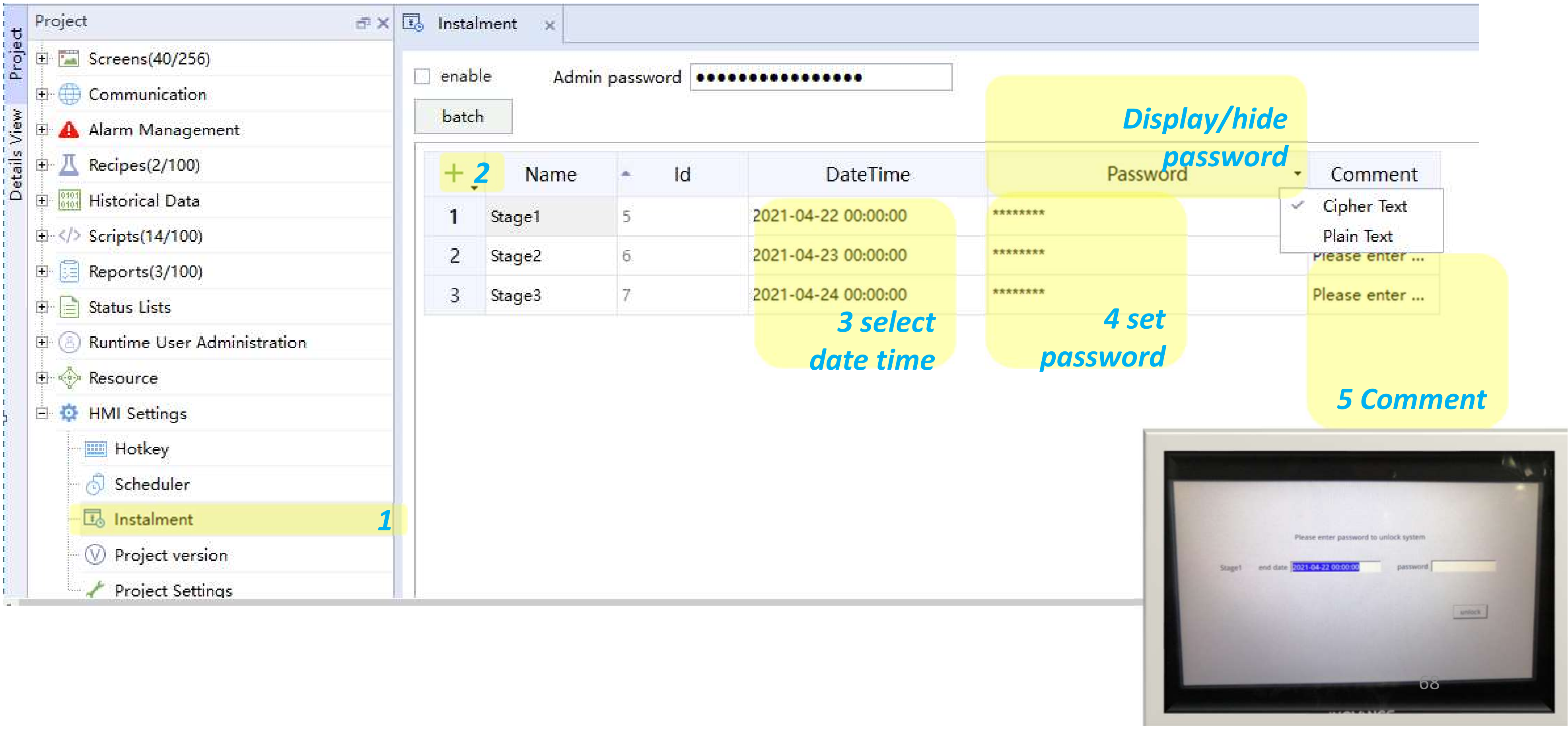
Instalment:
Instalment functionality can set the project stop running at a(or more) certain preset time, the end user have to enter correct password to continue to use the HMI.

Project version:
Version management. Users can save backup project and restore it according to real demand.

Project Settings:
Set device type/backlight/security/alarm/datalog etc.

Back to Contents

➢ Instalment



Project
Screens(40/256)
Communication
Alarm Management
Recipes(2/100)
Historical Data
Scripts(14/100)
Reports(3/100)
Status Lists
Runtime User Administration
Resource
HMI Settings
Hotkey
Scheduler
Instalment
Project version
Project Settings
Details View
Instalment
batch
Cipher Text
Plain Text
unlock

☐ enable

Admin password ●●●●●●●●●●●●●●●●

	Name	Id	DateTime	Password	Comment
1	Stage1	5	2021-04-22 00:00:00	********	
2	Stage2	6	2021-04-23 00:00:00	********	Please enter ...
3	Stage3	7	2021-04-24 00:00:00	********	Please enter ...

1

+ 2

3 select date time

Display/hide password

4 set password

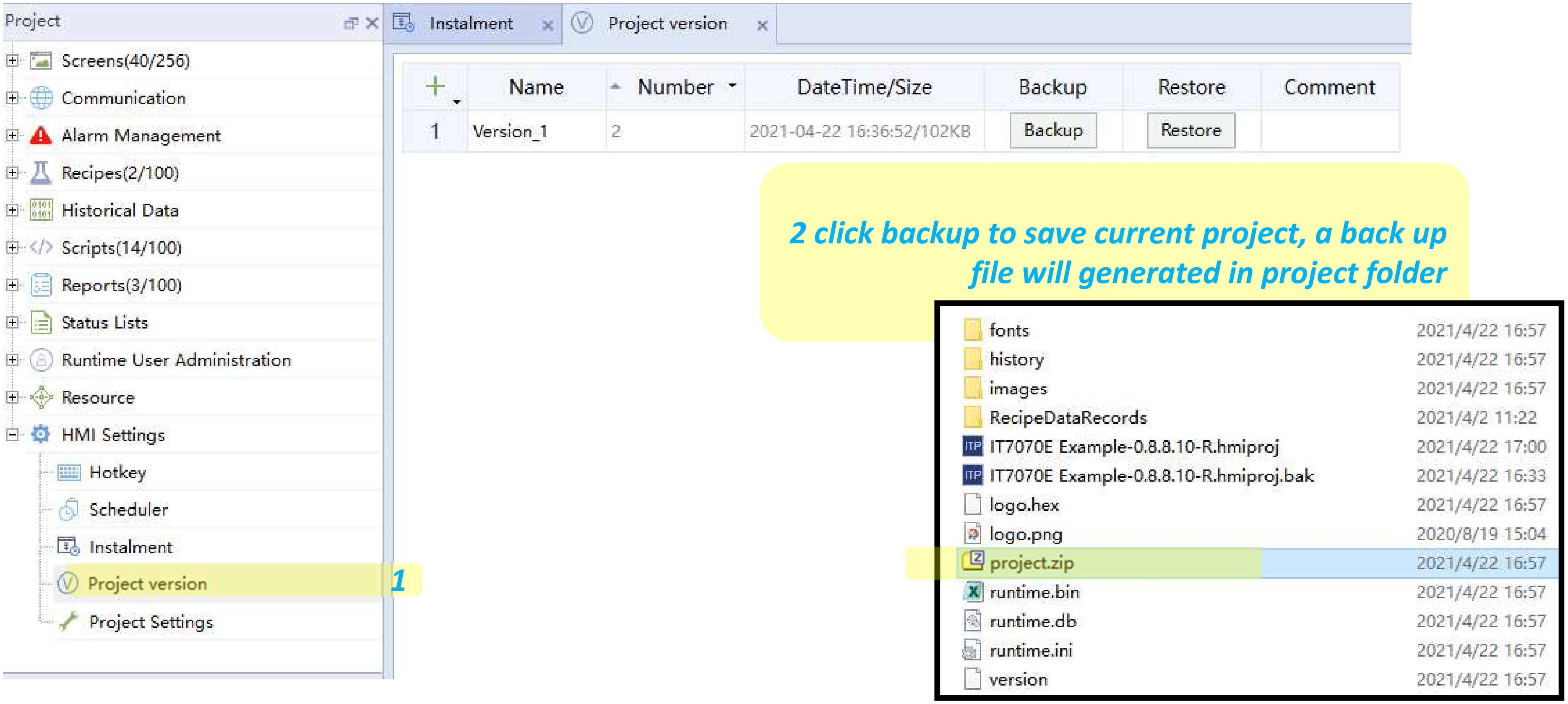
5 Comment

Please enter password to unlock system

Stage1 end date 2021-04-22 00:00:00 password

Back to Contents

➢ Project Version



Project

- Screens(40/256)
- Communication
- Alarm Management
- Recipes(2/100)
- Historical Data
- Scripts(14/100)
- Reports(3/100)
- Status Lists
- Runtime User Administration
- Resource
- HMI Settings
  - Hotkey
  - Scheduler
  - Instalment
  - Project version
  - Project Settings

Instalment | Project version

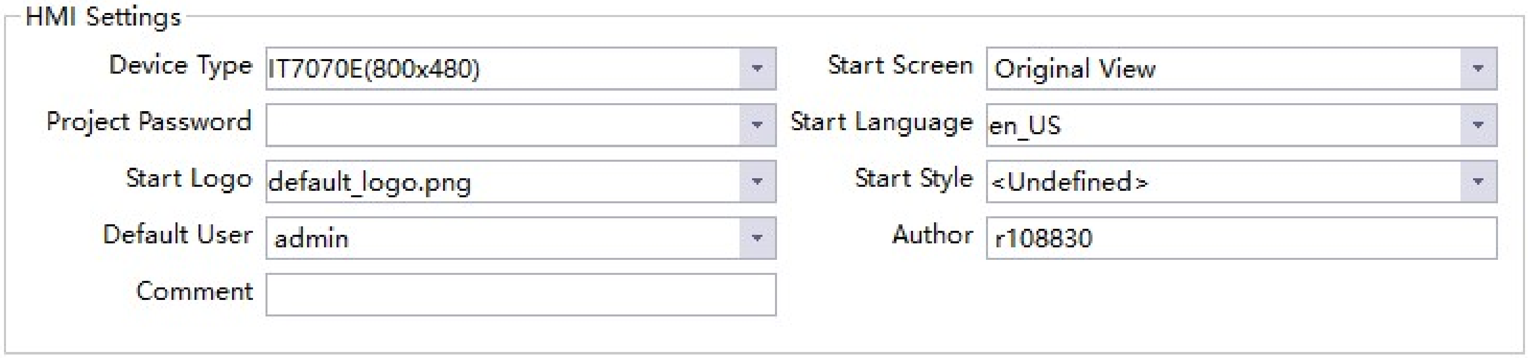
+	Name	Number	DateTime/Size	Backup	Restore	Comment
1	Version_1	2	2021-04-22 16:36:52/102KB	Backup	Restore	

fonts	2021/4/22 16:57
history	2021/4/22 16:57
images	2021/4/22 16:57
RecipeDataRecords	2021/4/2 11:22
IT7070E Example-0.8.8.10-R.hmiproj	2021/4/22 17:00
IT7070E Example-0.8.8.10-R.hmiproj.bak	2021/4/22 16:33
logo.hex	2021/4/22 16:57
logo.png	2020/8/19 15:04
project.zip	2021/4/22 16:57
runtime.bin	2021/4/22 16:57
runtime.db	2021/4/22 16:57
runtime.ini	2021/4/22 16:57
version	2021/4/22 16:57

1

2 click backup to save current project, a back up file will generated in project folder

Project Setting

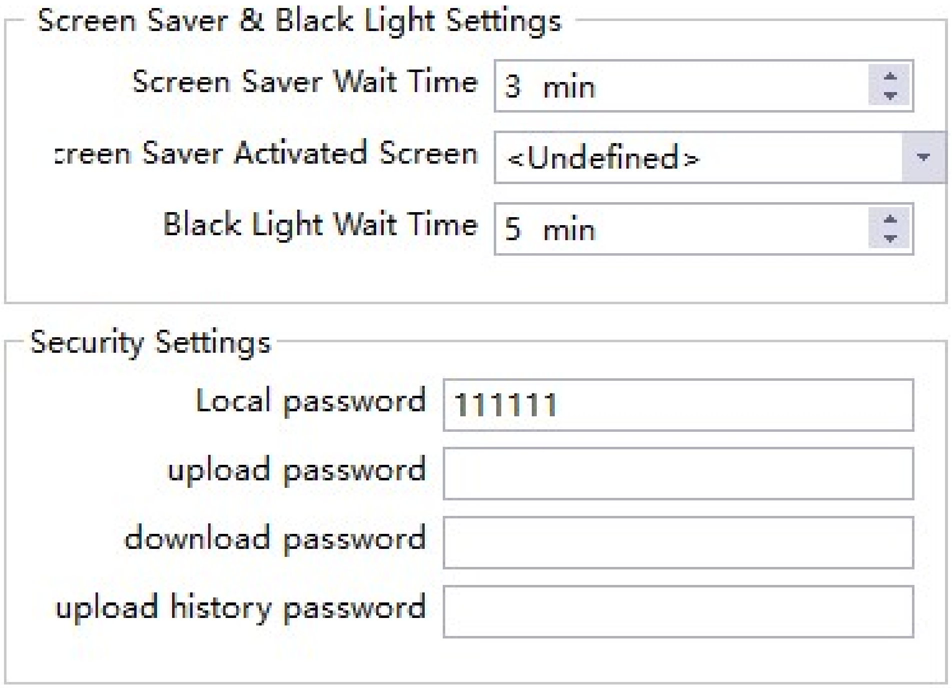


HMI Settings

Device Type	IT7070E(800x480)	Start Screen	Original View
Project Password		Start Language	en_US
Start Logo	default_logo.png	Start Style	<Undefined>
Default User	admin	Author	r108830
Comment			

Device Type:
Project Password:
Start Logo : the display graphic when HMI start on, an inovance logo as default
Default User: When login user administration view, the default selected user
Comment:
Start Screen: default screen when HMI project running
Start Language: default language when HMI project running
Start Style: default global style used for project, inotouchPad with built in 3 global style in ‘Resource’
Author:

Project Setting


Screen Saver & Black Light Settings

Screen Saver Wait Time: 3 min

creen Saver Activated Screen: <Undefined>

Black Light Wait Time: 5 min

Security Settings

Local password: 111111

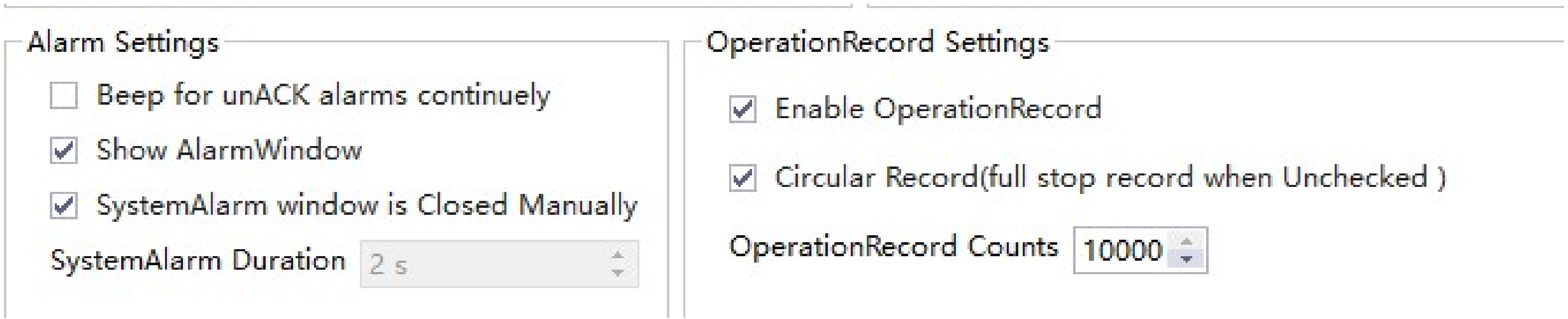
upload password:

download password:

upload history password:

Screen Saver Wait Time: time to get into screen saver when no operation, while set as 0 HMI will not get into screen saver
Screen Saver Activated Screen: When get into screen saver jump to specified screen
Back Light Wait Time: time to turn off back light, 5 minutes as default, while set as 0 HMI will not turn off back light
Local password: HMI password when get into control panel
Upload password:
Download password:
Upload History password:

Project Setting



Alarm Settings

☐ Beep for unACK alarms continuely

☑ Show AlarmWindow

☑ SystemAlarm window is Closed Manually

SystemAlarm Duration 2 s

OperationRecord Settings

☑ Enable OperationRecord

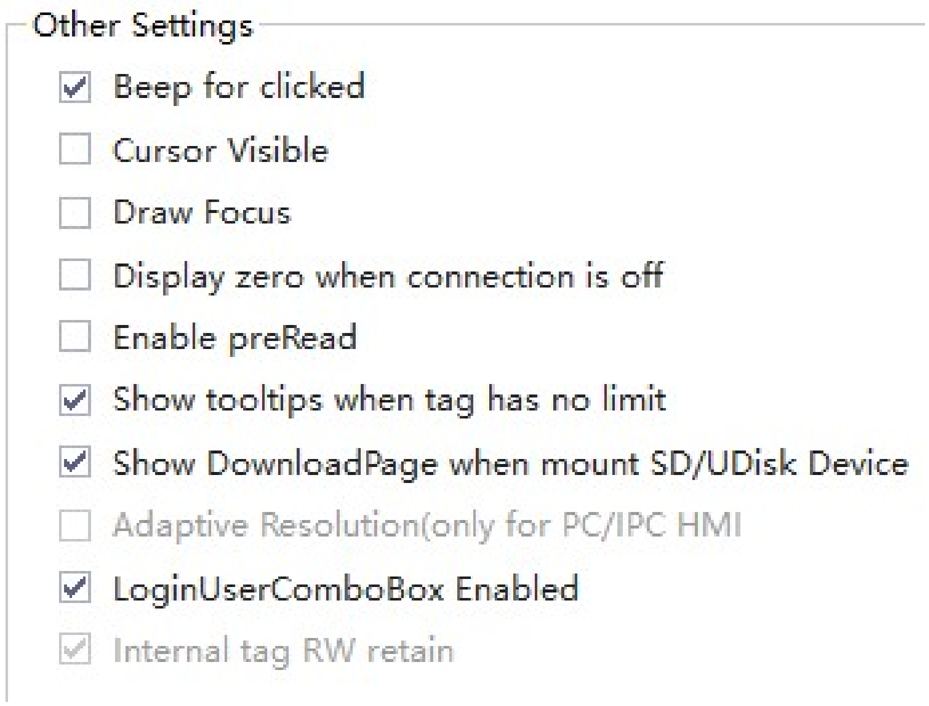
☑ Circular Record(full stop record when Unchecked)

OperationRecord Counts 10000

Beep for unACK alarms continuely: If there is unconfirmed alarm, the buzzer keep on
Show AlarmWindow: when system alarm occur, an alarm window will pop up
SystemAlarm window is Closed Manually: Manually close system alarm window or automatically closed according to the '**SystemAlarm Duration**'

OperationRecord Settings:
Circular Record: while select this option, if records over preset numbers, system will remove the earlier records and add new records; if this option is unchecked, while operation record number up to preset counts, system will stop record operations.

➢ Project Setting



Other Settings

- ☑ Beep for clicked
- ☐ Cursor Visible
- ☐ Draw Focus
- ☐ Display zero when connection is off
- ☐ Enable preRead
- ☑ Show tooltips when tag has no limit
- ☑ Show DownloadPage when mount SD/UDisk Device
- ☐ Adaptive Resolution(only for PC/IPC HMI
- ☑ LoginUserComboBox Enabled
- ☑ Internal tag RW retain

VNC

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What is VNC

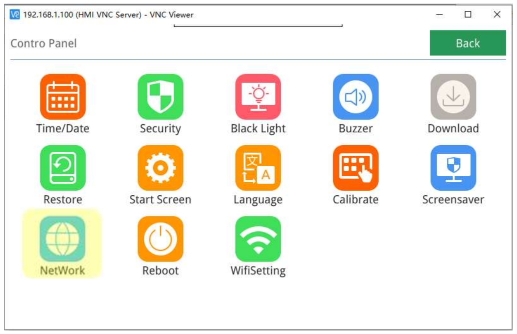
VNC is Virtual Network Console which used for remote monitoring. It is an excellent remote control tool developed by the famous AT&T European Research Laboratory. VNC consist of 2 part: VNC server and VNC client. IT7000 is a VNC server which can be accessed by VNC client like PC or cellphone.

InotouchPad integrate the VNC client application ‘**VNC Viewer**’ which can be directly used to remotely control an activated IT7000 series HMI(with Ethernet port) .

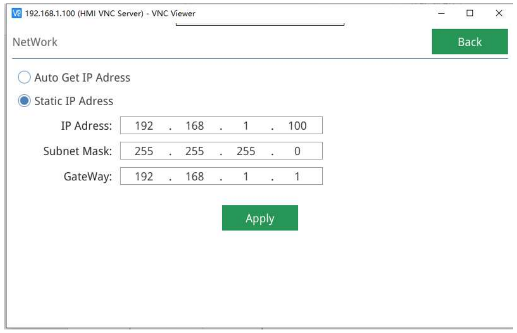
Connect to HMI via VNC view

Step1: Use an Ethernet cable to connect PC and HMI

Step2: Modify the IP address of HMI or PC to keep PC & HMI share the same network segments(first 3 segments of IP)


192.168.1.100 (HMI VNC Server) - VNC Viewer

Contro Panel
Back
Time/Date
Security
Black Light
Buzzer
Download
Restore
Start Screen
Language
Calibrate
Screensaver
NetWork
Reboot
WifiSetting


192.168.1.100 (HMI VNC Server) - VNC Viewer

NetWork
Back

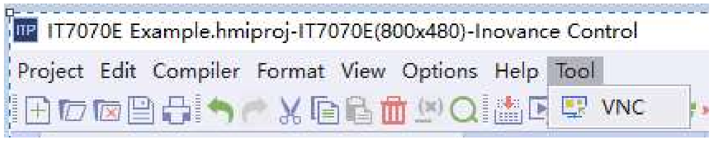
○ Auto Get IP Adress
● Static IP Adress

IP Adress: 192 . 168 . 1 . 100
Subnet Mask: 255 . 255 . 255 . 0
GateWay: 192 . 168 . 1 . 1

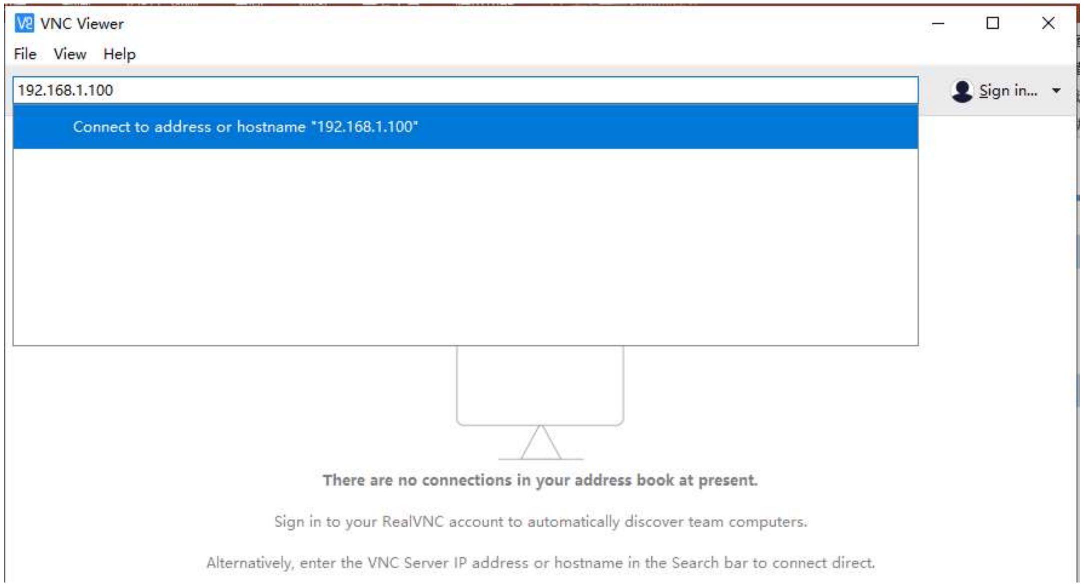
Apply

VNC

Step3: Open InoTouchPad software, menu bar >> Tool >>VNC to open VNC Viewer


IT7070E Example.hmiproj-IT7070E(800x480)-Inovance Control
Project
Edit
Compiler
Format
View
Options
Help
Tool
VNC

Step4: Enter the IP address of HMI(default IP:192.168.1.100) ,then select 'connect to address or hostname "192.168.1.100' or press 'Enter' key to connect.


VNC Viewer
File
View
Help
Sign in...

192.168.1.100

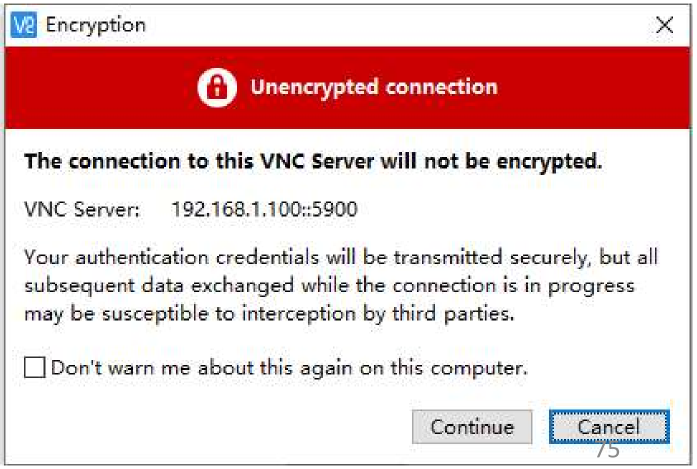
Connect to address or hostname "192.168.1.100"

There are no connections in your address book at present.

Sign in to your RealVNC account to automatically discover team computers.

Alternatively, enter the VNC Server IP address or hostname in the Search bar to connect direct.

If below warning pop up, just click '**continue**'


Encryption
Continue
Cancel

Unencrypted connection

The connection to this VNC Server will not be encrypted.

VNC Server: 192.168.1.100::5900

Your authentication credentials will be transmitted securely, but all subsequent data exchanged while the connection is in progress may be susceptible to interception by third parties.

☐ Don't warn me about this again on this computer.

VNC

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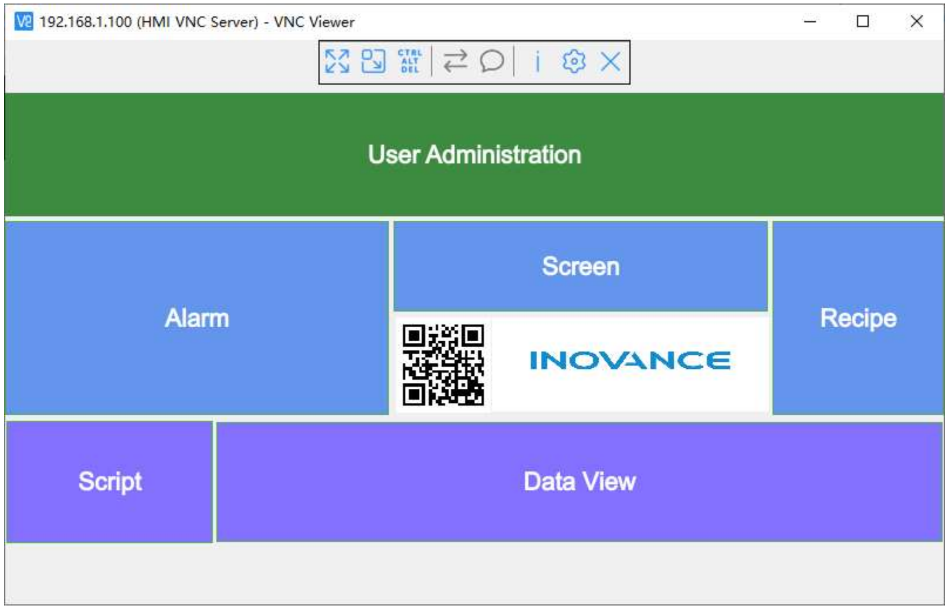
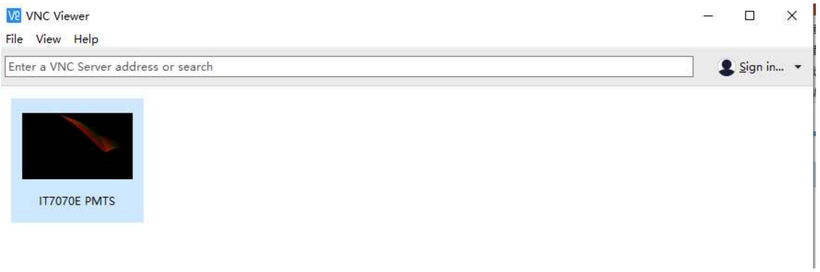
After connection established, PC can remotely monitor/access HMI via VNC Viewer.


192.168.1.100 (HMI VNC Server) - VNC Viewer
User Administration
Alarm
Screen
INOVANCE
Recipe
Script
Data View

Modify connected device name like ‘IT7070E PMTS’ instead of ‘192.168.1.100’

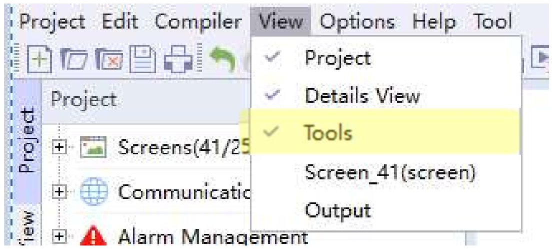

VNC Viewer
File View Help
Enter a VNC Server address or search
Sign in...
IT7070E PMTS

IT7000 Controls

IT7000 Controls

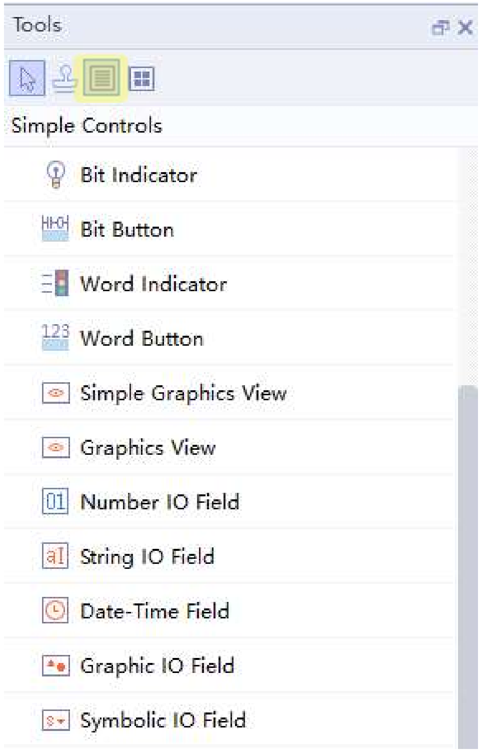
Back to Contents

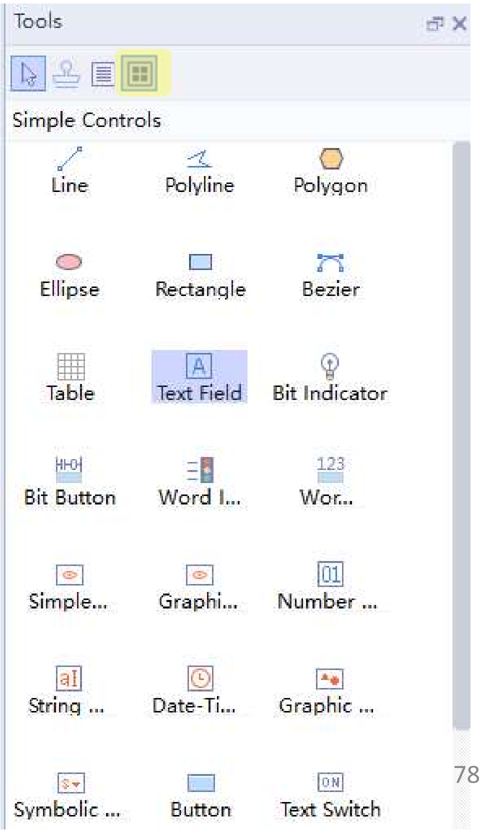
Menu bar ‘View’ to show the ‘Tools’, the tool box will pop up in the right of InoTouchPad development interface.


Project
Edit
Compiler
View
Options
Help
Tool
Project
Details View
Tools
Screen_41(screen)
Output
Project
Screens(41/25
Communicatio
Alarm Management
View

***Users can add the controls from tool box.**

There are 2 modes to display the controls—List view(Left) and thumbnails view(Right).

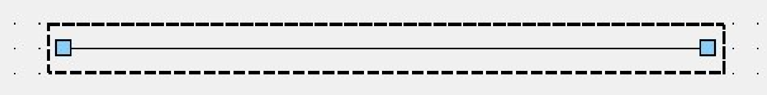

Tools
Simple Controls
Bit Indicator
Bit Button
Word Indicator
Word Button
Simple Graphics View
Graphics View
Number IO Field
String IO Field
Date-Time Field
Graphic IO Field
Symbolic IO Field


Tools
Simple Controls
Line
Polyline
Polygon
Ellipse
Rectangle
Bezier
Table
Text Field
Bit Indicator
Bit Button
Word I...
Wor...
Simple...
Graphi...
Number ...
String ...
Date-Ti...
Graphic ...
Symbolic ...
Button
Text Switch

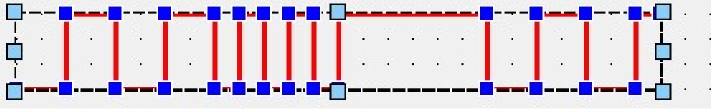
The Geometry

Back to Contents

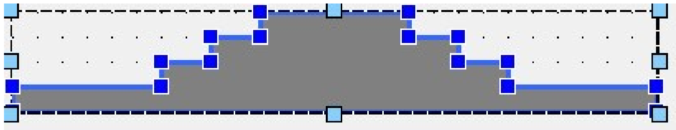
- **Line**



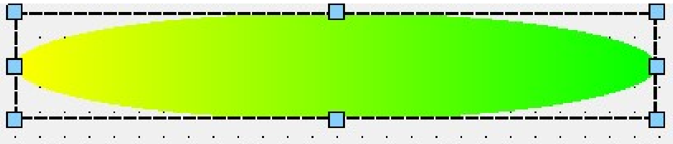
- **Polyline**



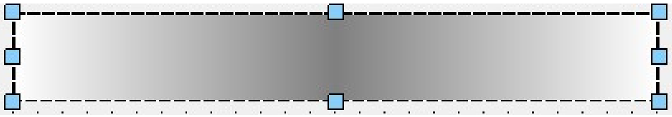
- **Polygon**



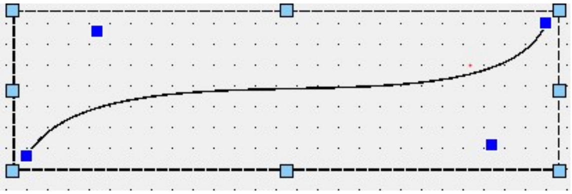
- **Ellipse**

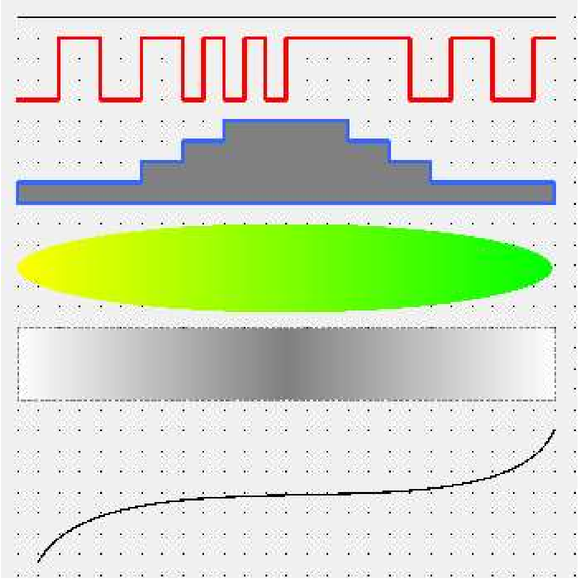


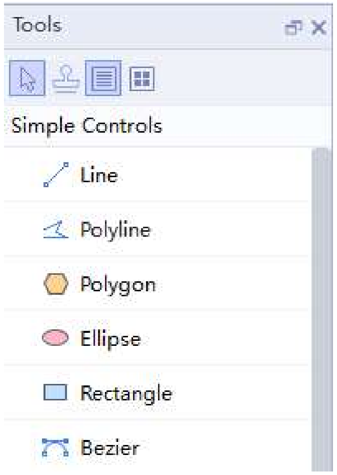
- **Rectangle**



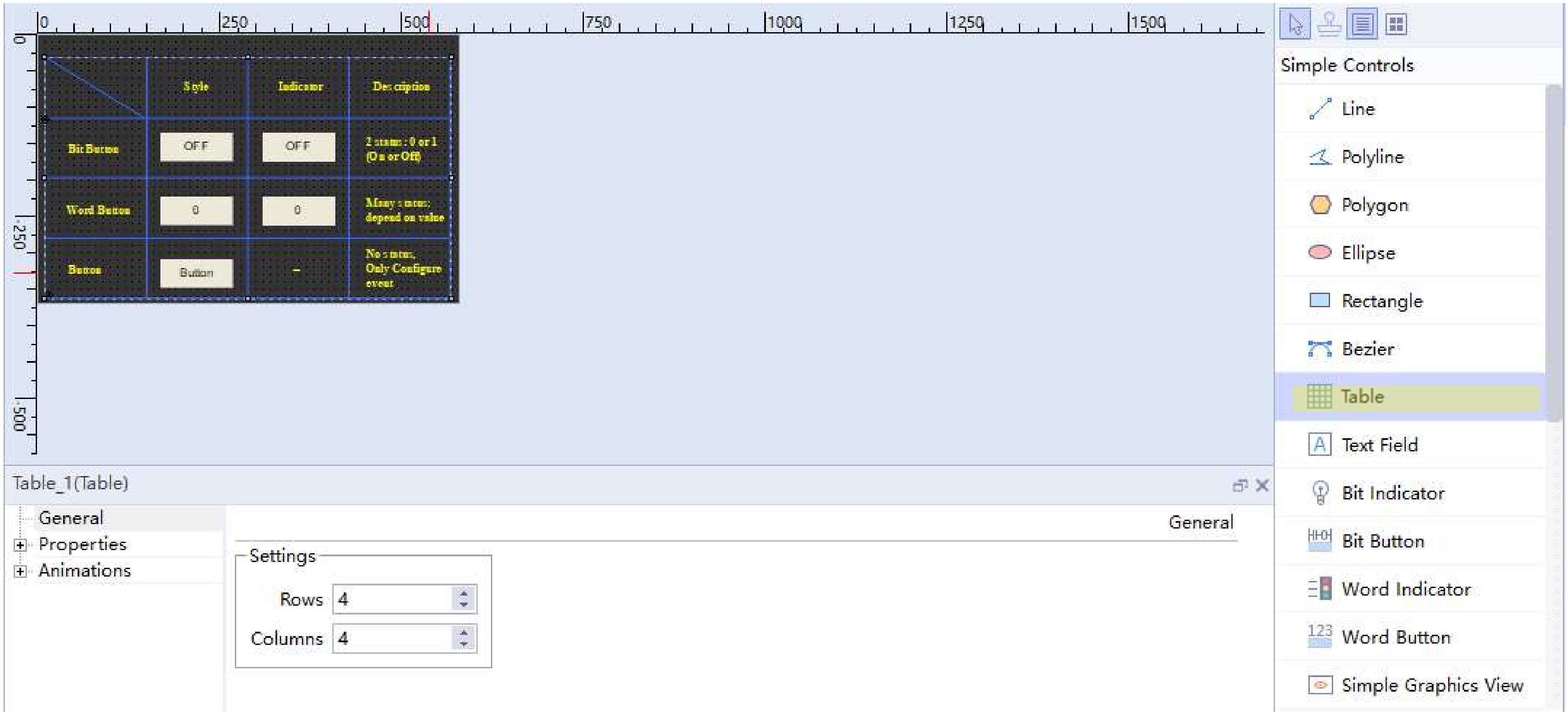
- **Bezier**






Tools
Simple Controls
Line
Polyline
Polygon
Ellipse
Rectangle
Bezier

Table



	Style	Indicator	Description
Bit Button	OFF	OFF	2 status: 0 or 1 (On or Off)
Word Button	0	0	Many status: depend on value
Button	Button	–	No status; Only Configure event

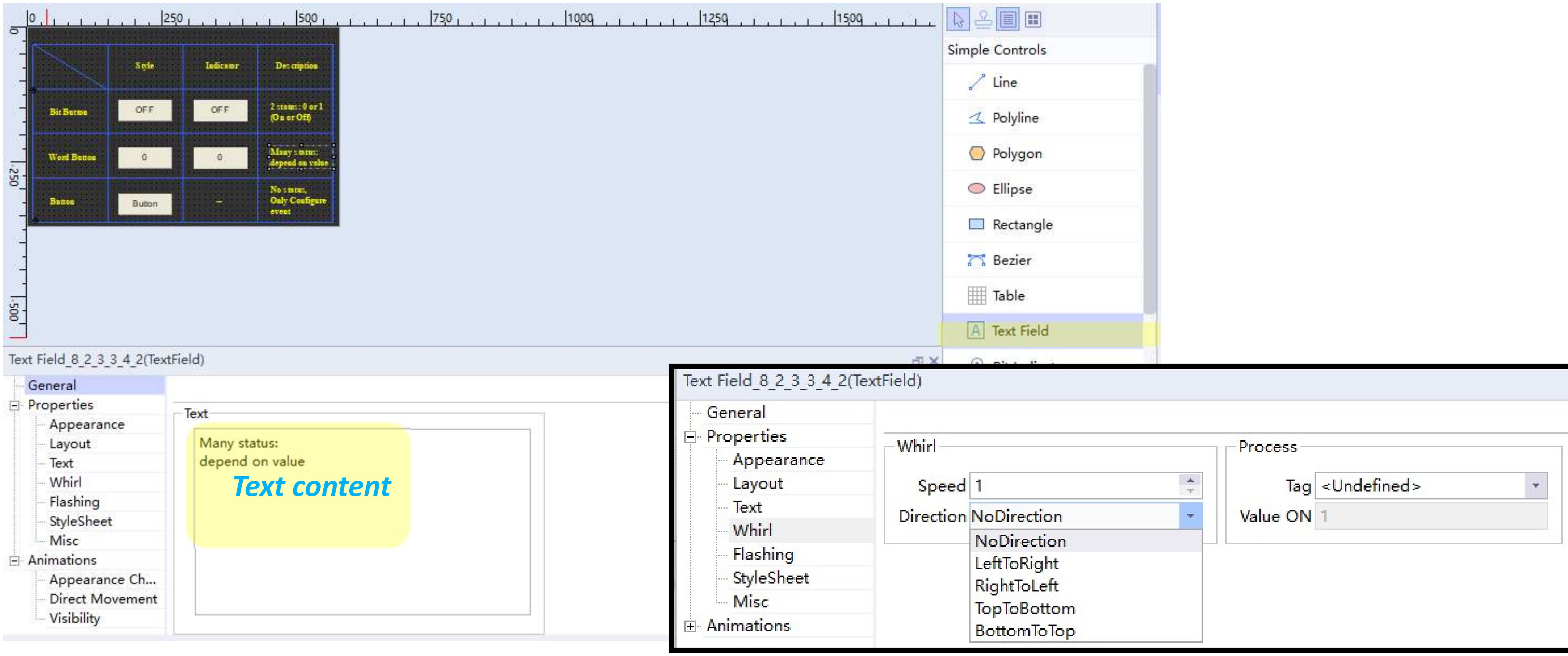
Table_1(Table)

Settings
Rows 4
Columns 4

0
250
500
750
1000
1250
1500
0
250
500
General
Properties
Animations
General
Simple Controls
Line
Polyline
Polygon
Ellipse
Rectangle
Bezier
Table
Text Field
Bit Indicator
Bit Button
Word Indicator
Word Button
Simple Graphics View

'Table' control support to draw a simple table, the color and border/fill type are adjustable.

Text Field



	Style	Indicator	Description
Bit Button	OFF	OFF	2 status: 0 or 1 (On or Off)
Word Button	0	0	Many status: depend on value
Button	Button	–	No status, Only Configure event

Text Field_8_2_3_3_4_2(TextField)

Text: Many status: depend on value

Text content

Whirl
Speed: 1
Direction: NoDirection

Process
Tag: <Undefined>
Value ON: 1

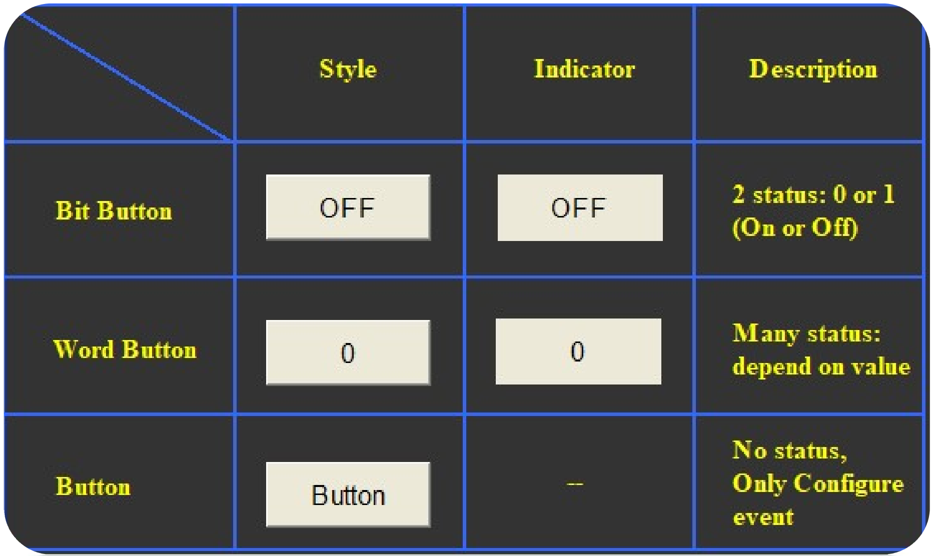
0
250
500
750
1000
1250
1500
Simple Controls
Line
Polyline
Polygon
Ellipse
Rectangle
Bezier
Table
Text Field
General
Properties
Appearance
Layout
Text
Whirl
Flashing
StyleSheet
Misc
Animations
Appearance Ch...
Direct Movement
Visibility
NoDirection
LeftToRight
RightToLeft
TopToBottom
BottomToTop

‘Text Field’ is a text display control. The content font/format/size are adjustable, users can also set the ‘flow’ effect when text display on HMI.

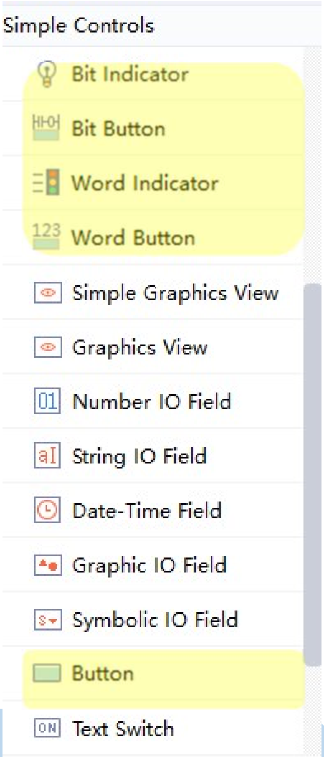
Button and Indicator

Back to Contents

- Bit Button
- Word Button
- Bit Indicator
- Word Indicator
- Button



	Style	Indicator	Description
Bit Button	OFF	OFF	2 status: 0 or 1 (On or Off)
Word Button	0	0	Many status: depend on value
Button	Button	--	No status, Only Configure event

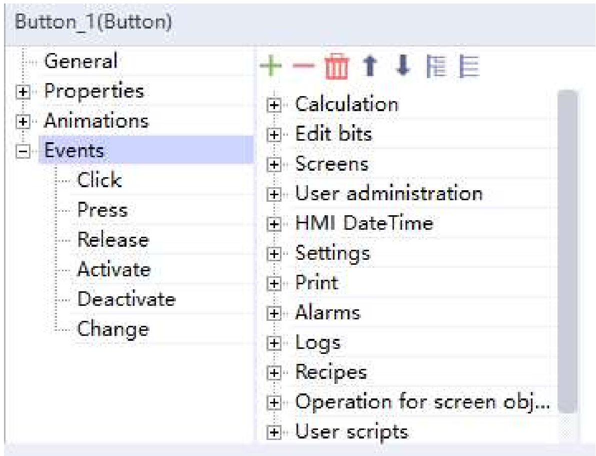

Simple Controls
Bit Indicator
Bit Button
Word Indicator
Word Button
Simple Graphics View
Graphics View
Number IO Field
String IO Field
Date-Time Field
Graphic IO Field
Symbolic IO Field
Button
Text Switch

Bit button: need map to a variable, only support 2 status
Word button: need map to a variable, support multi status
Bit indicator: indicate variable status, support only 2 status
Word indicator: indicate variable status, support multi status
Button: commonly used button, no need to map to a certain variable. Used with the system function.

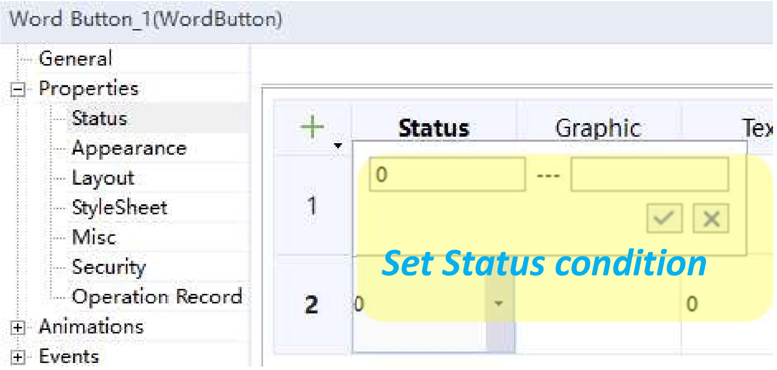
Button and Indicator

Back to Contents

Button Event


Button_1(Button)
General
Properties
Animations
Events
Click
Press
Release
Activate
Deactivate
Change
Calculation
Edit bits
Screens
User administration
HMI DateTime
Settings
Print
Alarms
Logs
Recipes
Operation for screen obj...
User scripts

Indicator Status


Word Button_1(WordButton)
General
Properties
Status
Appearance
Layout
StyleSheet
Misc
Security
Operation Record
Animations
Events
Status
Graphic
Tex
1
0

2
0
0

Set Status condition

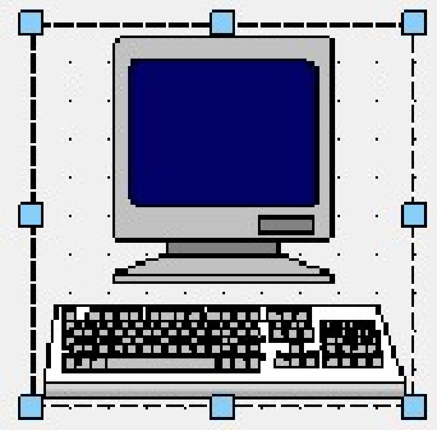
Events: a button call a system function according to the button events.
Status: an indicator display different status according to variable value

Graphic View

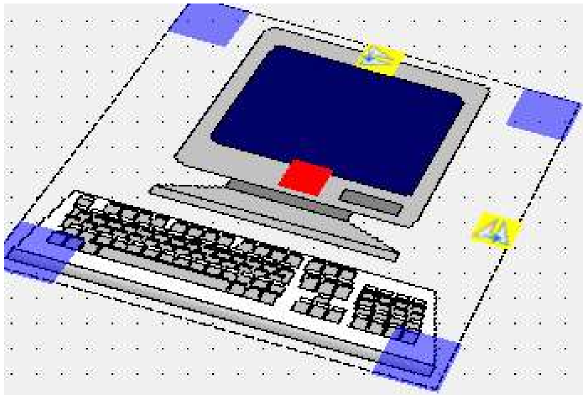
Back to Contents

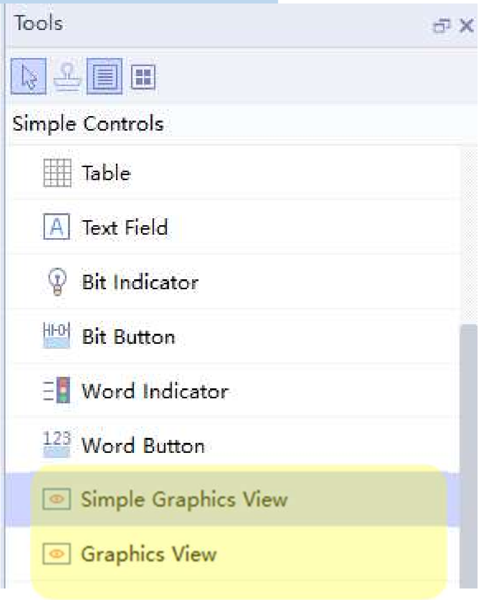
InoTouchPad provide 2 types graphic view to display picture.

- **Simple Graphics View**



- **Graphic View**



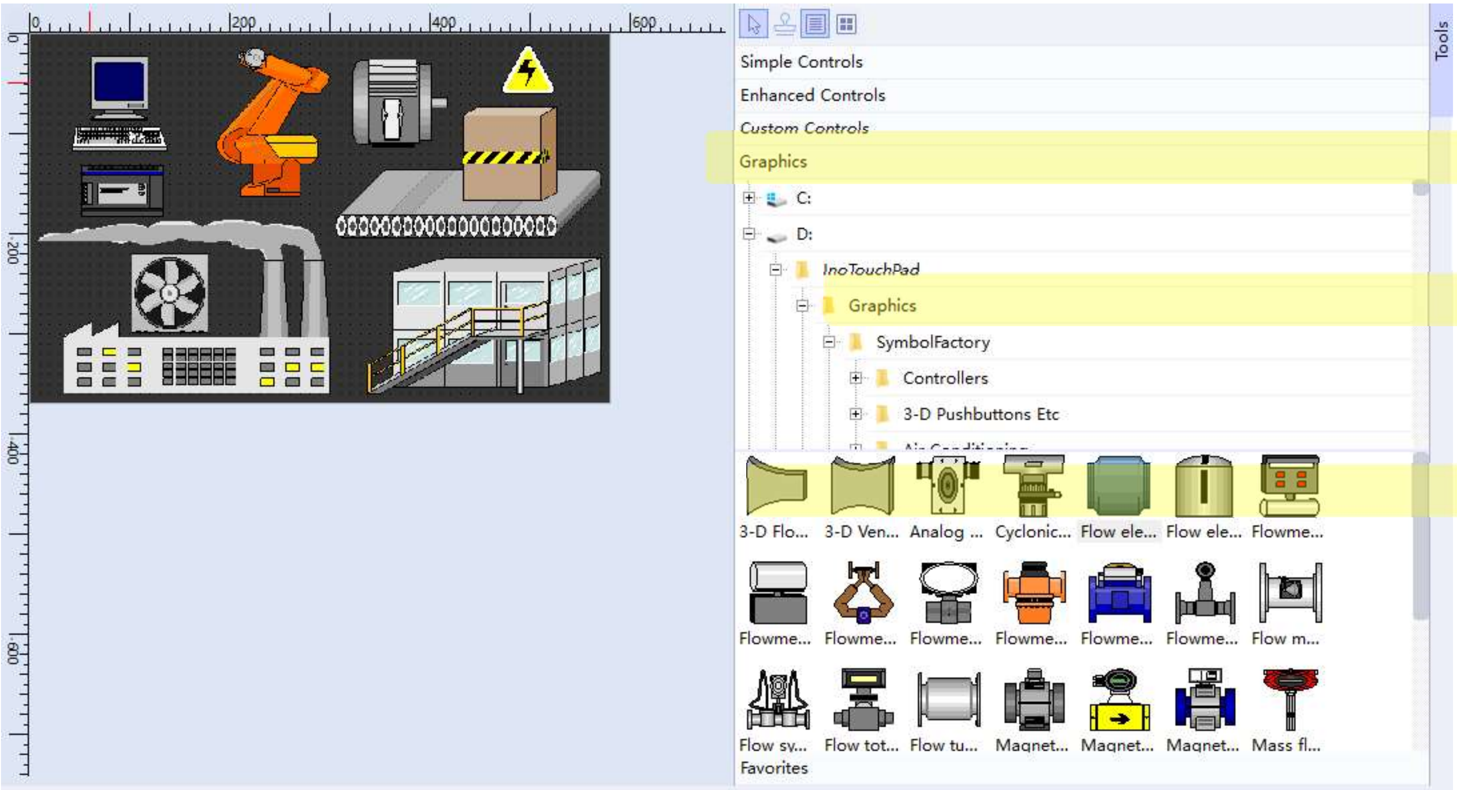

Tools
Simple Controls
Table
Text Field
Bit Indicator
Bit Button
Word Indicator
Word Button
Simple Graphics View
Graphics View

Graphic View

Back to Contents

➢ Built in Graphics

InoTouchPad provide many in built graphics for users to configure the HMI screen. Select ‘Graphics’ and find the InoTouchPad installation path then open the folder ‘Graphics’, drag and drop the figure directly to screen.


Simple Controls
Enhanced Controls
Custom Controls
Graphics
1
C:
D:
InoTouchPad
Graphics
2
SymbolFactory
Controllers
3-D Pushbuttons Etc
3
3-D Flo...
3-D Ven...
Analog ...
Cyclonic...
Flow ele...
Flow ele...
Flowme...
Flowme...
Flowme...
Flowme...
Flowme...
Flowme...
Flowme...
Flow m...
Flow sy...
Flow tot...
Flow tu...
Magnet...
Magnet...
Magnet...
Mass fl...
Favorites
Tools

GIF Display View

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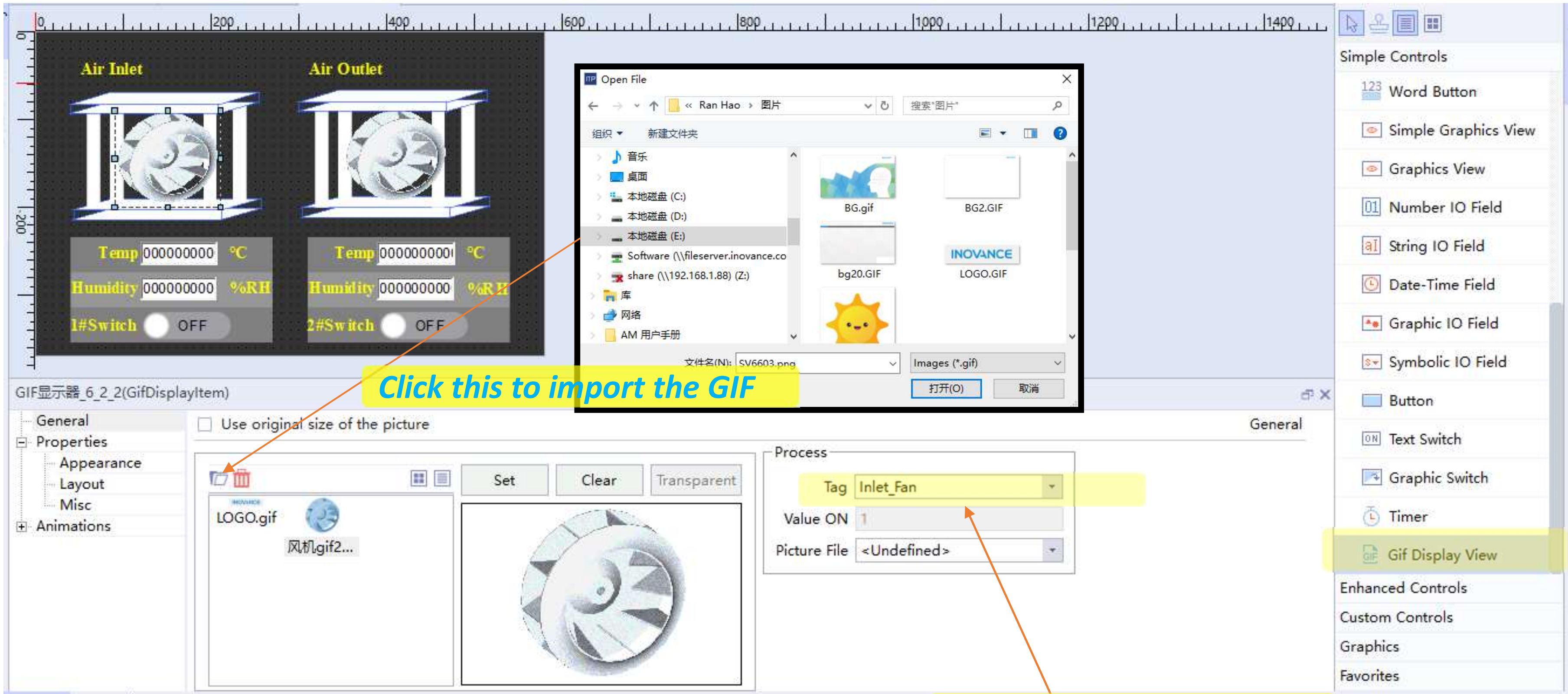
A GIF display view support to display a gif format picture.


Air Inlet
Air Outlet
Temp 000000000 ℃
Humidity 000000000 %RH
1#Switch OFF
2#Switch OFF
Open File
Ran Hao › 图片
组织
新建文件夹
音乐
桌面
本地磁盘 (C:)
本地磁盘 (D:)
本地磁盘 (E:)
Software (\\fileserver.inovance.co
share (\\192.168.1.88) (Z:)
库
网络
AM 用户手册
BG.gif
BG2.GIF
bg20.GIF
LOGO.GIF
文件名(N): SV6603.png
Images (*.gif)
打开(O)
取消
GIF显示器_6_2_2(GifDisplayItem)
General
Properties
Appearance
Layout
Misc
Animations
LOGO.gif
风机gif2...
Set
Clear
Transparent
Process
Simple Controls
Word Button
Simple Graphics View
Graphics View
Number IO Field
String IO Field
Date-Time Field
Graphic IO Field
Symbolic IO Field
Button
Text Switch
Graphic Switch
Timer
Gif Display View
Enhanced Controls
Custom Controls
Graphics
Favorites

☐ Use original size of the picture

Tag: Inlet_Fan

Value ON: 1

Picture File: <Undefined>

Click this to import the GIF

A variable is needed to enable the GIF

IO Field

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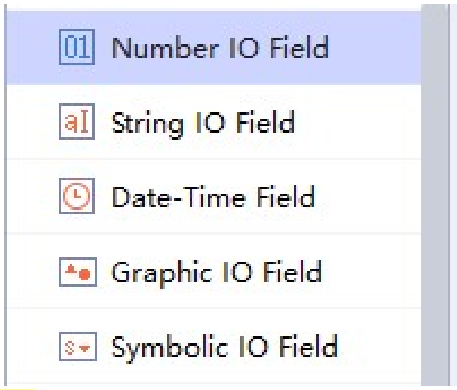
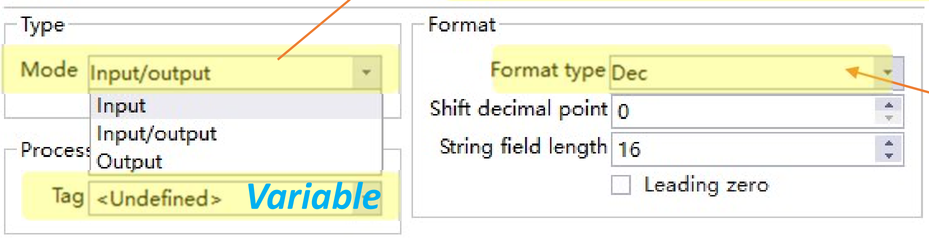
InoTouchPad provide 5 types IO field for input/output functionality.


Number IO Field
String IO Field
Date-Time Field
Graphic IO Field
Symbolic IO Field

- **Number IO field**
- **String IO field**

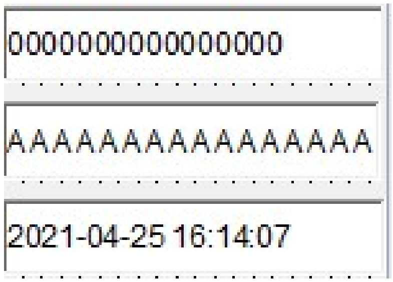
Input: Only write variable
Output: Only read variable
Input/output: Read/write


Type
Mode: Input/output
Input
Input/output
Output
Process
Tag: <Undefined>

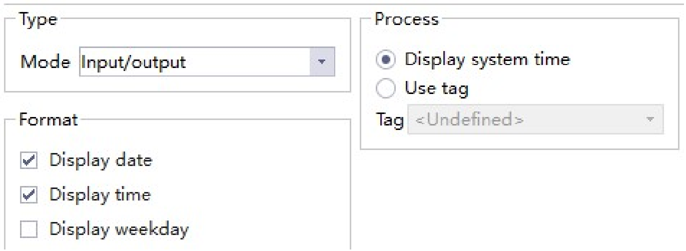
Variable

Format
Format type: Dec
Shift decimal point: 0
String field length: 16
☐ Leading zero

Display format(number IO field): Dec/hex/bin/BCD


0000000000000000
AAAAAAAAAAAAAAA
2021-04-25 16:14:07

- **Date-Time field**


Type
Mode: Input/output

Format
☑ Display date
☑ Display time
☐ Display weekday

Process
● Display system time
○ Use tag
Tag: <Undefined>

- **Graphic IO field : refer to ‘States List’**
- **Symbolic IO field : refer to ‘States List’**

Switch

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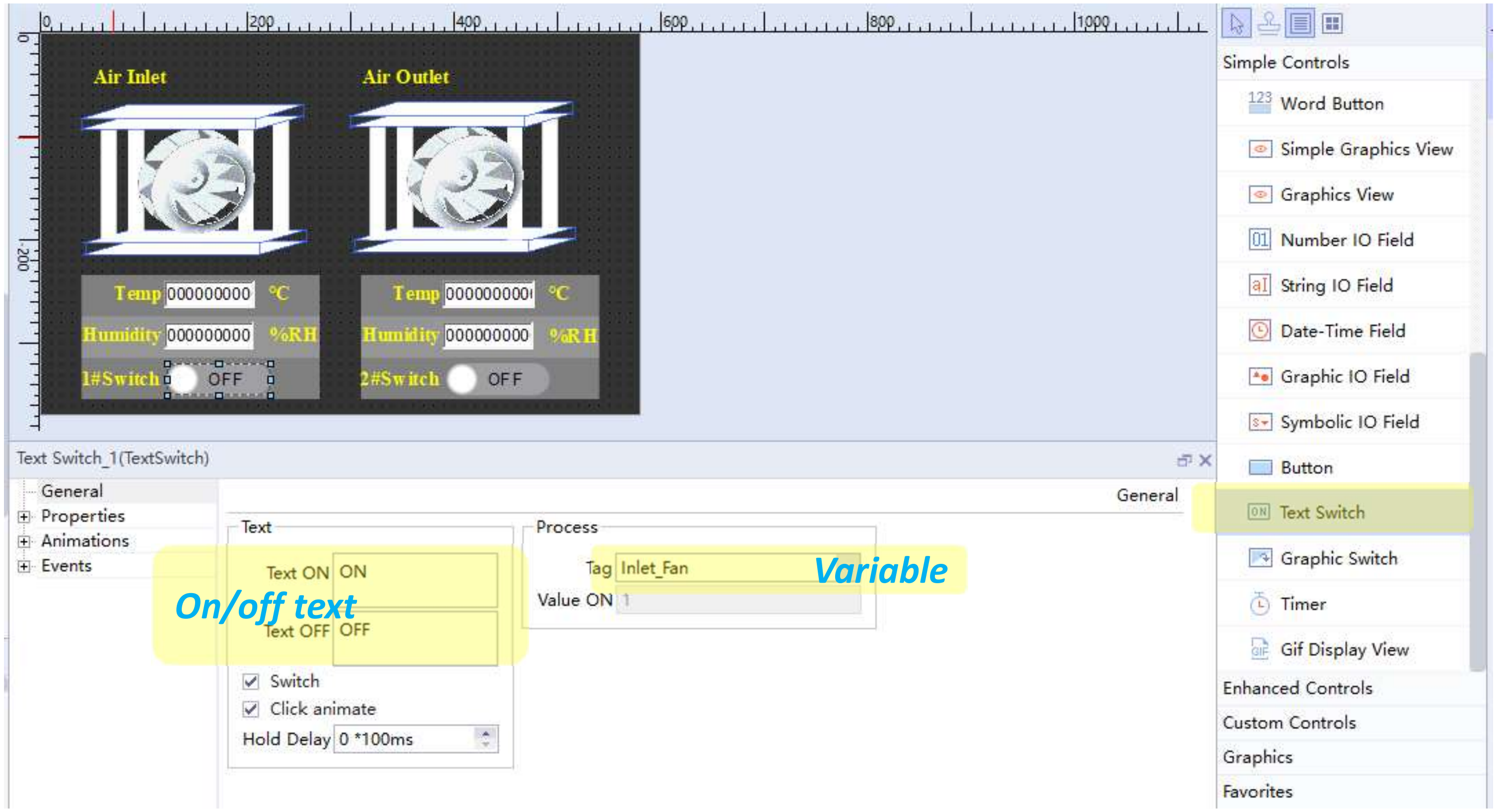
InoTouchPad provide 2 types switch to change the variable status.

- **Text Switch: text to show the different status of a variable**


0
200
400
600
800
1000
Air Inlet
Air Outlet
Temp 000000000 ℃
Humidity 000000000 %RH
1#Switch OFF
Temp 000000000 ℃
Humidity 000000000 %RH
2#Switch OFF
Simple Controls
Word Button
Simple Graphics View
Graphics View
Number IO Field
String IO Field
Date-Time Field
Graphic IO Field
Symbolic IO Field
Button
Text Switch
Graphic Switch
Timer
Gif Display View
Enhanced Controls
Custom Controls
Graphics
Favorites
General
Properties
Animations
Events
General
Text
Process

Text Switch_1(TextSwitch)

Text ON: ON

Text OFF: OFF

☑ Switch

☑ Click animate

Hold Delay: 0 *100ms

Tag: Inlet_Fan

Value ON: 1

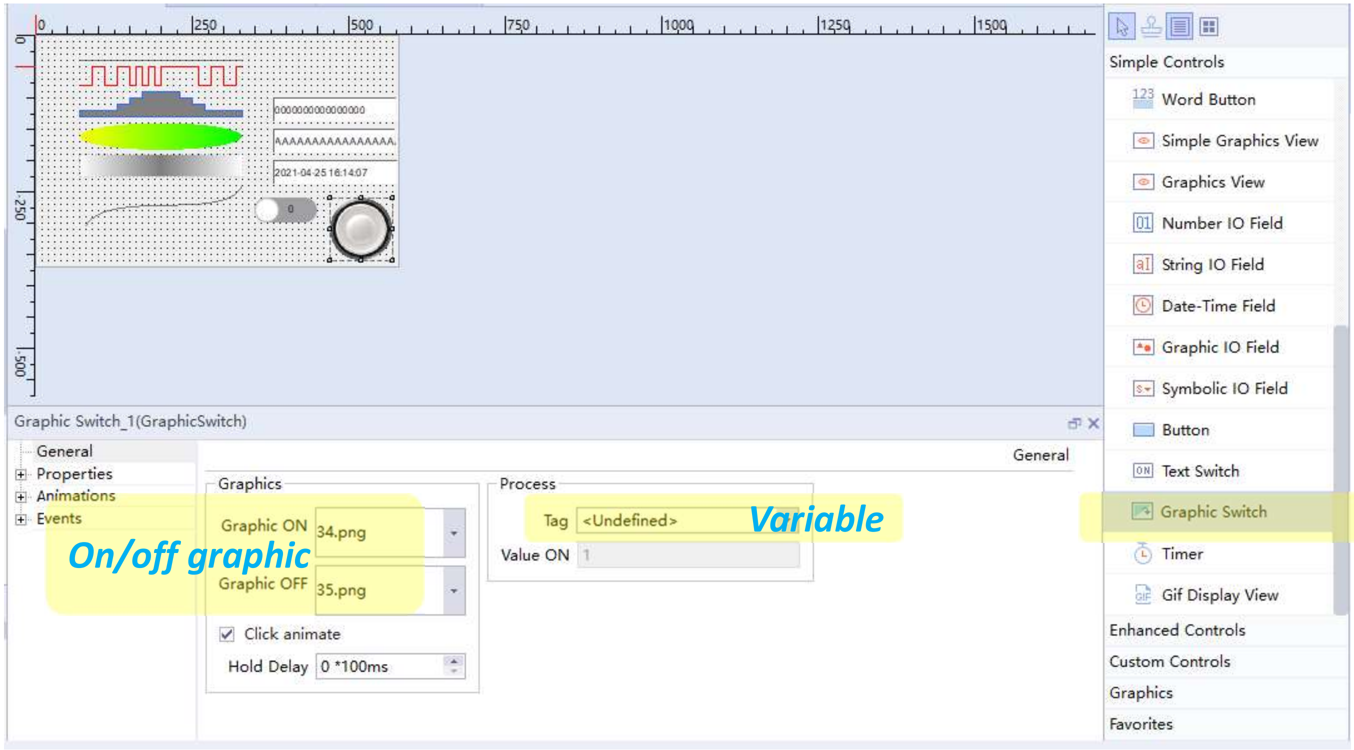
On/off text

Variable

Switch

Back to Contents

- **Graphic Switch : graphic to show the different status of a variable**


Graphic Switch_1(GraphicSwitch)

Graphic ON 34.png

Graphic OFF 35.png

☑ Click animate

Hold Delay 0 *100ms

Tag <Undefined>

Value ON 1

On/off graphic

Variable

General
Properties
Animations
Events
General
Graphics
Process
Simple Controls
Word Button
Simple Graphics View
Graphics View
Number IO Field
String IO Field
Date-Time Field
Graphic IO Field
Symbolic IO Field
Button
Text Switch
Graphic Switch
Timer
Gif Display View
Enhanced Controls
Custom Controls
Graphics
Favorites

Timer

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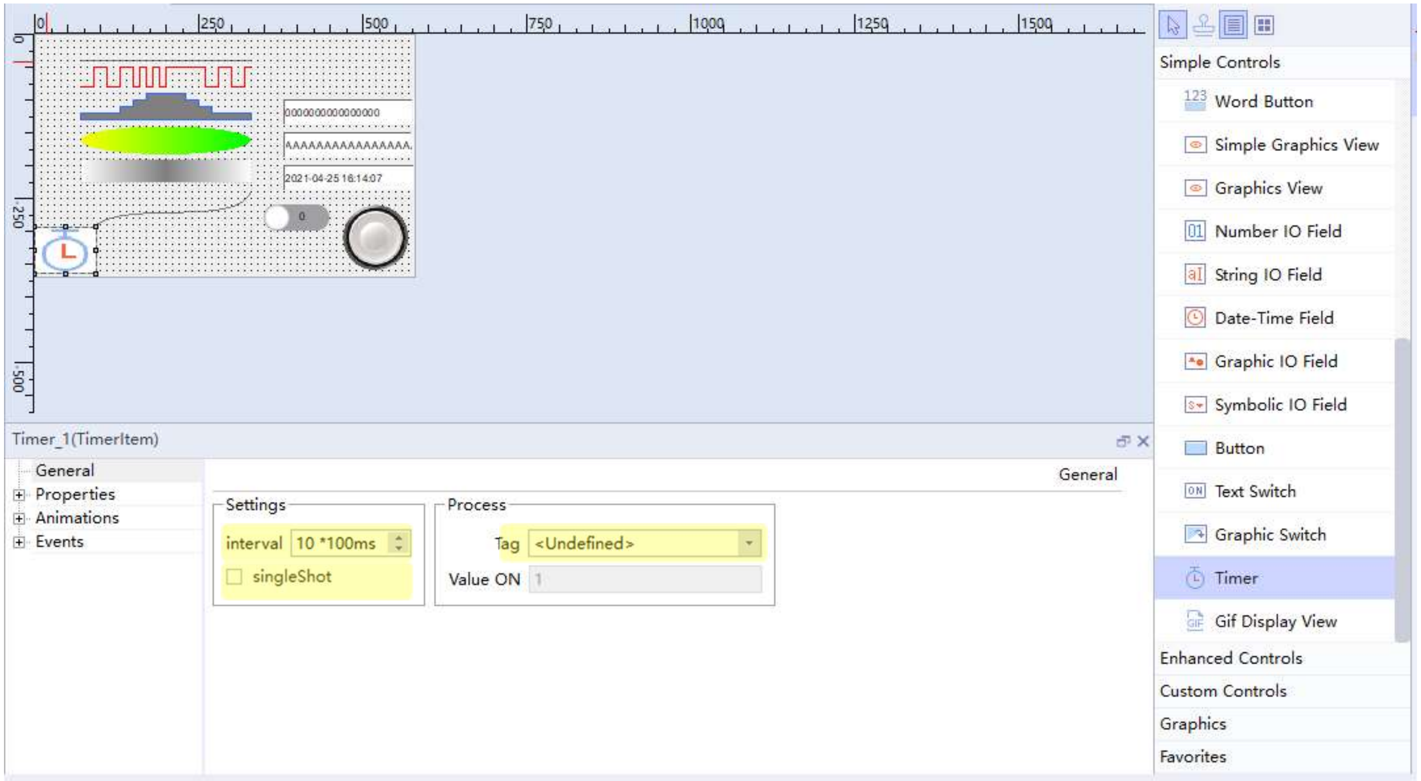
Timer is a very useful control while users want to realize some certain function(s) in a certain screen. This control can map to system function or a customized script.
***Note: a timer only works in current screen, if need a function works in whole project, scheduler could be a better choice(refer to script part)**



0
250
500
750
1000
1250
1500
000000000000000
AAAAAAAAAAAAAAA
2021-04-25 16:14:07
0
Simple Controls
Word Button
Simple Graphics View
Graphics View
Number IO Field
String IO Field
Date-Time Field
Graphic IO Field
Symbolic IO Field
Button
Text Switch
Graphic Switch
Timer
Gif Display View
Enhanced Controls
Custom Controls
Graphics
Favorites
General
Properties
Animations
Events
General
Settings
Process

Timer_1(TimerItem)

interval 10 *100ms

☐ singleShot

Tag <Undefined>

Value ON 1

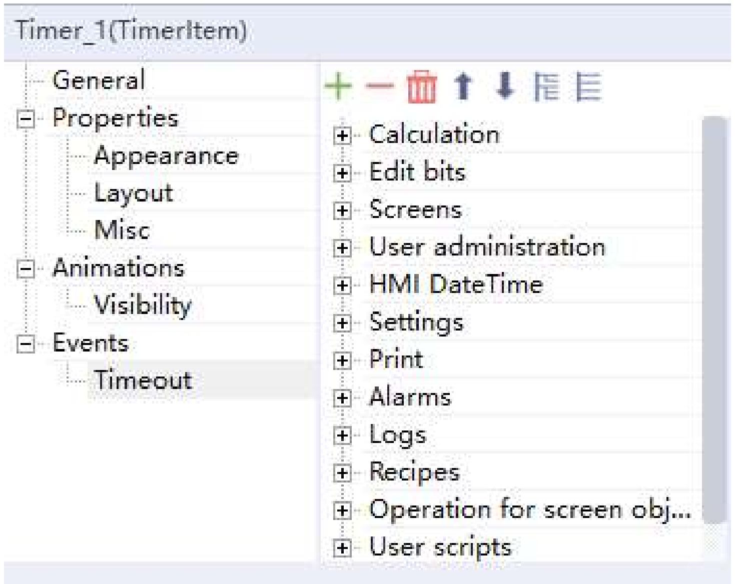
Interval:
The execution cycle of specified function(or script)

Single Shot:
While timer is triggered, execute specified function(or script) only once.

Process(Tag):
Variable to enable the timer

Timer

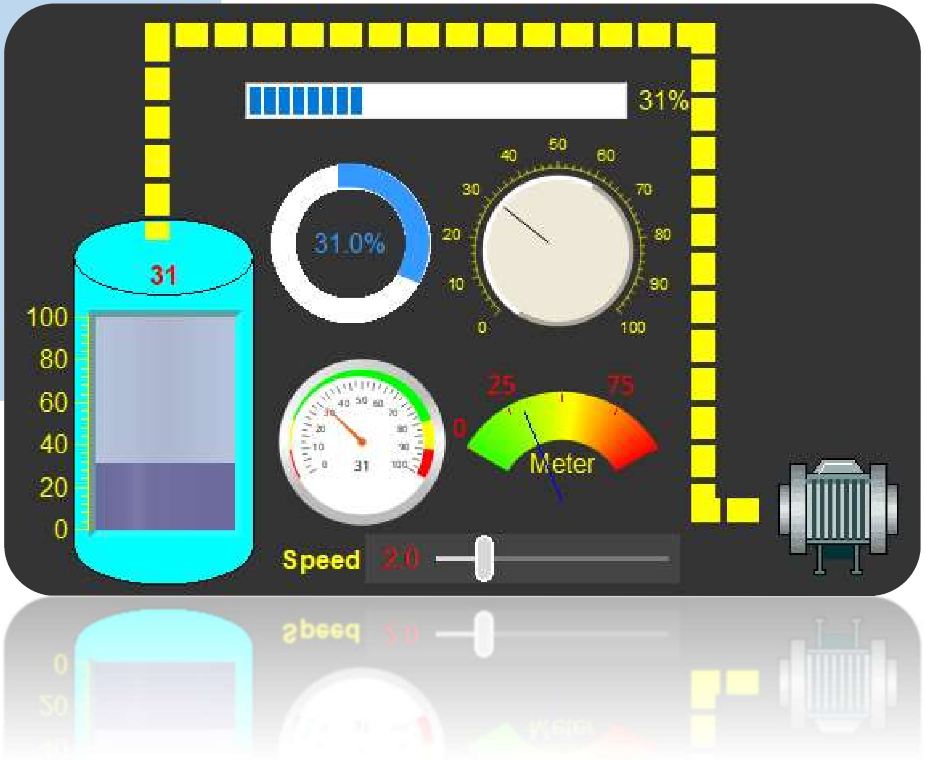
Event:
Timer have only one event——Timeout. Users can configure this event with system built function or user script.


Timer_1(TimerItem)
General
Properties
Appearance
Layout
Misc
Animations
Visibility
Events
Timeout
Calculation
Edit bits
Screens
User administration
HMI DateTime
Settings
Print
Alarms
Logs
Recipes
Operation for screen obj...
User scripts

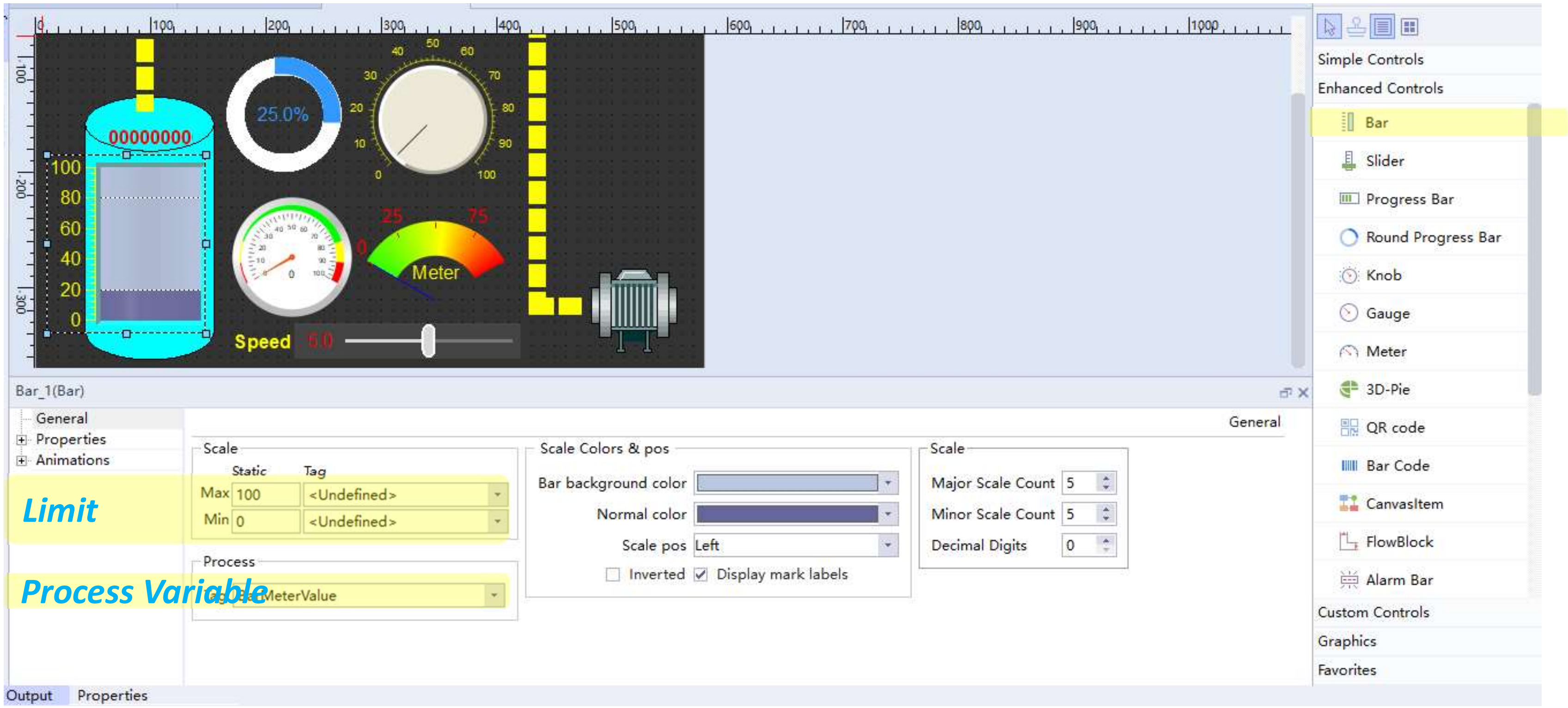
Instrument

InoTouchPad provide below controls used to monitor/control process variable value.

Bar: used to monitor the process variable value
Slider: used to monitor/adjust the variable value
Progress Bar: used to display process scale values
Round Progress Bar: used to display process variable scale values
Knob: used to set the process variable value
Gauge: display the process variable value in format of analog type
Meter: display the process variable value in format of analog type


31%
31.0%
40
50
60
30
70
20
80
10
90
0
100
31
100
80
60
40
20
0
25
75
0
Meter
Speed
2.0

➢ Bar


Simple Controls
Enhanced Controls
Bar
Slider
Progress Bar
Round Progress Bar
Knob
Gauge
Meter
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
Custom Controls
Graphics
Favorites
00000000
25.0%
Meter
Speed
5.0
Output
Properties
General
Properties
Animations

Bar_1(Bar)

General

Scale

	Static	Tag
Max	100	<Undefined>
Min	0	<Undefined>

Process

Tag BarMeterValue

Scale Colors & pos

Bar background color

Normal color

Scale pos: Left

☐ Inverted ☑ Display mark labels

Scale

Major Scale Count: 5

Minor Scale Count: 5

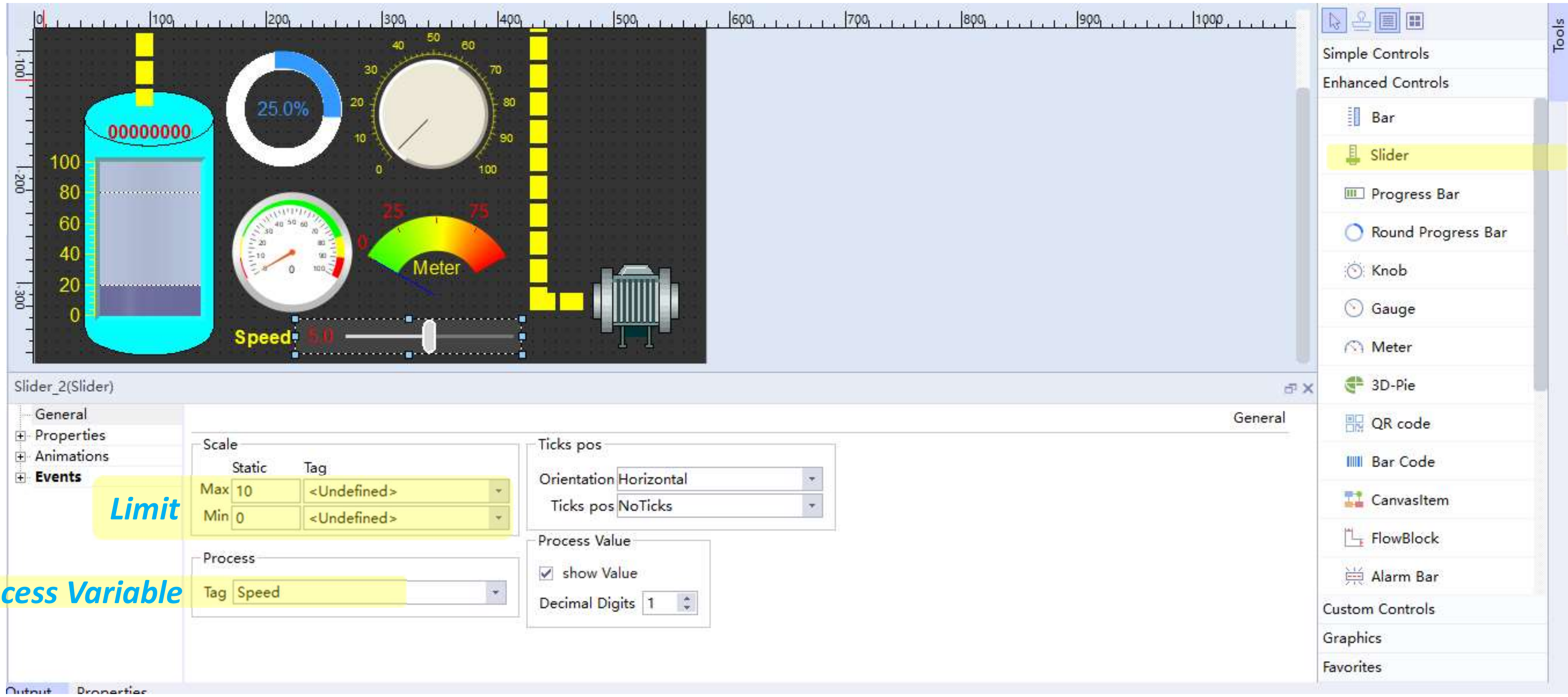
Decimal Digits: 0

Limit

Process Variable

Back to Contents

➢ Slider


Speed
5.0
25.0%
Meter
00000000
Simple Controls
Enhanced Controls
Bar
Slider
Progress Bar
Round Progress Bar
Knob
Gauge
Meter
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
Custom Controls
Graphics
Favorites
Tools
General
Properties
Animations
Events
Output
Properties

Slider_2(Slider)

General

Scale

	Static	Tag
Max	10	<Undefined>
Min	0	<Undefined>

Ticks pos

Orientation Horizontal

Ticks pos NoTicks

Process

Tag Speed

Process Value

☑ show Value

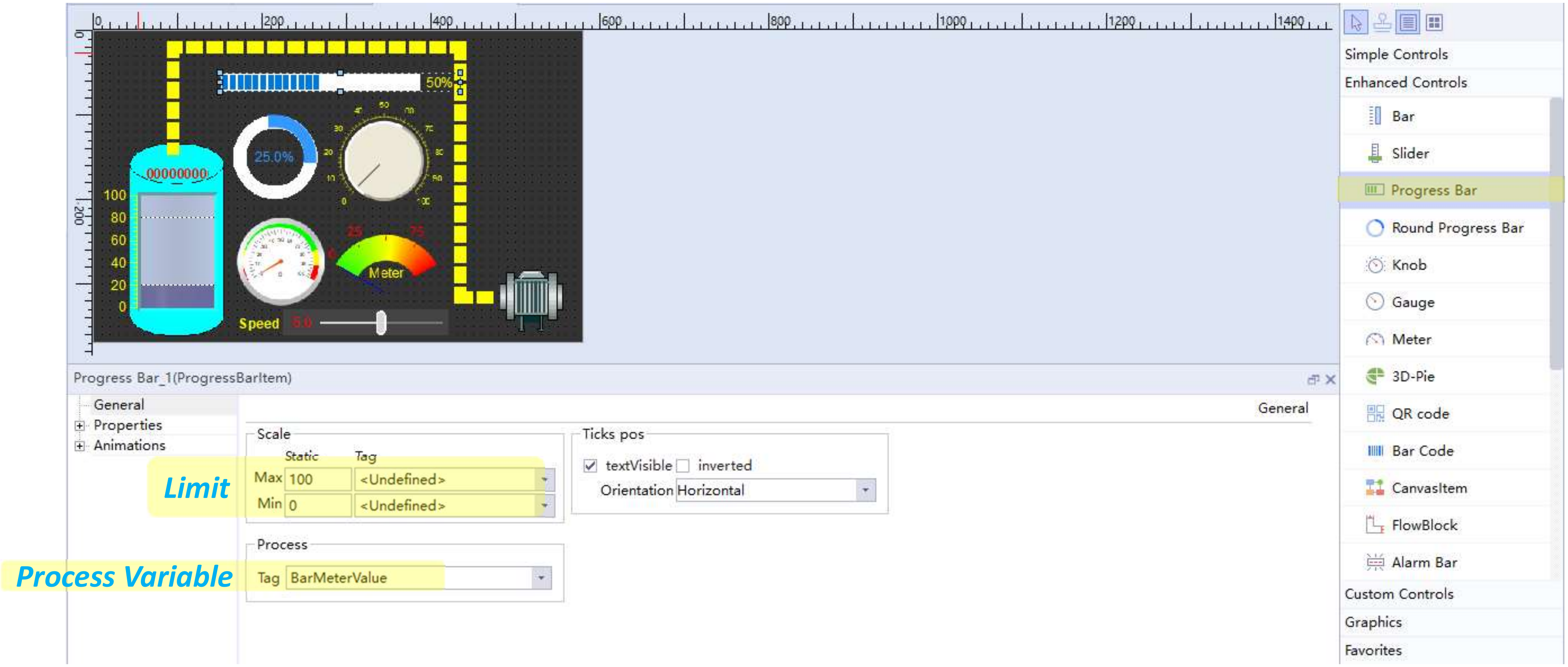
Decimal Digits 1

Limit

Process Variable

Back to Contents

➢ Progress Bar


0
200
400
600
800
1000
1200
1400
50%
25.0%
00000000
100
80
60
40
20
0
Meter
Speed
Simple Controls
Enhanced Controls
Bar
Slider
Progress Bar
Round Progress Bar
Knob
Gauge
Meter
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
Custom Controls
Graphics
Favorites
Limit
Process Variable

Progress Bar_1(ProgressBarItem)

- General
- Properties
- Animations

General

Scale

	Static	Tag
Max	100	<Undefined>
Min	0	<Undefined>

Ticks pos

☑ textVisible ☐ inverted

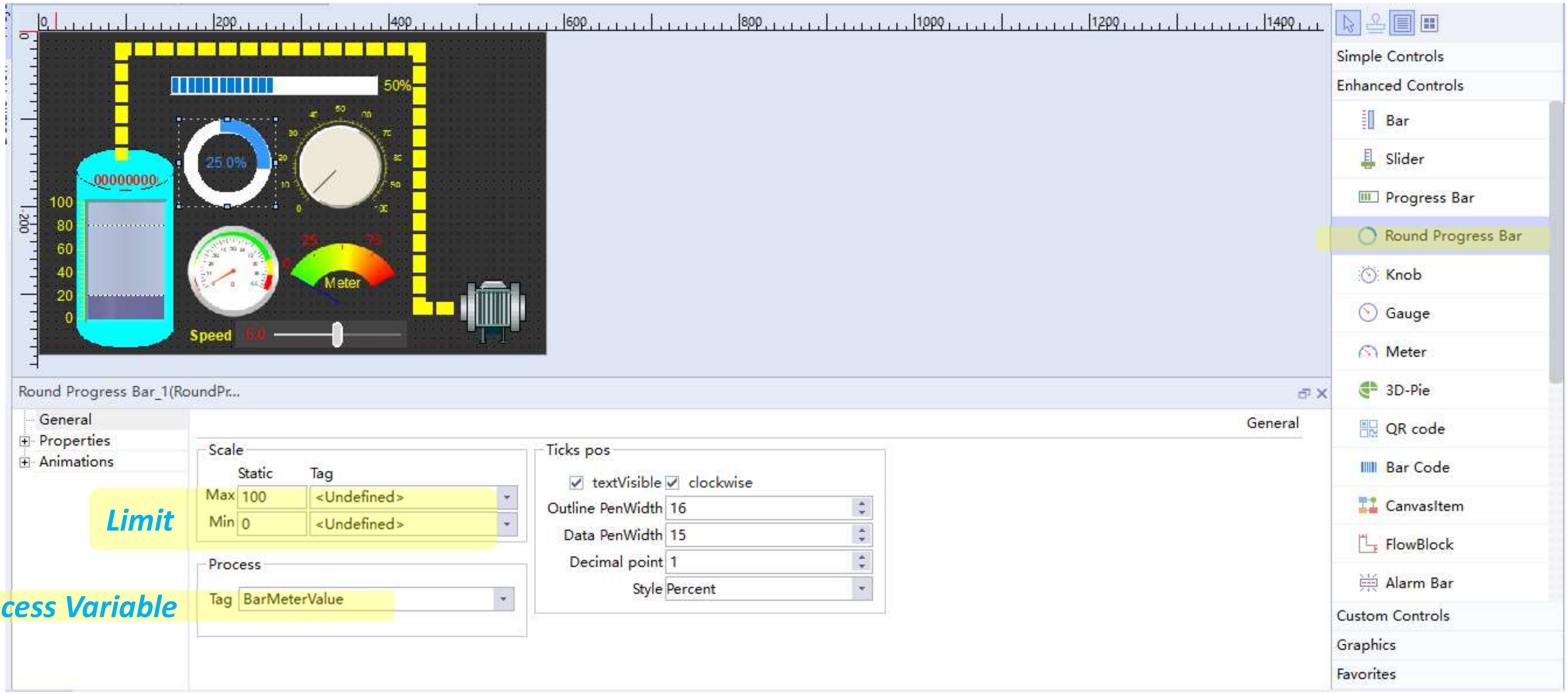
Orientation: Horizontal

Process

Tag: BarMeterValue

Back to Contents

➢ Round Progress Bar


0
200
400
600
800
1000
1200
1400
50%
25.0%
00000000
100
80
60
40
20
0
Meter
Speed
Simple Controls
Enhanced Controls
Bar
Slider
Progress Bar
Round Progress Bar
Knob
Gauge
Meter
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
Custom Controls
Graphics
Favorites

Round Progress Bar_1(RoundPr...

- General
- Properties
- Animations

General

Scale

	Static	Tag
Max	100	<Undefined>
Min	0	<Undefined>

Process

Tag BarMeterValue

Ticks pos

☑ textVisible ☑ clockwise

Outline PenWidth 16

Data PenWidth 15

Decimal point 1

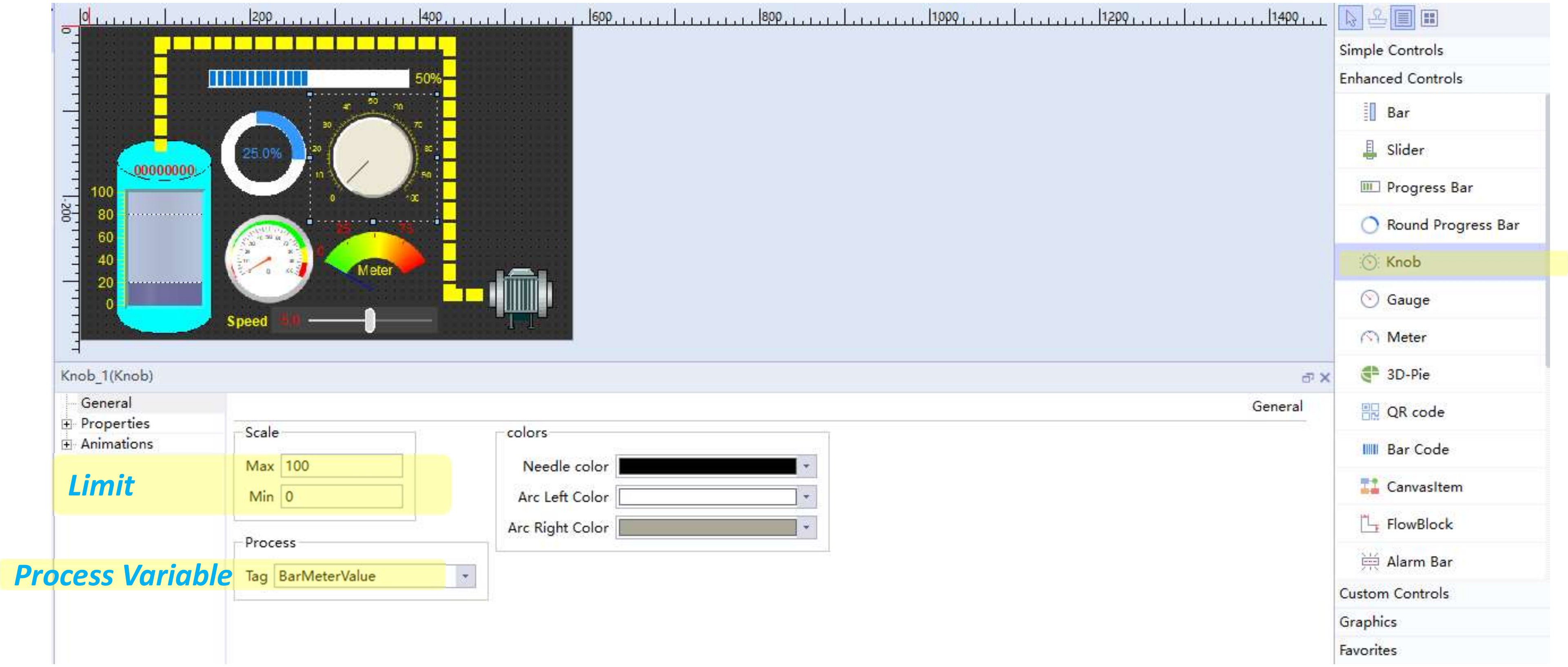
Style Percent

Limit

Process Variable

Back to Contents

➢ Knob


50%
25.0%
00000000
100
80
60
40
20
0
Meter
Speed
Simple Controls
Enhanced Controls
Bar
Slider
Progress Bar
Round Progress Bar
Knob
Gauge
Meter
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
Custom Controls
Graphics
Favorites

Knob_1(Knob)

- General
- Properties
- Animations

General

Scale

Max 100

Min 0

Process

Tag BarMeterValue

colors

Needle color

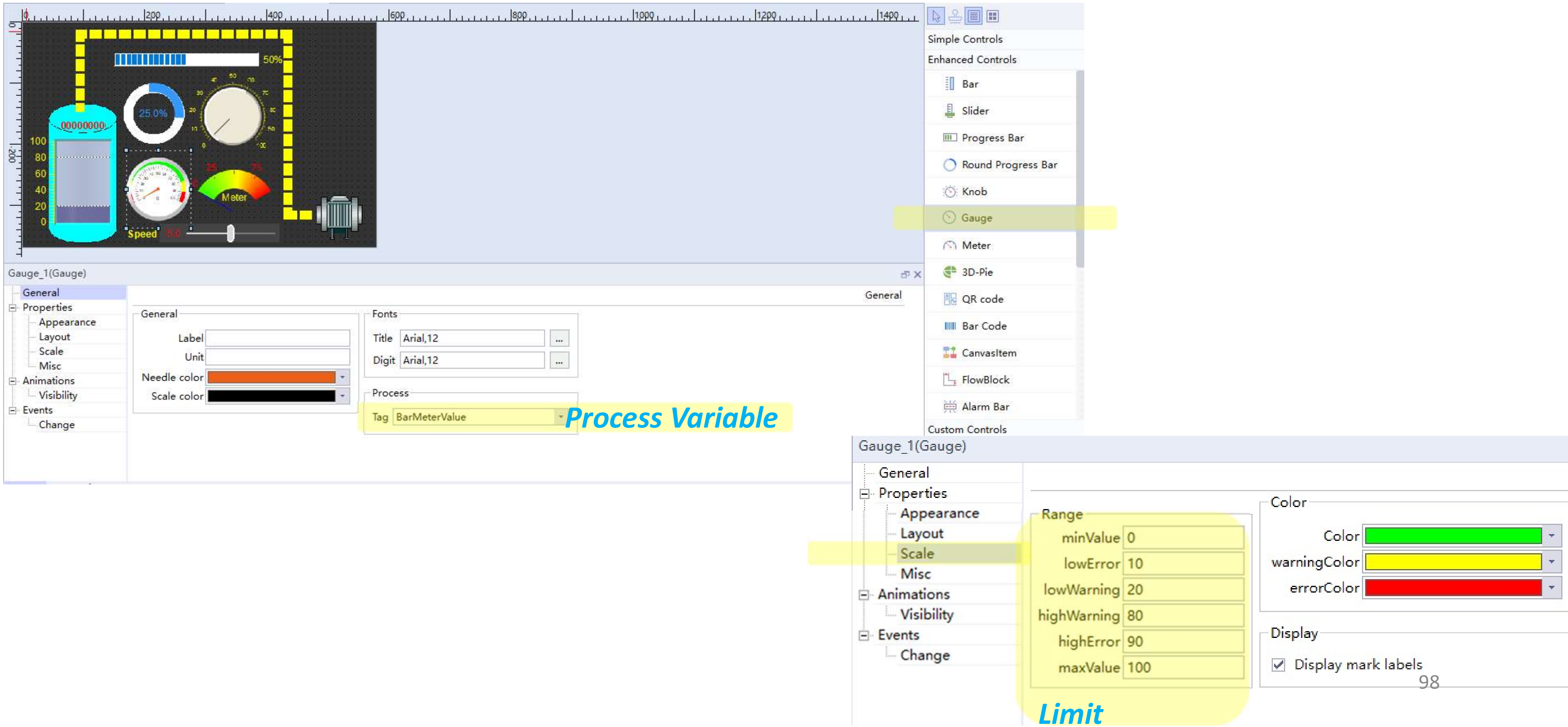
Arc Left Color

Arc Right Color

Limit

Process Variable

➢ Gauge


100
80
60
40
20
0
00000000
50%
25.0%
Meter
Speed
Simple Controls
Enhanced Controls
Bar
Slider
Progress Bar
Round Progress Bar
Knob
Gauge
Meter
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
Custom Controls
General
Properties
Appearance
Layout
Scale
Misc
Animations
Visibility
Events
Change

Gauge_1(Gauge)

General

- Label:
- Unit:
- Needle color: 🟧
- Scale color: ⬛

Fonts

- Title: Arial,12
- Digit: Arial,12

Process

- Tag: BarMeterValue

Process Variable

Gauge_1(Gauge) – Scale

Range

- minValue: 0
- lowError: 10
- lowWarning: 20
- highWarning: 80
- highError: 90
- maxValue: 100

Color

- Color: 🟩
- warningColor: 🟨
- errorColor: 🟥

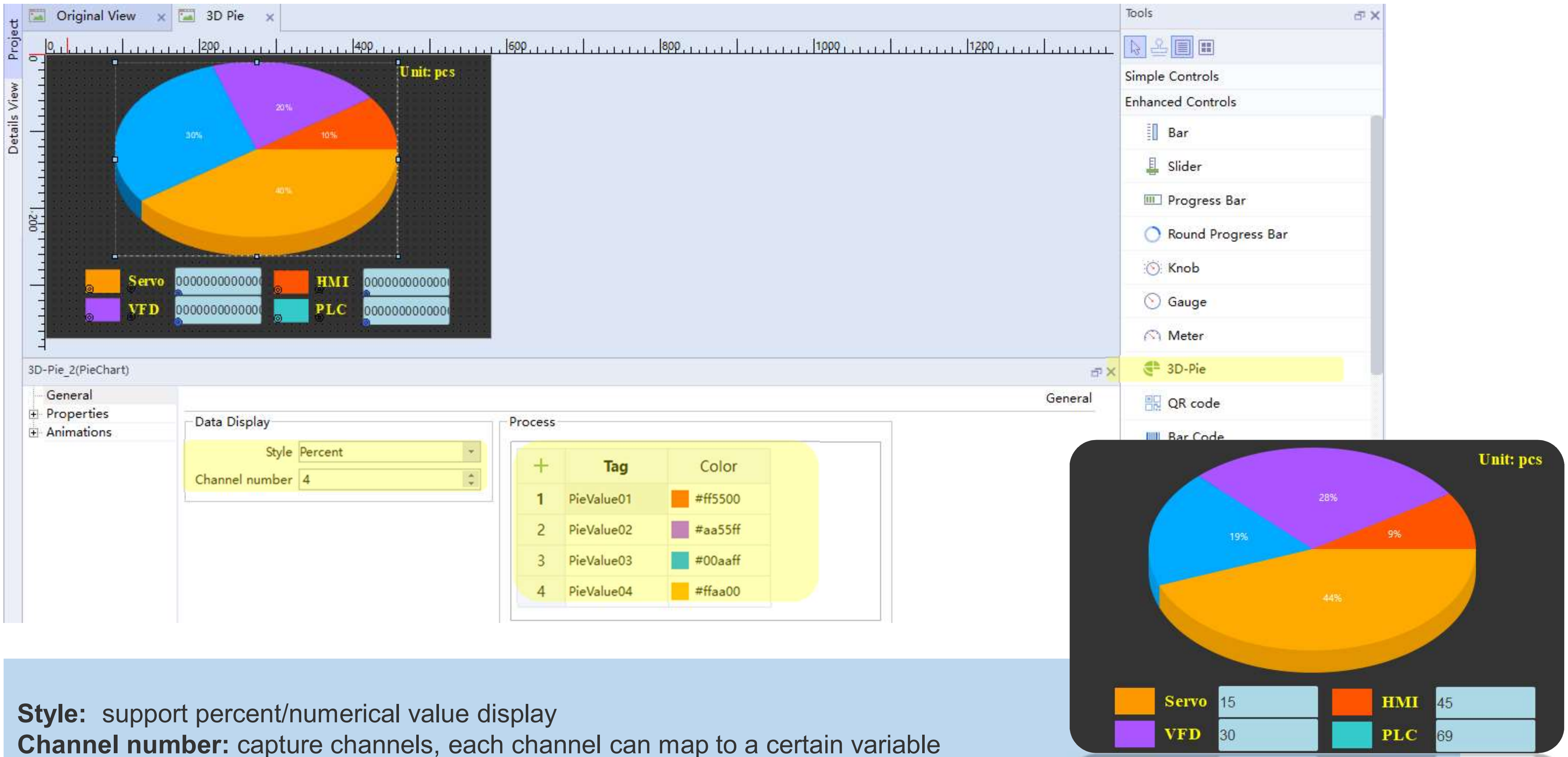
Display

- ☑ Display mark labels

Limit

3D Pie

Back to Contents


Original View
3D Pie
Project
Details View
Unit: pcs
30%
20%
10%
40%
Servo
VFD
HMI
PLC
000000000000
Tools
Simple Controls
Enhanced Controls
Bar
Slider
Progress Bar
Round Progress Bar
Knob
Gauge
Meter
3D-Pie
QR code
Bar Code
3D-Pie_2(PieChart)
General
Properties
Animations
Data Display
Process
19%
28%
9%
44%

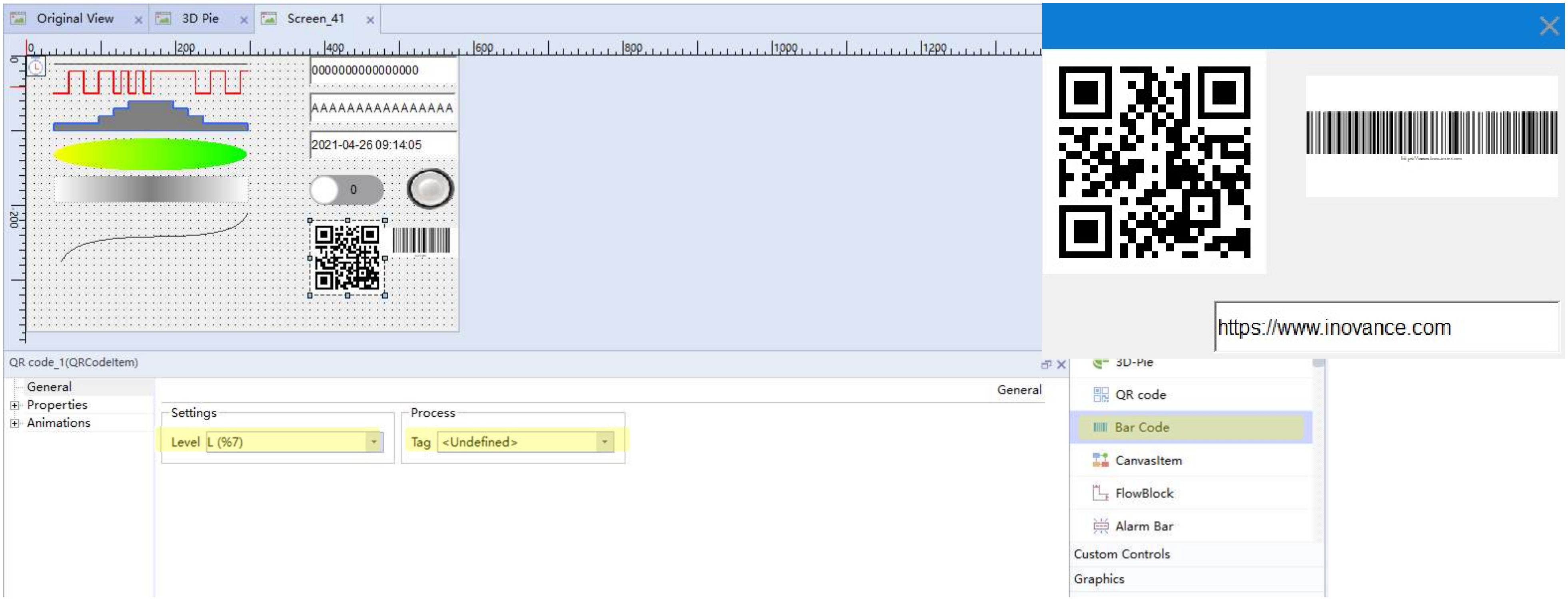
Style: Percent
Channel number: 4

	Tag	Color
1	PieValue01	#ff5500
2	PieValue02	#aa55ff
3	PieValue03	#00aaff
4	PieValue04	#ffaa00

Servo	15	HMI	45
VFD	30	PLC	69

Style: support percent/numerical value display
Channel number: capture channels, each channel can map to a certain variable
Tag: corresponding variable for each channel
Color: Channel display color

QR code & Bar code



Original View
3D Pie
Screen_41
0
200
400
600
800
1000
1200
0000000000000000
AAAAAAAAAAAAAAAA
2021-04-26 09:14:05
0
General
Properties
Animations
General
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
Custom Controls
Graphics

QR code_1(QRCodeItem)

Settings

Level L (%7)

Process

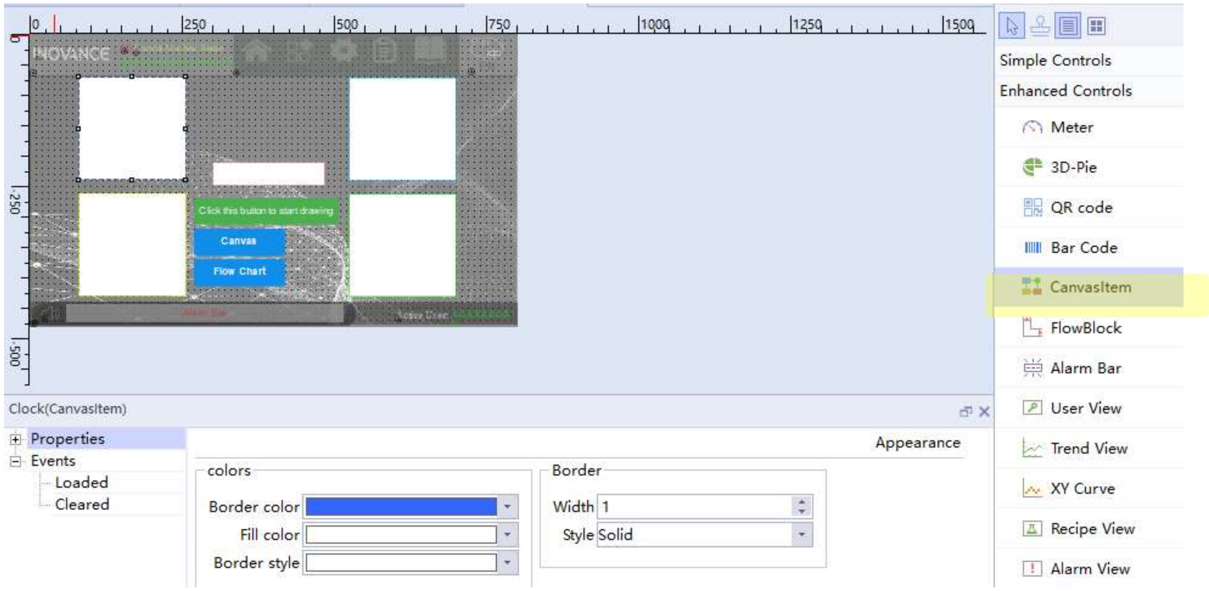
Tag <Undefined>

https://www.inovance.com

Level: calibration level for QR code, 4 levels are available: L, M, Q, H. The higher the level, the higher the fault tolerance.
Tag: read variable

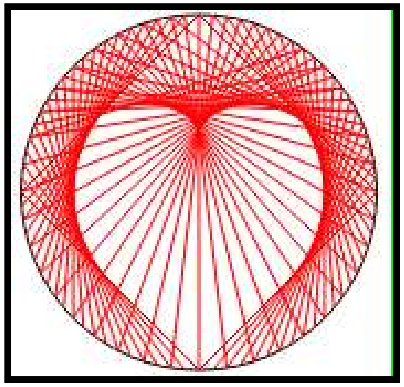
Canvas Item

Canvas Item is used to display the graphics drawn by script.


0
250
500
750
1000
1250
1500
-250
-500
INOVANCE
Click this button to start drawing
Canvas
Flow Chart
Simple Controls
Enhanced Controls
Meter
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Clock(CanvasItem)
Properties
Events
Loaded
Cleared
Appearance
colors
Border color
Fill color
Border style
Border

Width 1

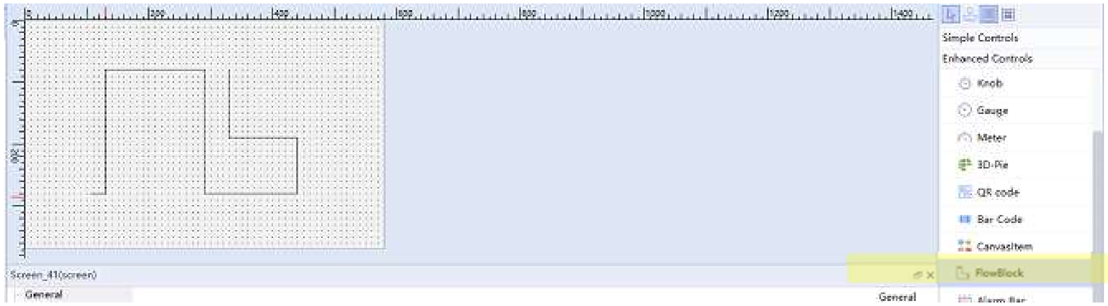
Style Solid



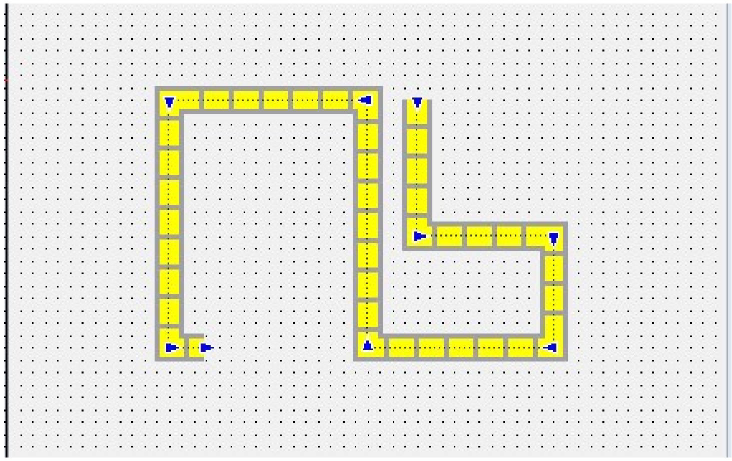
Flow Block

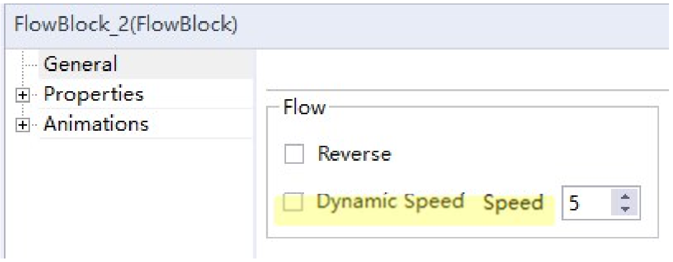
Back to Contents

Flow block is used to display of fluid flow dynamically.


Simple Controls
Enhanced Controls
Knob
Gauge
Meter
3D-Pie
QR code
Bar Code
CanvasItem
FlowBlock
Alarm Bar
Screen_41(screen)
General
General

***Note:** Select and click flow block control, then in the work area move the mouse (**NOT drag and drop**) to configure the flow shape, then right click to generate the flow block.





FlowBlock_2(FlowBlock)

General
Properties
Animations

Flow

☐ Reverse

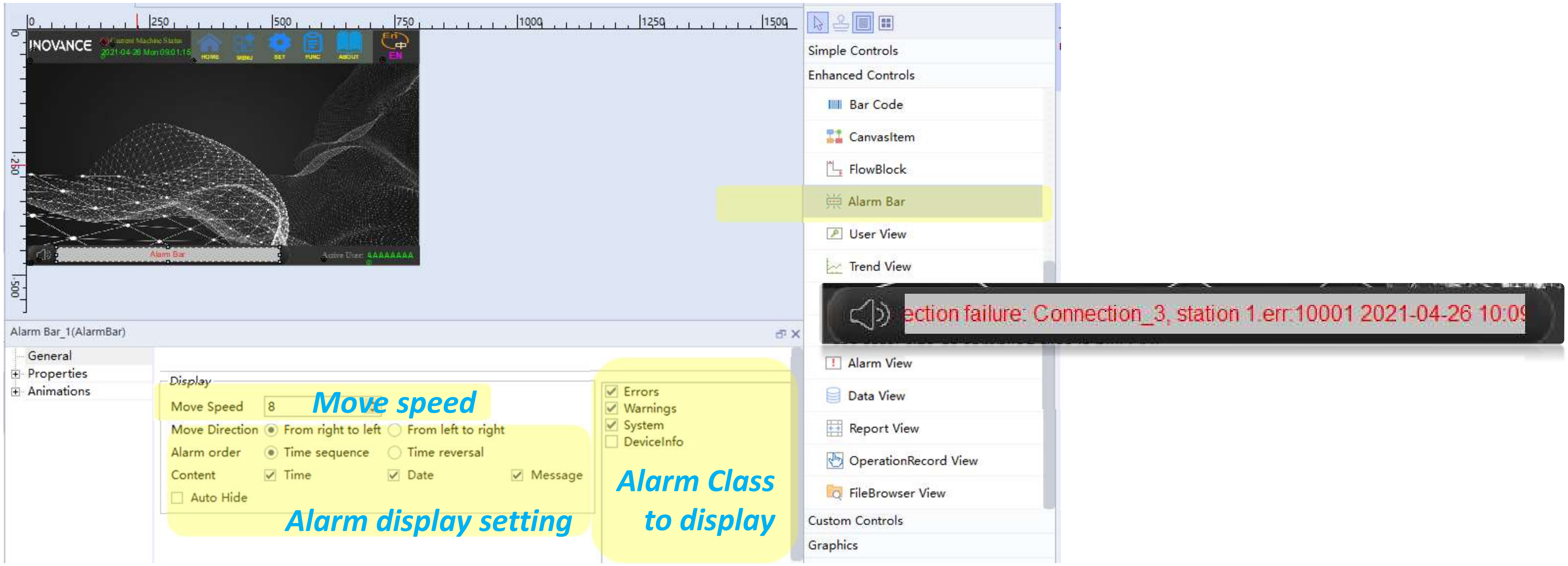
☐ Dynamic Speed Speed 5

Set flow speed as a fixed value or map to a variable to dynamically adjust.

Alarm Bar

Back to Contents

Alarm bar is used to display current alarm information. Users can select the display information and alarm class according to requirements.



Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
Alarm View
Data View
Report View
OperationRecord View
FileBrowser View
Custom Controls
Graphics
General
Properties
Animations

ection failure: Connection_3, station 1.err:10001 2021-04-26 10:09

Alarm Bar_1(AlarmBar)

Display

Move Speed 8

Move Direction ● From right to left ○ From left to right

Alarm order ● Time sequence ○ Time reversal

Content ☑ Time ☑ Date ☑ Message

☐ Auto Hide

☑ Errors
☑ Warnings
☑ System
☐ DeviceInfo

Move speed

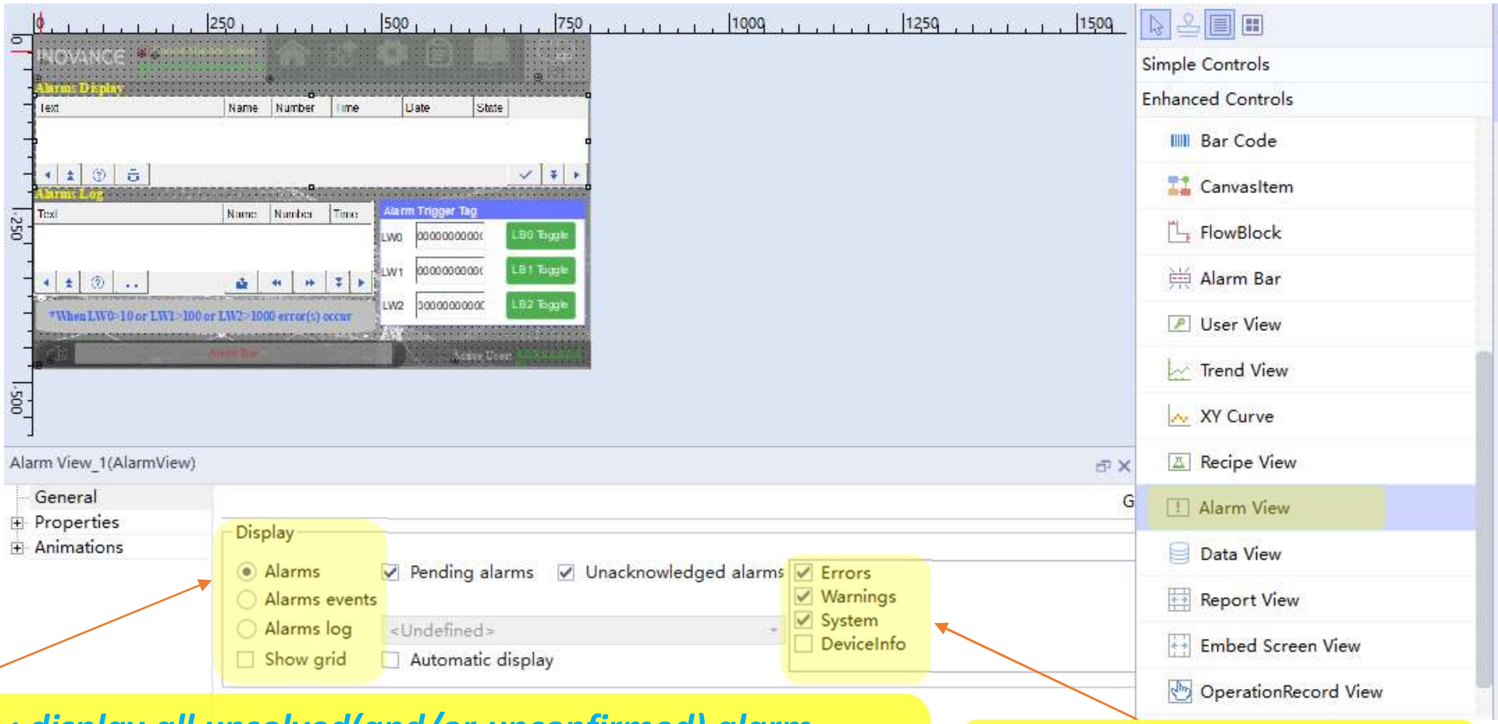
Alarm display setting

Alarm Class to display

Alarm View

Back to Contents

Alarm view is used to display current alarm information or historical alarm.



Alarm View_1(AlarmView)

- General
- Properties
- Animations

Display

- ● Alarms
- ○ Alarms events
- ○ Alarms log
- ☐ Show grid
- ☑ Pending alarms
- ☑ Unacknowledged alarms
- <Undefined>
- ☐ Automatic display
- ☑ Errors
- ☑ Warnings
- ☑ System
- ☐ DeviceInfo

0
250
500
750
1000
1250
1500
INOVANCE
Alarms Display
Text
Name
Number
Time
Date
State
Alarms Log
Alarm Trigger Tag
LW0
LW1
LW2
LB0 Toggle
LB1 Toggle
LB2 Toggle
*When LW0>10 or LW1>100 or LW2>1000 error(s) occur
Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen View
OperationRecord View

Alarms : display all unsolved(and/or unconfirmed) alarm
Alarm Events: display according to alarm class
Alarm log: display specified alarm log

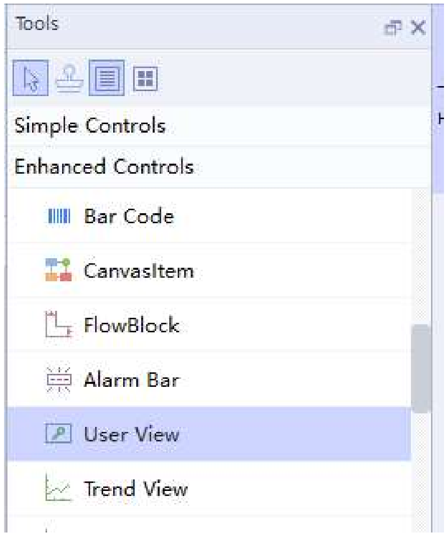
Alarm class to display

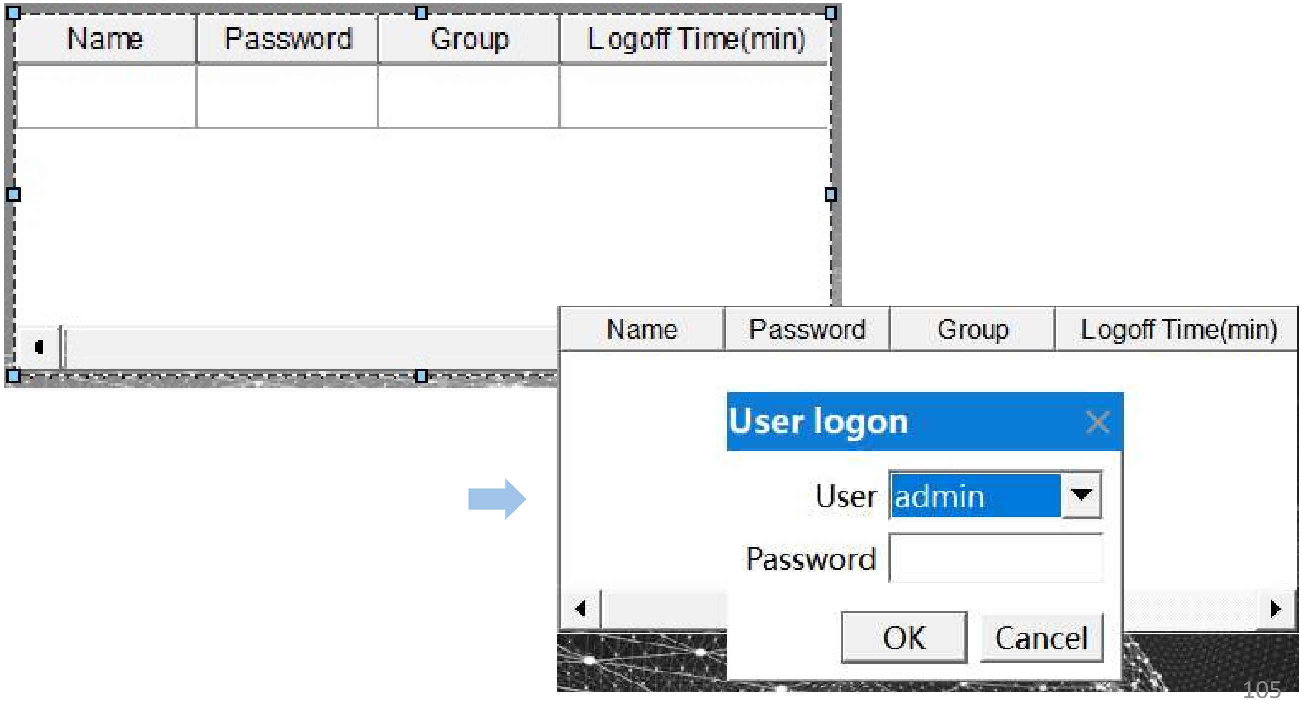
User View

Back to Contents

User view is used to manage the system authority and user logon/logout. For the authority setting please refer to 'User Administration'.

While HMI project running, click the empty part of user view, a logon dialog box will pop up and users need select user and enter correct password to logon.


Tools
Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View


Name
Password
Group
Logoff Time(min)
Name
Password
Group
Logoff Time(min)
User logon
Password
OK
Cancel

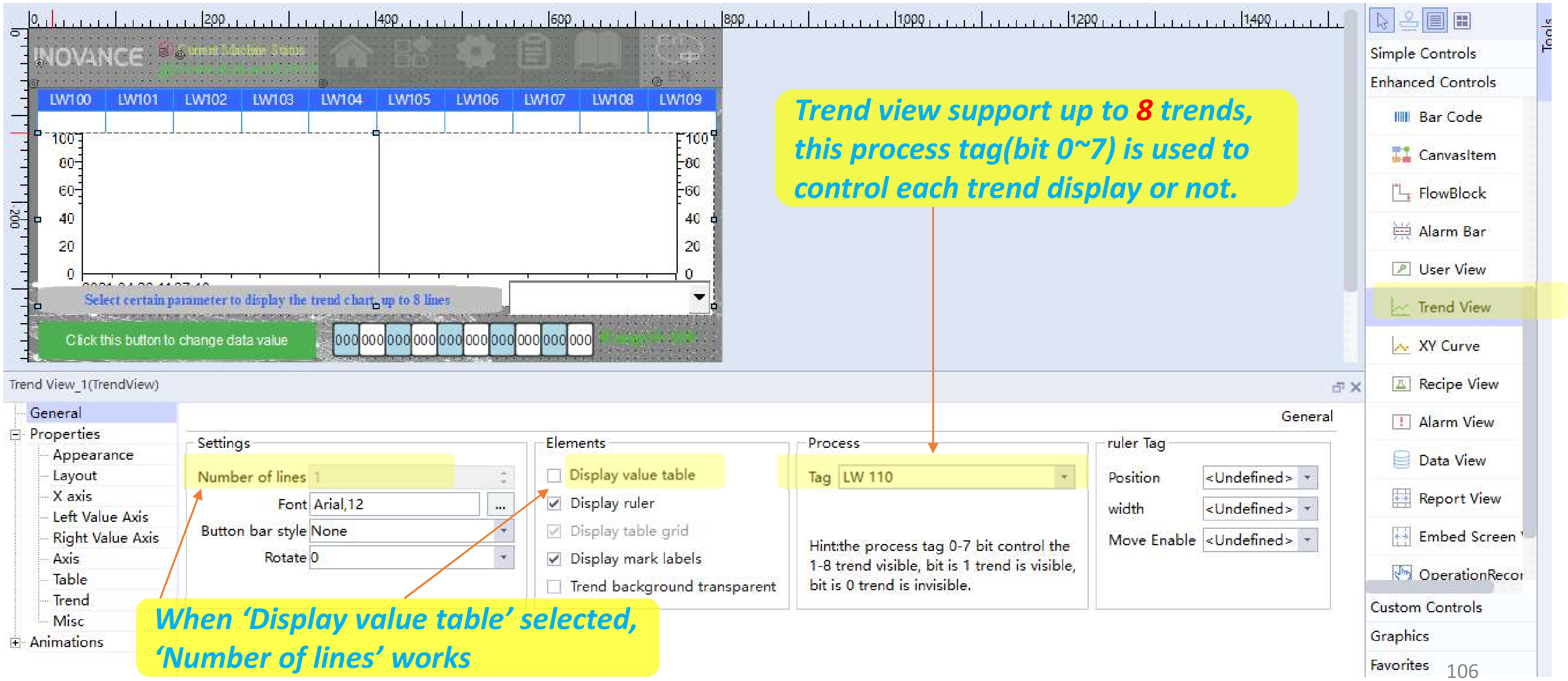
User admin

Trend View

INOVANCE

[Back to Contents](#)

A trend view is used to display the change trend real time or historical variable value.



INOVANCE
LW100
LW101
LW102
LW103
LW104
LW105
LW106
LW107
LW108
LW109
100
80
60
40
20
0
Select certain parameter to display the trend chart, up to 8 lines
Click this button to change data value
Trend View_1(TrendView)
General
Properties
Appearance
Layout
X axis
Left Value Axis
Right Value Axis
Axis
Table
Trend
Misc
Animations
Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen
OperationRecor
Custom Controls
Graphics
Favorites
Tools

*Trend view support up to **8** trends, this process tag(bit 0~7) is used to control each trend display or not.*

General

Settings

Number of lines 1

Font Arial,12

Button bar style None

Rotate 0

Elements

☐ Display value table

☑ Display ruler

☑ Display table grid

☑ Display mark labels

☐ Trend background transparent

Process

Tag LW 110

Hint:the process tag 0-7 bit control the 1-8 trend visible, bit is 1 trend is visible, bit is 0 trend is invisible.

ruler Tag

Position <Undefined>

width <Undefined>

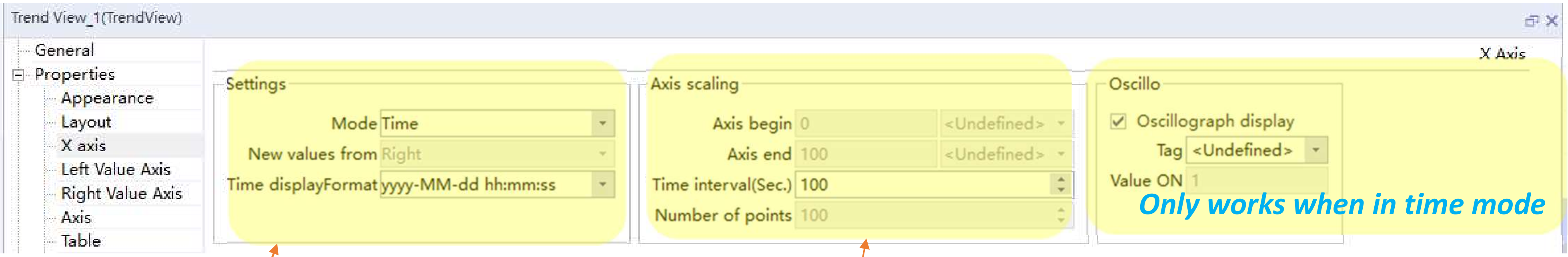
Move Enable <Undefined>

When 'Display value table' selected, 'Number of lines' works

Trend View

Back to Contents

X axis setting


Trend View_1(TrendView)
General
Properties
Appearance
Layout
X axis
Left Value Axis
Right Value Axis
Axis
Table
X Axis

Settings

Mode: Time

New values from: Right

Time displayFormat: yyyy-MM-dd hh:mm:ss

Axis scaling

Axis begin: 0 <Undefined>

Axis end: 100 <Undefined>

Time interval(Sec.): 100

Number of points: 100

Oscillo

☑ Oscillograph display

Tag: <Undefined>

Value ON: 1

Only works when in time mode

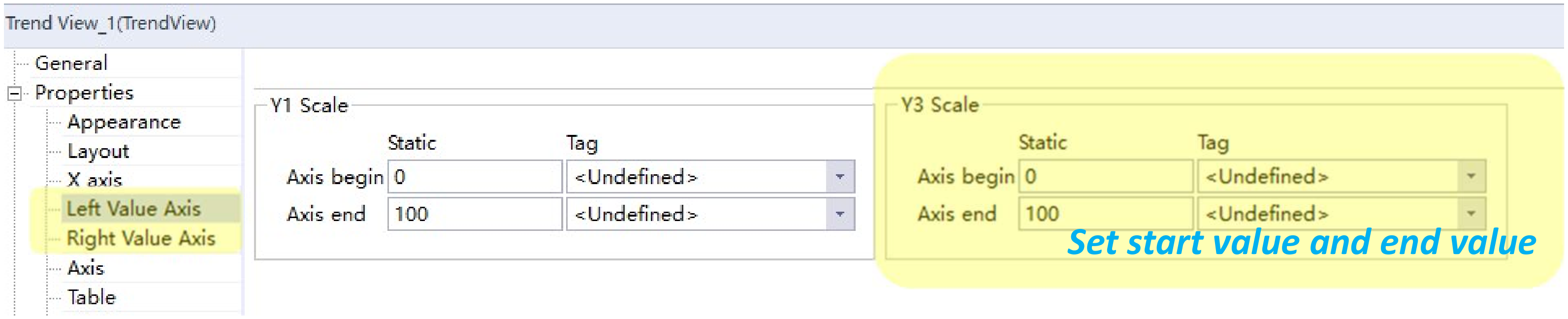
Mode:
Time: According to time
Points: According to points
Tag/constant: According to value

Axis scaling:
Time mode: Set time interval
Points: Set Number of point
Tag/constant: Set axis begin/end/number of points

Trend View

Back to Contents

Y axis setting: left 2 axis and right 2 axis


Trend View_1(TrendView)
General
Properties
Appearance
Layout
X axis
Left Value Axis
Right Value Axis
Axis
Table

Y1 Scale

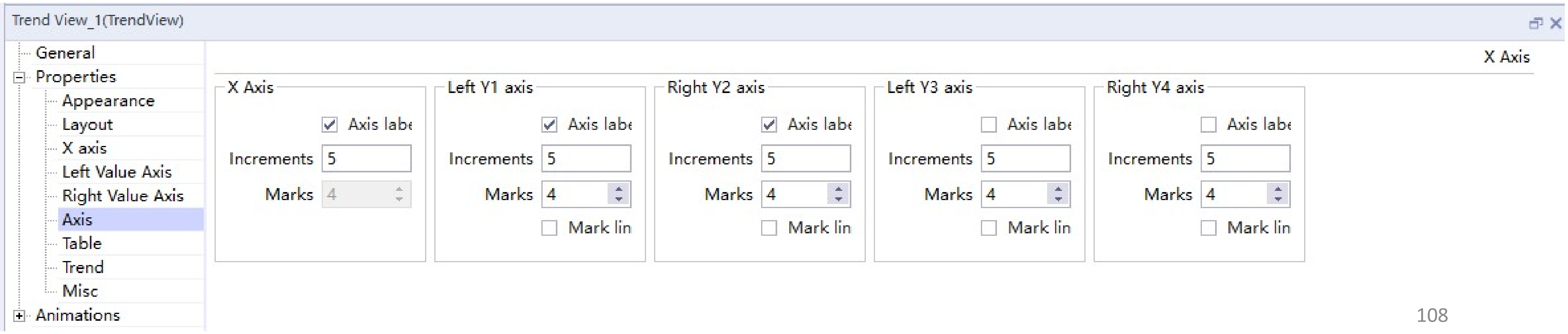
	Static	Tag
Axis begin	0	<Undefined>
Axis end	100	<Undefined>

Y3 Scale

	Static	Tag
Axis begin	0	<Undefined>
Axis end	100	<Undefined>

Set start value and end value

Select displayed axis(X, Y1, Y2, Y3, Y4) and scale incremental for each axis.


Trend View_1(TrendView)
General
Properties
Appearance
Layout
X axis
Left Value Axis
Right Value Axis
Axis
Table
Trend
Misc
Animations
X Axis

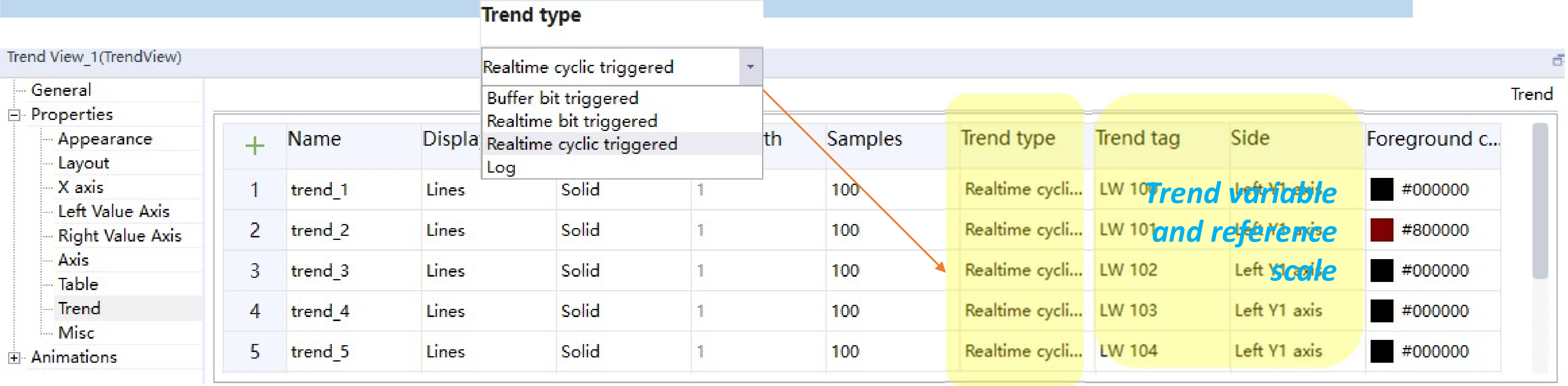
	X Axis	Left Y1 axis	Right Y2 axis	Left Y3 axis	Right Y4 axis
Axis labe	☑	☑	☑	☐	☐
Increments	5	5	5	5	5
Marks	4	4	4	4	4
Mark lin		☐	☐	☐	☐

Trend View

INOVANCE

Back to Contents

Set the trend(up to 8 trends)



Trend View_1(TrendView)

- General
- Properties
  - Appearance
  - Layout
  - X axis
  - Left Value Axis
  - Right Value Axis
  - Axis
  - Table
  - Trend
  - Misc
- Animations

Trend type

Realtime cyclic triggered

- Buffer bit triggered
- Realtime bit triggered
- Realtime cyclic triggered
- Log

Trend

	Name	Displa		th	Samples	Trend type	Trend tag	Side	Foreground c...
1	trend_1	Lines	Solid	1	100	Realtime cycli...	LW 100	Left Y1 axis	#000000
2	trend_2	Lines	Solid	1	100	Realtime cycli...	LW 101	Left Y1 axis	#800000
3	trend_3	Lines	Solid	1	100	Realtime cycli...	LW 102	Left Y1 axis	#000000
4	trend_4	Lines	Solid	1	100	Realtime cycli...	LW 103	Left Y1 axis	#000000
5	trend_5	Lines	Solid	1	100	Realtime cycli...	LW 104	Left Y1 axis	#000000

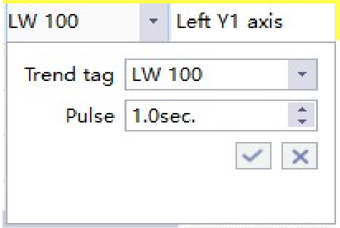
Trend variable and reference scale

Real time cyclic:
Set trend tag and capture cycle

Real time bit:
Bit: trigger bit
Trend transfer1: when MSB and trigger bit enable, trend capture

Buffer bit :
Capture array object value and display as trend format

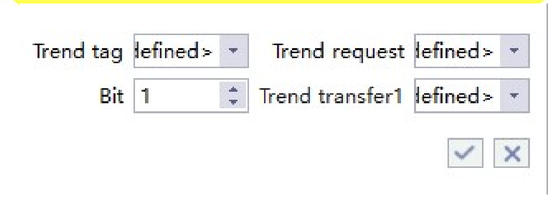
Log :
Display historical trend



LW 100 | Left Y1 axis

Trend tag: LW 100

Pulse: 1.0sec.



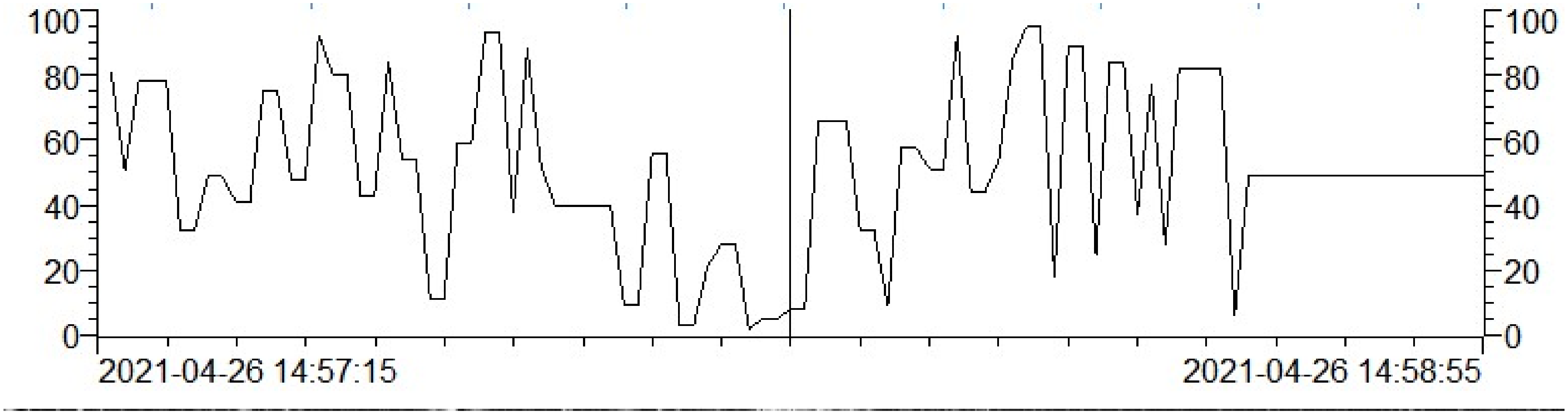
Trend tag: ⟨undefined⟩ Trend request: ⟨undefined⟩

Bit: 1 Trend transfer1: ⟨undefined⟩

Trend View

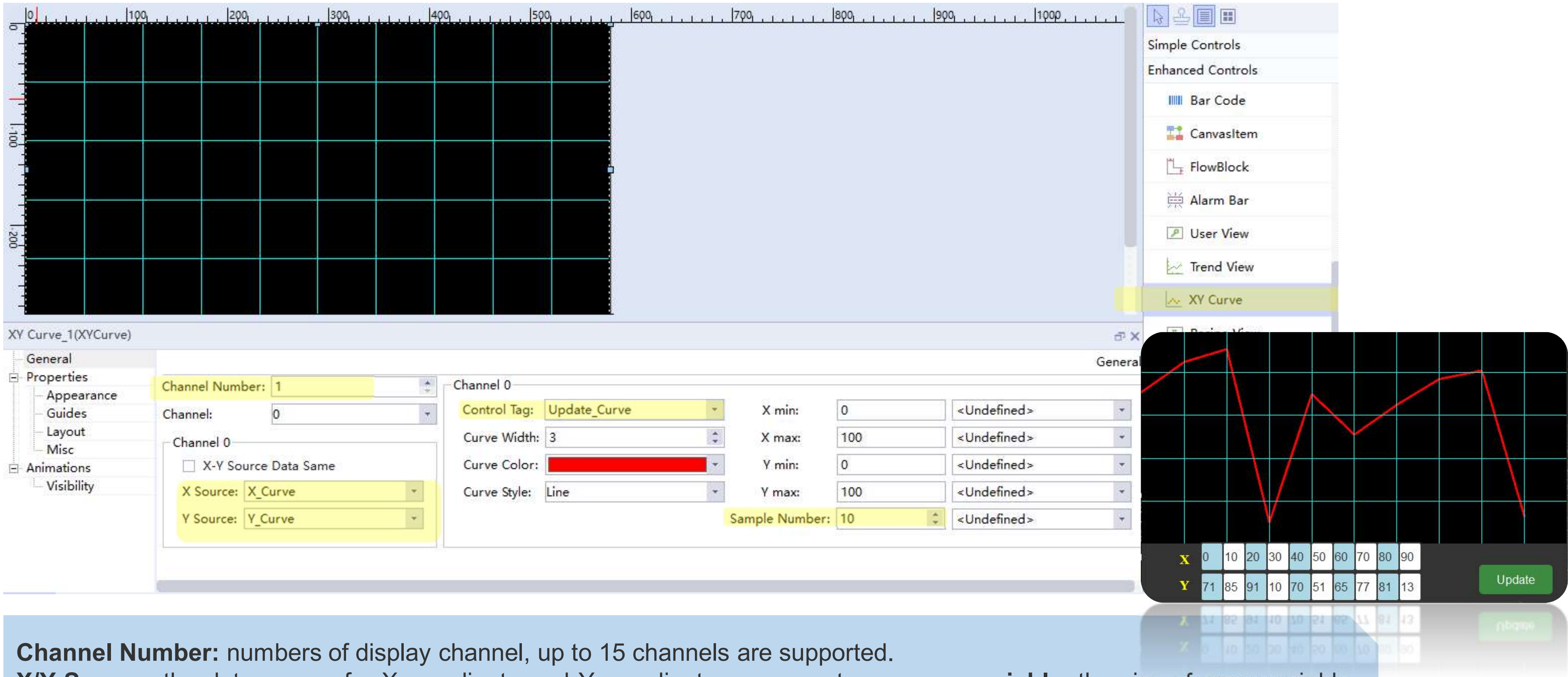
Back to Contents

Display effect



Back to Contents

X-Y curve


0
100
200
300
400
500
600
700
800
900
1000
Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
XY Curve_1(XYCurve)
General
Properties
Appearance
Guides
Layout
Misc
Animations
Visibility
Update

Channel Number: 1
Channel: 0

Channel 0
☐ X-Y Source Data Same
X Source: X_Curve
Y Source: Y_Curve

Channel 0
Control Tag: Update_Curve
Curve Width: 3
Curve Color: 🟥
Curve Style: Line
X min: 0 <Undefined>
X max: 100 <Undefined>
Y min: 0 <Undefined>
Y max: 100 <Undefined>
Sample Number: 10 <Undefined>

X	0	10	20	30	40	50	60	70	80	90
Y	71	85	91	10	70	51	65	77	81	13

Channel Number: numbers of display channel, up to 15 channels are supported.
X/Y Source: the data source for X coordinate and Y coordinate, can map to an **array variable,** the size of array variable should keep consistent with sample number
Control Tag: When control tag enabled, the curve will update
Sample Number: Capture points

Recipe View

INOVANCE

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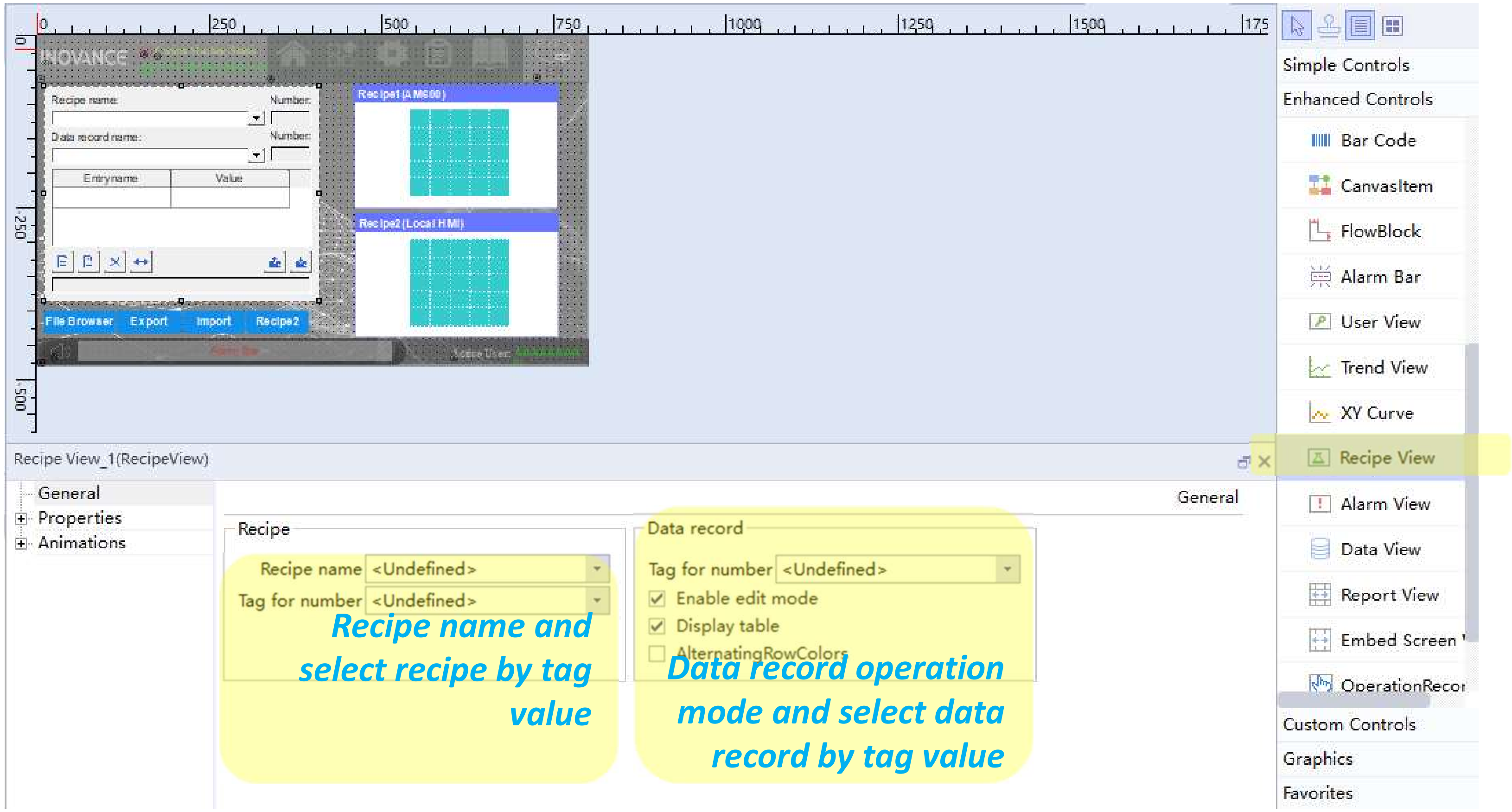
Recipe view is used to display/edit/manage the recipes.



0
250
500
750
1000
1250
1500
175
INOVANCE
Recipe name:
Number:
Data record name:
Number:
Entryname
Value
Recipe1 (AM600)
Recipe2 (Local HMI)
File Browser
Export
Import
Recipe2
Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen
OperationRecor
Custom Controls
Graphics
Favorites
Recipe View_1(RecipeView)
General
Properties
Animations
General

Recipe

Recipe name <Undefined>

Tag for number <Undefined>

Data record

Tag for number <Undefined>

☑ Enable edit mode

☑ Display table

☐ AlternatingRowColors

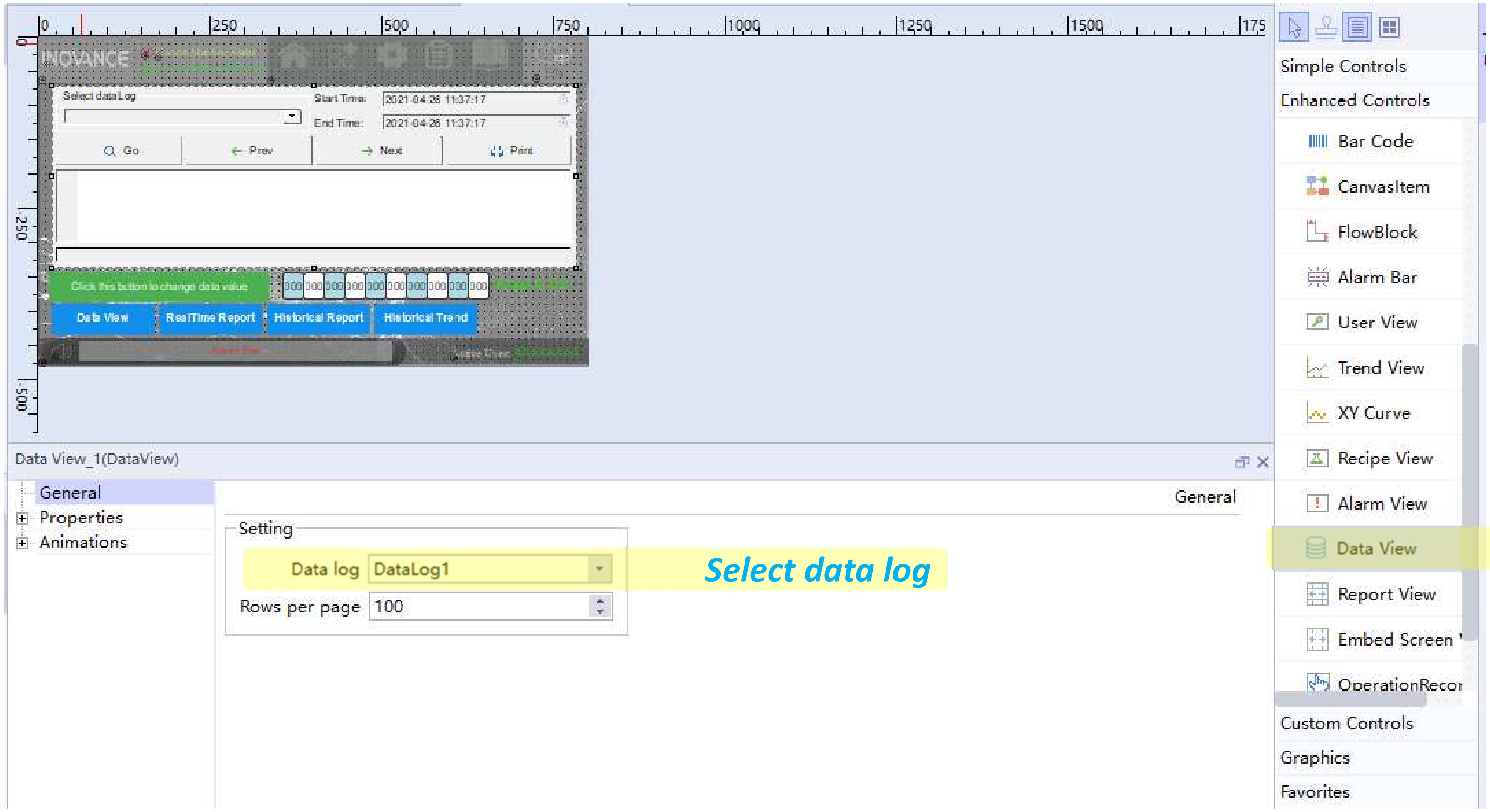
Recipe name and select recipe by tag value

Data record operation mode and select data record by tag value

Data View

Back to Contents

Data view is used to display the data log. Users can filter the data according to date/time range.


Select data Log
Start Time: 2021-04-26 11:37:17
End Time: 2021-04-26 11:37:17
Go
Prev
Next
Print
Click this button to change data value
Data View
RealTime Report
Historical Report
Historical Trend
Data View_1(DataView)
General
Properties
Animations
General
Setting
Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen
OperationRecor
Custom Controls
Graphics
Favorites

Data log: DataLog1

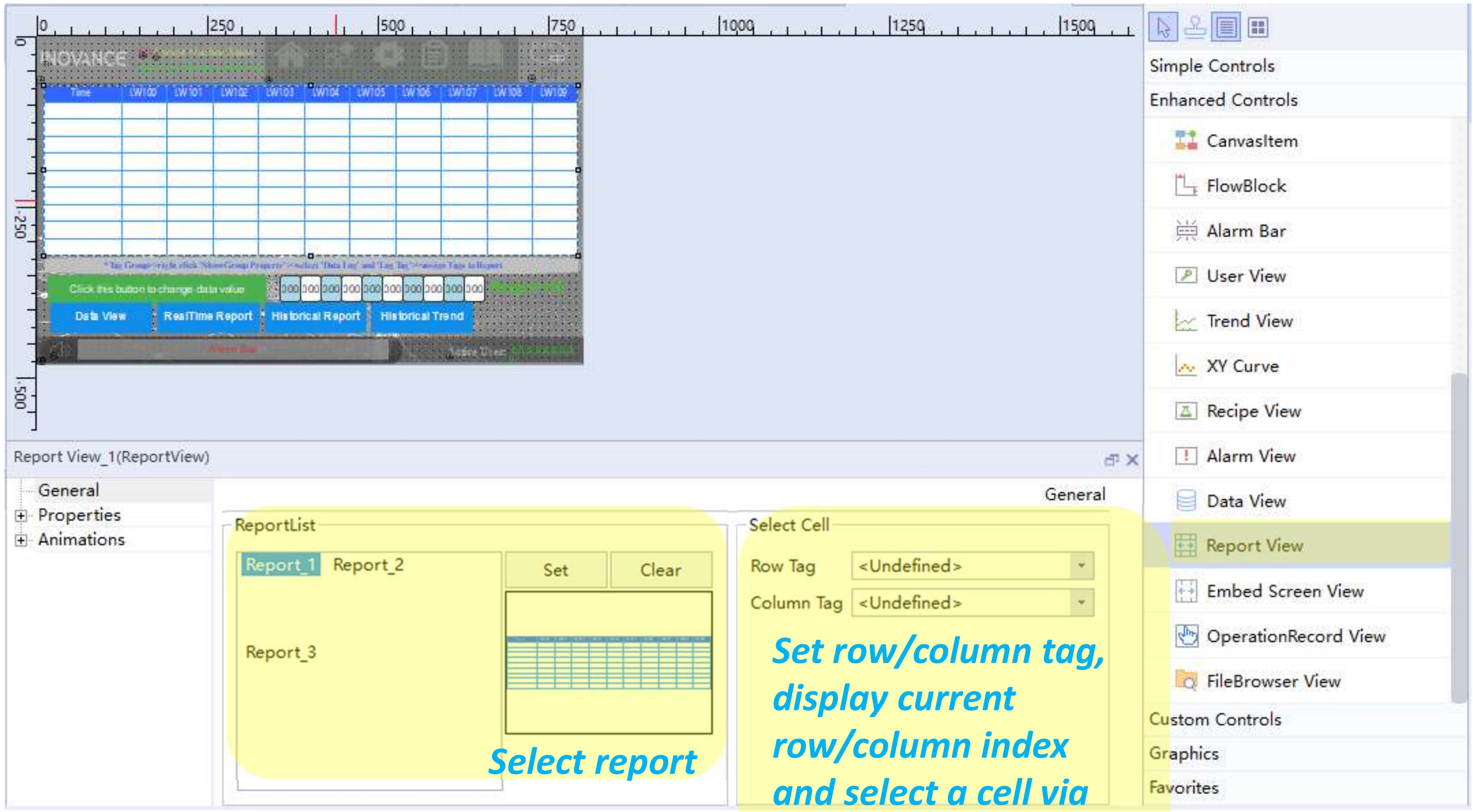
Rows per page: 100

Select data log

Report View

Back to Contents

Report view is used to display the real time report or historical data report. For the report details please refer to 'Report'.


Report View_1(ReportView)
General
Properties
Animations
General
ReportList
Report_1
Report_2
Report_3
Set
Clear
Select Cell
Simple Controls
Enhanced Controls
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen View
OperationRecord View
FileBrowser View
Custom Controls
Graphics
Favorites

Row Tag <Undefined>

Column Tag <Undefined>

Select report

Set row/column tag, display current row/column index and select a cell via row/column index

Embed Screen View

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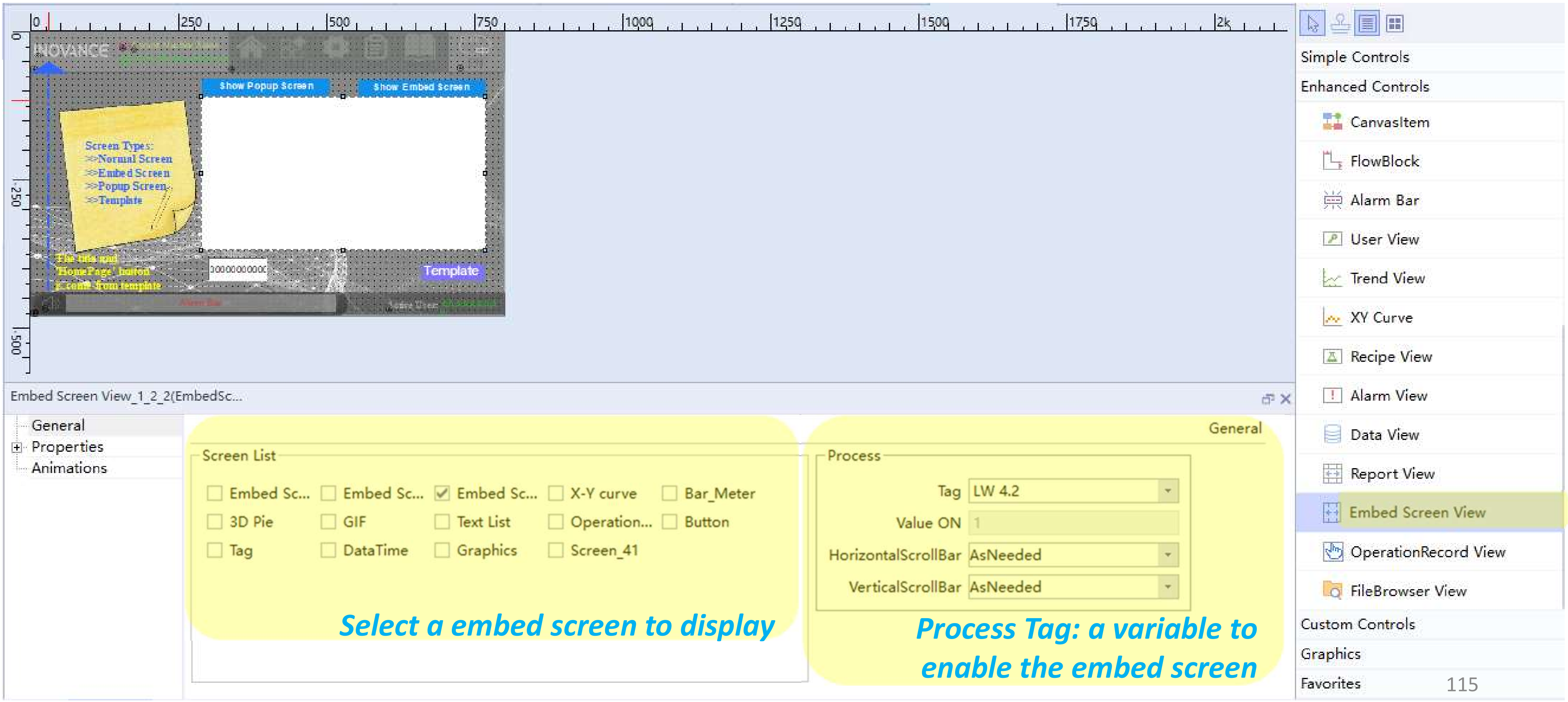
Embed screen view is used to display the embed screen.



Embed Screen View_1_2_2(EmbedSc...

General

Screen List

☐ Embed Sc... ☐ Embed Sc... ☑ Embed Sc... ☐ X-Y curve ☐ Bar_Meter

☐ 3D Pie ☐ GIF ☐ Text List ☐ Operation... ☐ Button

☐ Tag ☐ DataTime ☐ Graphics ☐ Screen_41

Process

Tag: LW 4.2

Value ON: 1

HorizontalScrollBar: AsNeeded

VerticalScrollBar: AsNeeded

Select a embed screen to display

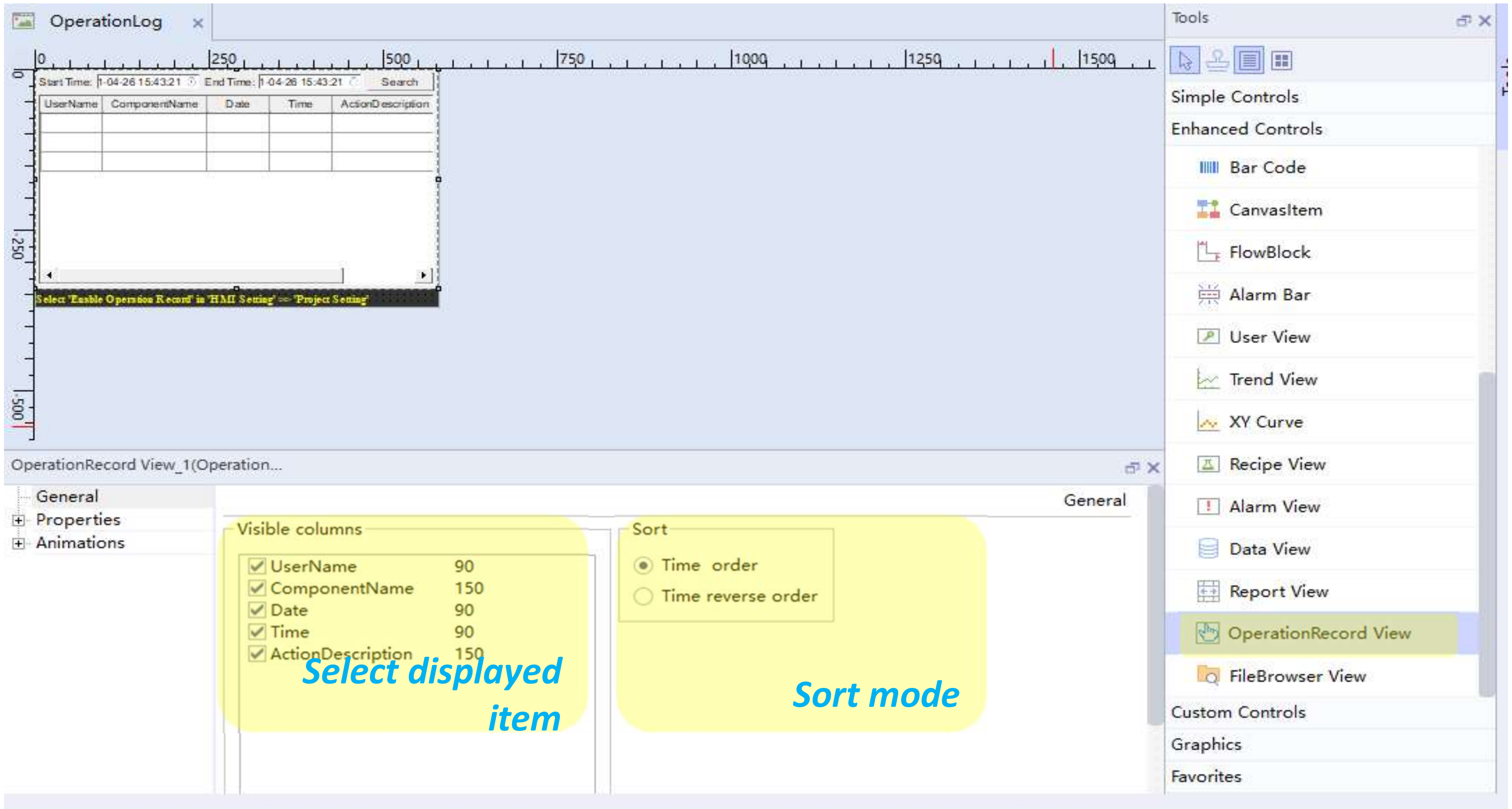
Process Tag: a variable to enable the embed screen

General
Properties
Animations
Show Popup Screen
Show Embed Screen
Screen Types:
>>Normal Screen
>>Embed Screen
>>Popup Screen
>>Template
The title and 'HomePage' button come from template
Template
Simple Controls
Enhanced Controls
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen View
OperationRecord View
FileBrowser View
Custom Controls
Graphics
Favorites

Operation Record View

Back to Contents

Operation record view can record the operation record for each controls running in HMI application and show the operation data/time and login user.



Start Time: 1-04-26 15:43:21 End Time: 1-04-26 15:43:21 Search

UserName	ComponentName	Date	Time	ActionDescription

Select 'Enable Operation Record' in 'HMI Setting' => 'Project Setting'

OperationRecord View_1(Operation...

Visible columns

- ☑ UserName 90
- ☑ ComponentName 150
- ☑ Date 90
- ☑ Time 90
- ☑ ActionDescription 150

Sort

- ● Time order
- ○ Time reverse order

Select displayed item

Sort mode

OperationLog
0
250
500
750
1000
1250
1500
General
Properties
Animations
General
Tools
Simple Controls
Enhanced Controls
Bar Code
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
OperationRecord View
FileBrowser View
Custom Controls
Graphics
Favorites

Operation Record View

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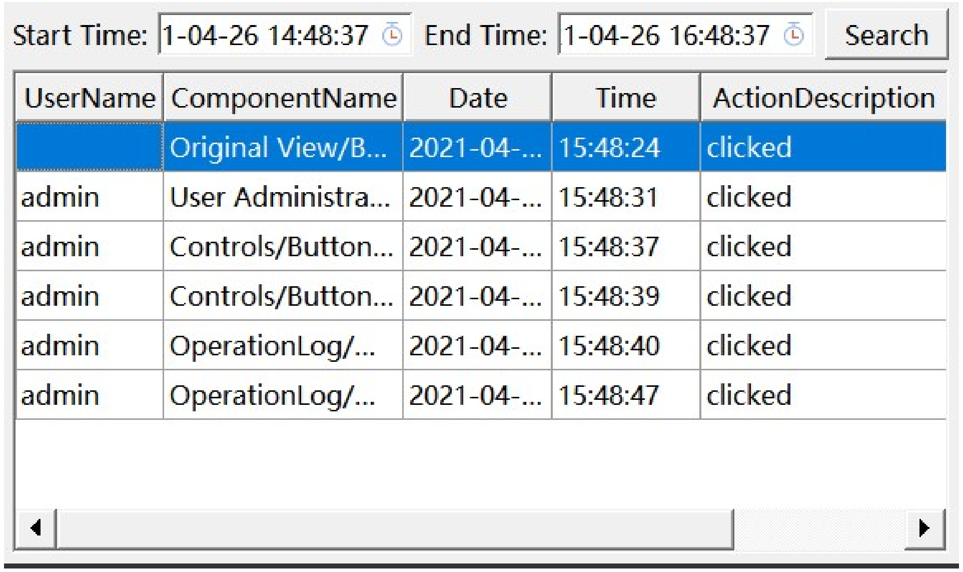
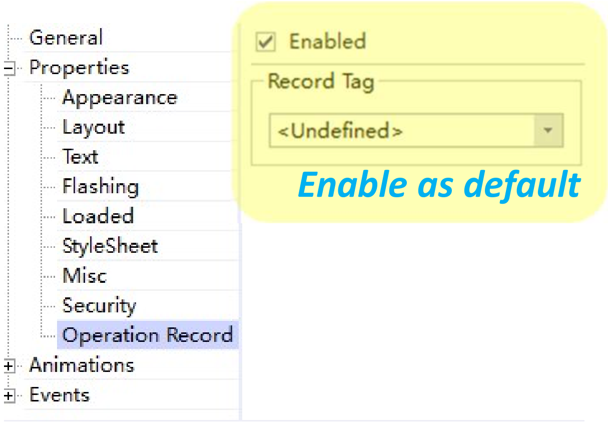
Select start/end time and click ‘Search’ button to check the operation record.

***Note1: need enable operation record in HMI setting. Refer to ‘HMI Setting’.**
***Note2: need enable ‘Operation Record’ property for controls.**



Start Time: 1-04-26 14:48:37 End Time: 1-04-26 16:48:37

UserName	ComponentName	Date	Time	ActionDescription
	Original View/B...	2021-04-...	15:48:24	clicked
admin	User Administra...	2021-04-...	15:48:31	clicked
admin	Controls/Button...	2021-04-...	15:48:37	clicked
admin	Controls/Button...	2021-04-...	15:48:39	clicked
admin	OperationLog/...	2021-04-...	15:48:40	clicked
admin	OperationLog/...	2021-04-...	15:48:47	clicked


General
Properties
Appearance
Layout
Text
Flashing
Loaded
StyleSheet
Misc
Security
Operation Record
Animations
Events

☑ Enabled

Record Tag
<Undefined>

Enable as default

File Browser View

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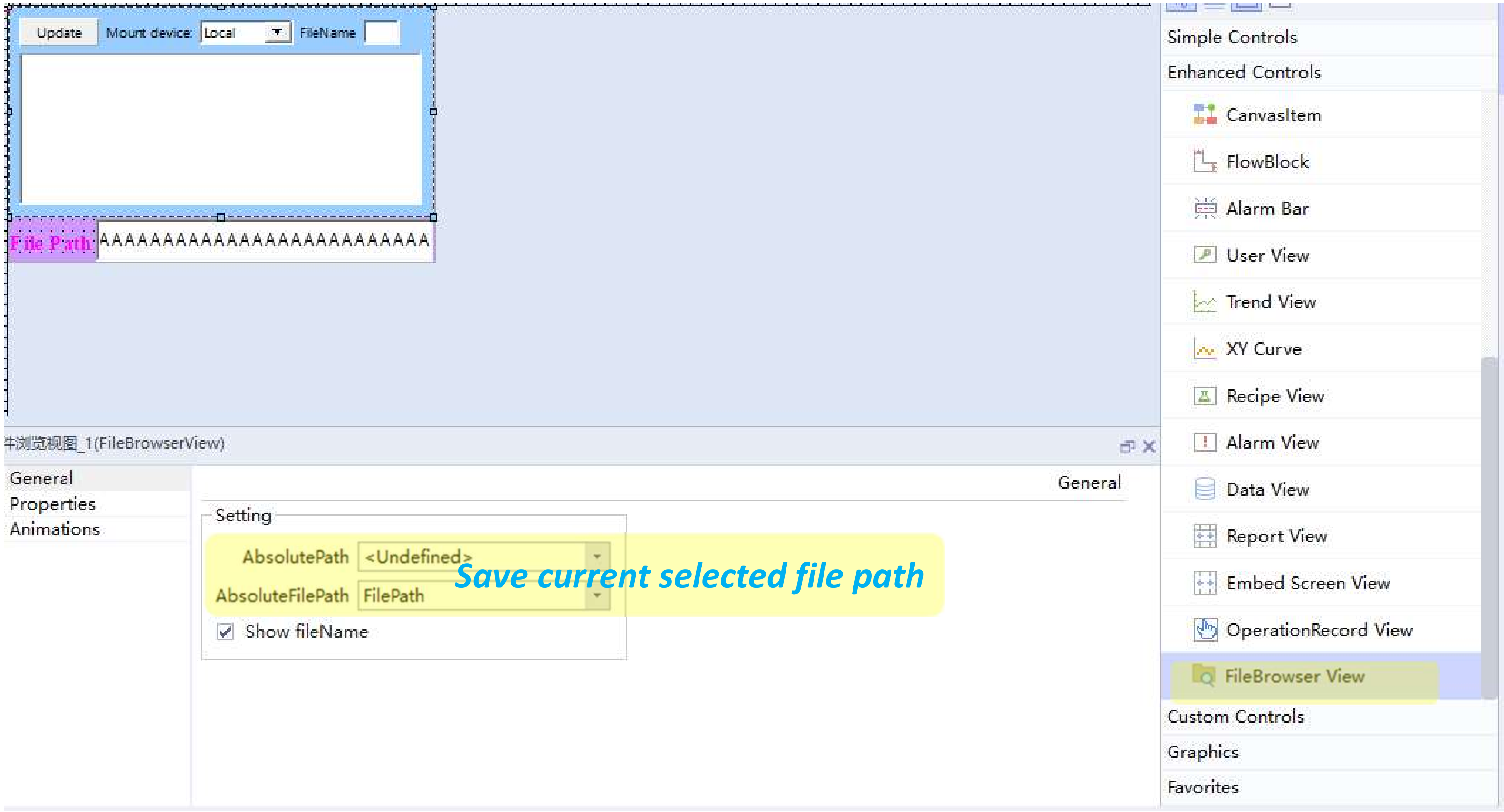
File Browser view provide simple functionality to access external memory like SD card or USB.


Update
Mount device:
Local
FileName
File Path
AAAAAAAAAAAAAAAAAAAAAAAAA
件浏览视图_1(FileBrowserView)
General
Properties
Animations
General
Setting
Simple Controls
Enhanced Controls
CanvasItem
FlowBlock
Alarm Bar
User View
Trend View
XY Curve
Recipe View
Alarm View
Data View
Report View
Embed Screen View
OperationRecord View
FileBrowser View
Custom Controls
Graphics
Favorites

AbsolutePath: <Undefined>

AbsoluteFilePath: FilePath

☑ Show fileName

Save current selected file path

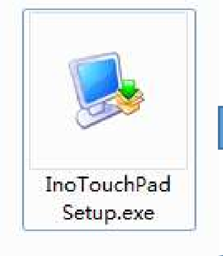
InoTouchPad Common Operation

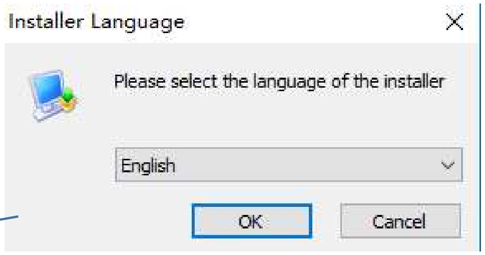
Installation

Back to Contents

➢ InoTouchPad

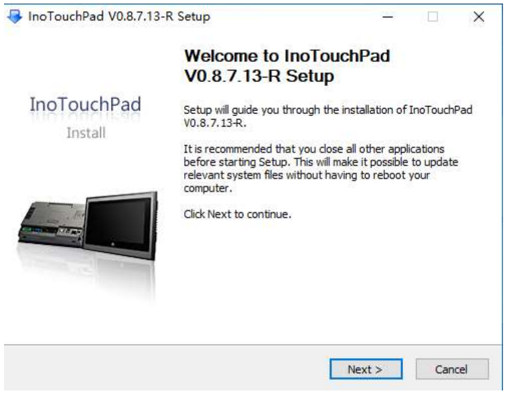
- The development software of IT7000 is **InoTouchPad**, and the installation package currently supports three installation languages: English + simplified Chinese + traditional Chinese. The USB download driver will automatically registered after installation (the software can be downloaded from INOVANCE website: Link).
- **InoTouchPad** supports Windows XP /Windows 2000 /Windows Vista/Windows 7/8/10 and other operating systems(32/64 bit).




Installer Language

Please select the language of the installer

English


InoTouchPad V0.8.7.13-R Setup

Welcome to InoTouchPad V0.8.7.13-R Setup

Setup will guide you through the installation of InoTouchPad V0.8.7.13-R.

It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

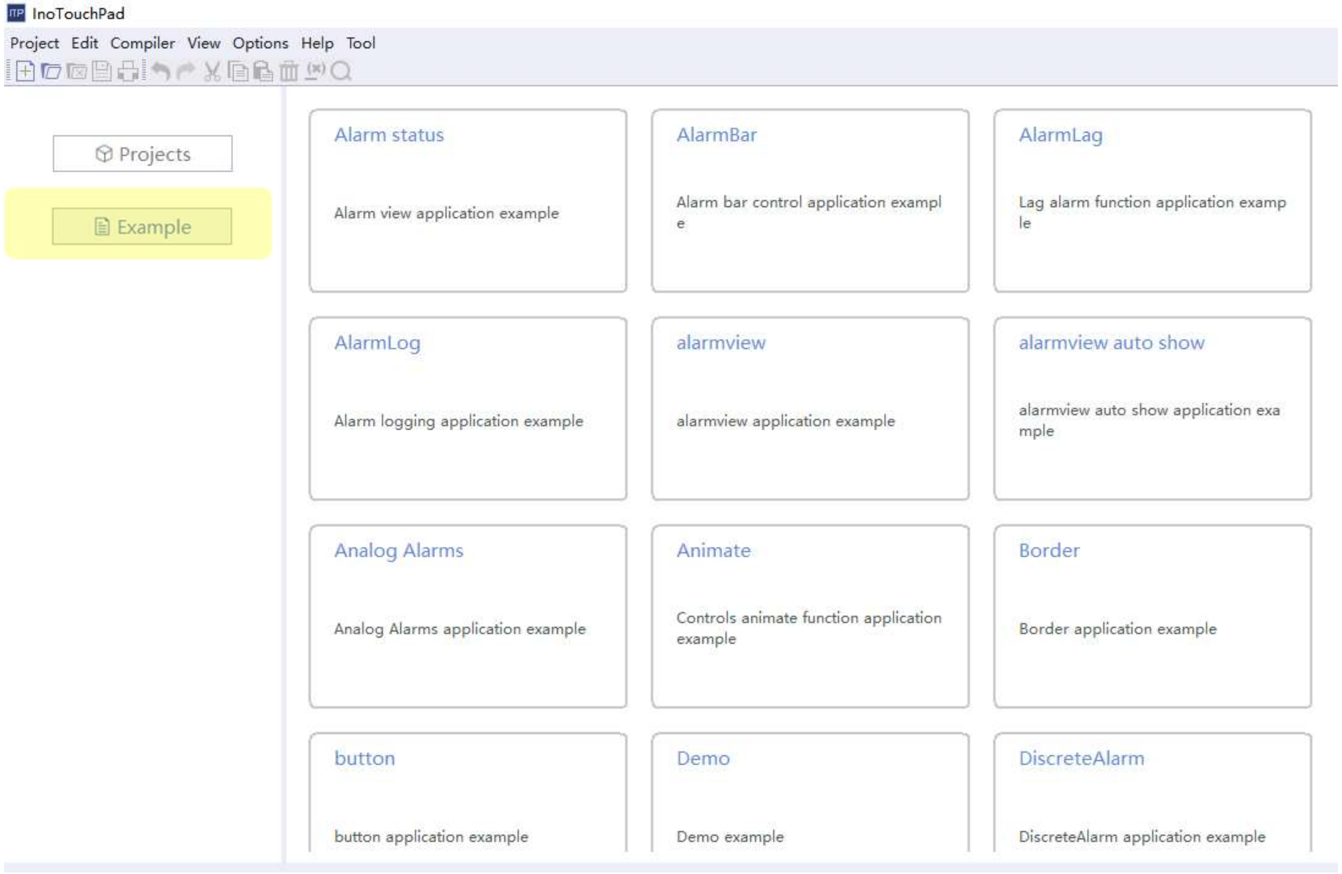
Click Next to continue.

Language will be automatically selected according to the system language of PC.

Installation steps

Example Project

While open the software, users can find the built in example projects, details show as below:


InoTouchPad
Project
Edit
Compiler
View
Options
Help
Tool
Projects
Example

Alarm status

Alarm view application example

AlarmBar

Alarm bar control application example

AlarmLag

Lag alarm function application example

AlarmLog

Alarm logging application example

alarmview

alarmview application example

alarmview auto show

alarmview auto show application example

Analog Alarms

Analog Alarms application example

Animate

Controls animate function application example

Border

Border application example

button

button application example

Demo

Demo example

DiscreteAlarm

DiscreteAlarm application example

Tab

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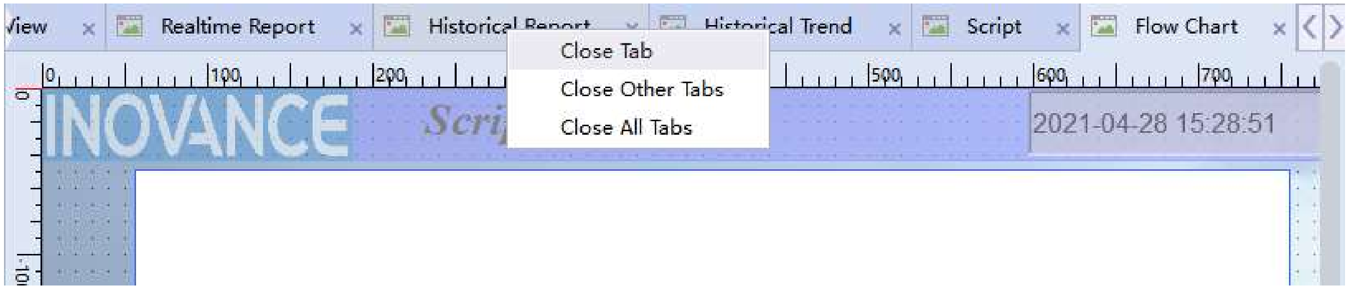
InoTouchPad support up to 40 tabs in the UI development interface, sometimes when user open many tabs and it is inconvenient to exchange screen, they can try to right click and do the fast operation:

Close Tab: close current tab
Close Other Tabs: only remain current tab, other tabs will be closed
Close All Tabs: all the opened tabs will be closed


View
Realtime Report
Historical Report
Historical Trend
Script
Flow Chart
Close Tab
Close Other Tabs
Close All Tabs
INOVANCE
2021-04-28 15:28:51

Project Conversion

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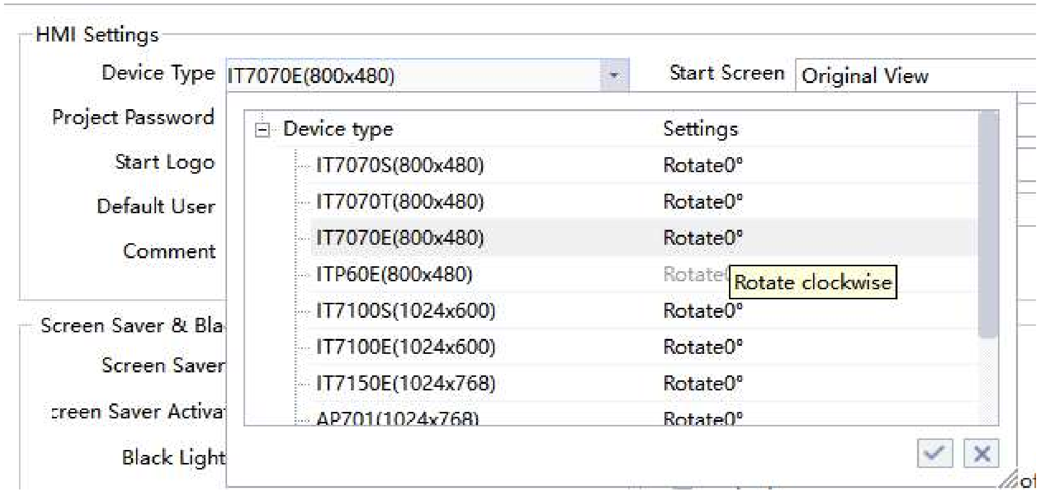
In the HMI settings view, users can change the device type to adapt to a specified model product, at the same time, they can adjust the display angle of the project, IT7000 HMI can display a project from 4 directions(0°, 90°, 180° and 270°).


HMI Settings
Project Password
Start Logo
Default User
Comment
Screen Saver & Bla
Screen Saver
creen Saver Activa
Black Light
Rotate clockwise

Device Type: IT7070E(800x480)

Start Screen: Original View

Device type	Settings
IT7070S(800x480)	Rotate0°
IT7070T(800x480)	Rotate0°
IT7070E(800x480)	Rotate0°
ITP60E(800x480)	Rotate
IT7100S(1024x600)	Rotate0°
IT7100E(1024x600)	Rotate0°
IT7150E(1024x768)	Rotate0°
AP701(1024x768)	Rotate0°

Table Operation

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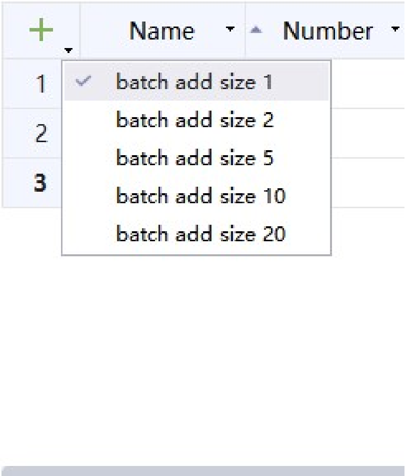
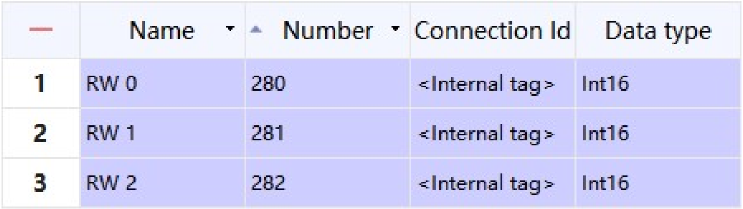
➢ Add/Delete row(s)

The icon + is used to add row(s). Click the lower right corner, there are 5 options: batch add size 1 as default, users can modify this setting to quickly add variable.



+	Name	Number
1		
2		
3		

- ✓ batch add size 1
- batch add size 2
- batch add size 5
- batch add size 10
- batch add size 20

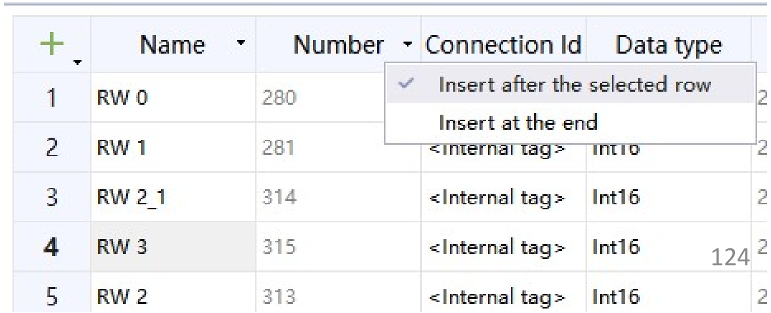


—	Name	Number	Connection Id	Data type
1	RW 0	280	<Internal tag>	Int16
2	RW 1	281	<Internal tag>	Int16
3	RW 2	282	<Internal tag>	Int16

The icon — is used to delete row(s). While select a row or multi rows, this icon will appear.

*Note: 'Del' key of PC keyboard can also used to delete a row.

Number>>Insert after the selected row, in this way users can insert a new item at an appropriate place.

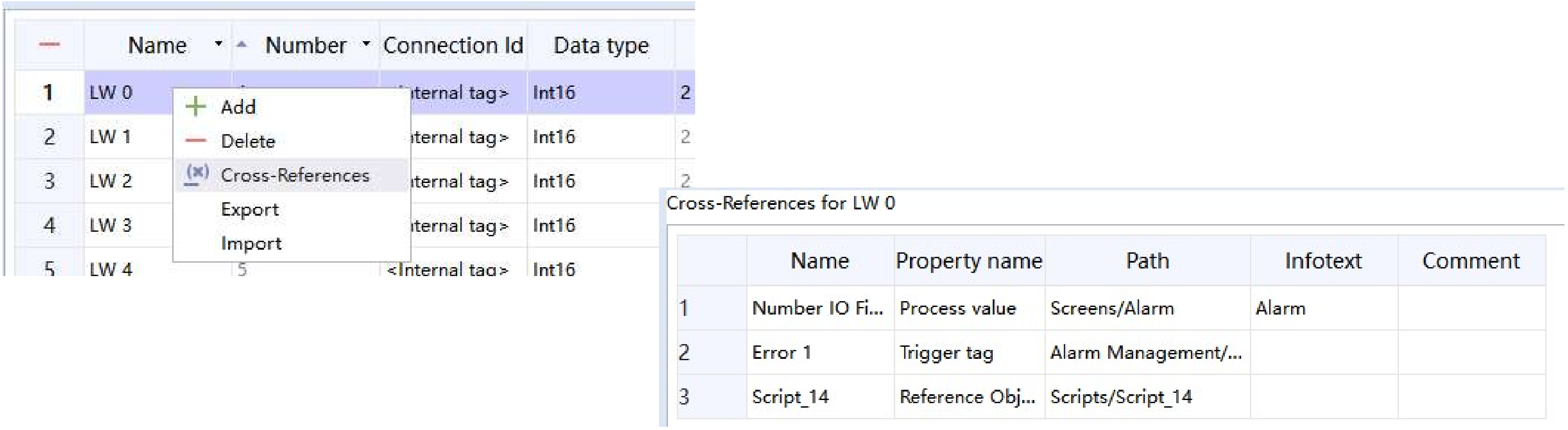


+	Name	Number	Connection Id	Data type	
1	RW 0	280			2
2	RW 1	281	<Internal tag>	Int16	2
3	RW 2_1	314	<Internal tag>	Int16	2
4	RW 3	315	<Internal tag>	Int16	2
5	RW 2	313	<Internal tag>	Int16	2

- ✓ Insert after the selected row
- Insert at the end

➢ Cross-References

Select a variable and right click, then click ‘Cross-References’, a reference table will be loaded. From this reference table, users can find where the selected variable is used, just click the item in this table, the corresponding screen/controls will load automatically.



—	Name	Number	Connection Id	Data type	
1	LW 0		ternal tag>	Int16	2
2	LW 1		ternal tag>	Int16	2
3	LW 2		ternal tag>	Int16	2
4	LW 3		ternal tag>	Int16	
5	LW 4	5	<Internal tag>	Int16	

Cross-References for LW 0

	Name	Property name	Path	Infotext	Comment
1	Number IO Fi...	Process value	Screens/Alarm	Alarm	
2	Error 1	Trigger tag	Alarm Management/...		
3	Script_14	Reference Obj...	Scripts/Script_14		

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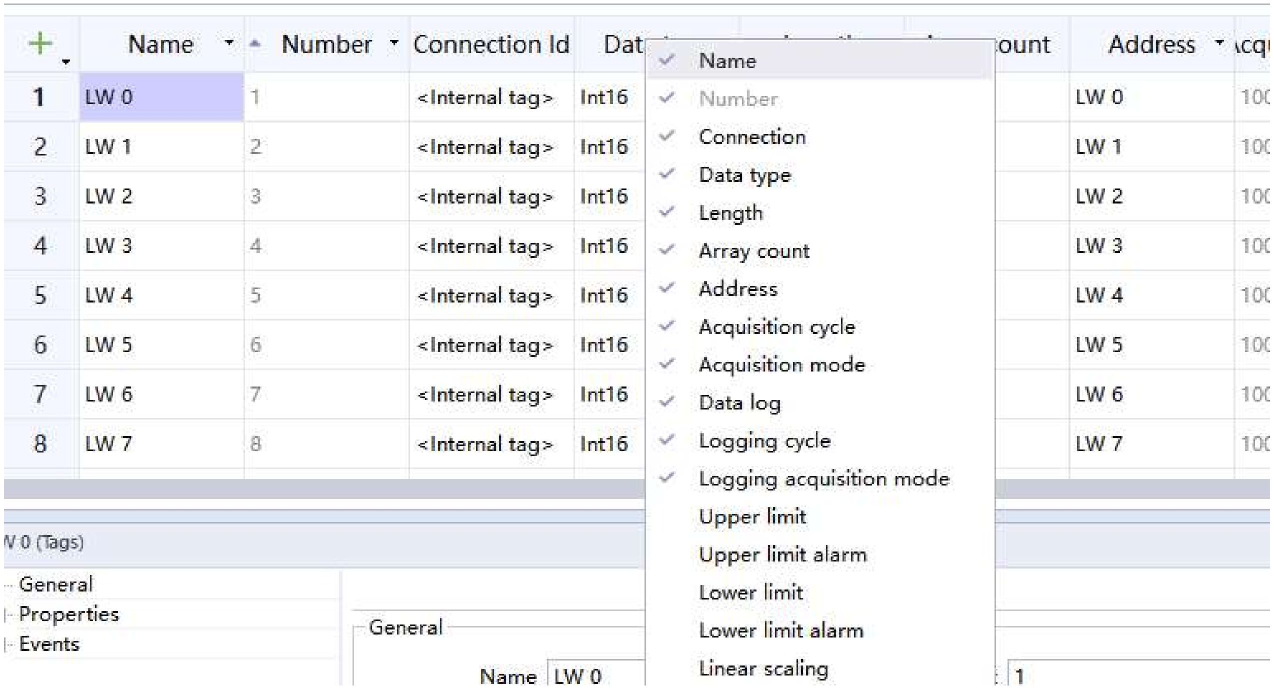
Hide/Show Columns

InoTouchPad have many different tables used for different object. For example, for the object ‘Tags’, there are over 20 properties. But sometimes users don’t want to show all properties in the table and they just need to show what they want. In this case, they just need to right click the title of the table and select the columns they want to hide/show.



	Name	Number	Connection Id	Dat	Address
1	LW 0	1	<Internal tag>	Int16	LW 0
2	LW 1	2	<Internal tag>	Int16	LW 1
3	LW 2	3	<Internal tag>	Int16	LW 2
4	LW 3	4	<Internal tag>	Int16	LW 3
5	LW 4	5	<Internal tag>	Int16	LW 4
6	LW 5	6	<Internal tag>	Int16	LW 5
7	LW 6	7	<Internal tag>	Int16	LW 6
8	LW 7	8	<Internal tag>	Int16	LW 7

✓ Name
✓ Number
✓ Connection
✓ Data type
✓ Length
✓ Array count
✓ Address
✓ Acquisition cycle
✓ Acquisition mode
✓ Data log
✓ Logging cycle
✓ Logging acquisition mode
Upper limit
Upper limit alarm
Lower limit
Lower limit alarm
Linear scaling
V 0 (Tags)
General
Properties
Events
General
Name LW 0
1

Table Operation

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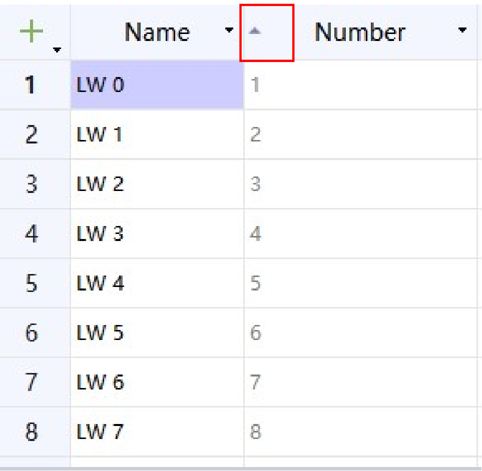
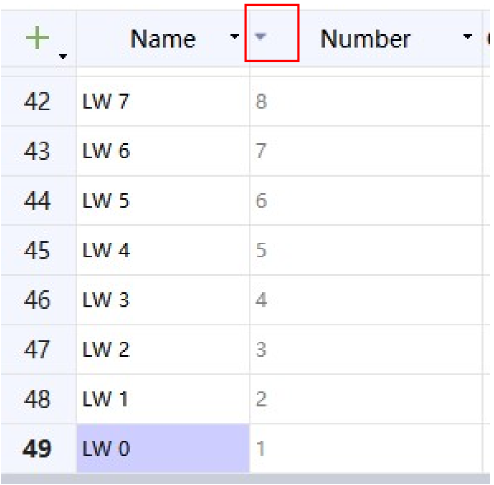
➢ Sort according to number

Some tables support to sort according to the number, in this situation, you can find the icon ▲ on the left of the table header.



+	Name	▲ Number
1	LW 0	1
2	LW 1	2
3	LW 2	3
4	LW 3	4
5	LW 4	5
6	LW 5	6
7	LW 6	7
8	LW 7	8



+	Name	▼ Number
42	LW 7	8
43	LW 6	7
44	LW 5	6
45	LW 4	5
46	LW 3	4
47	LW 2	3
48	LW 1	2
49	LW 0	1

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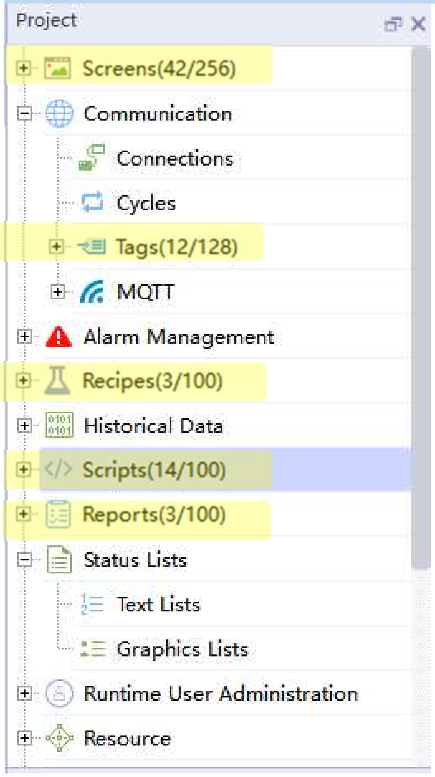
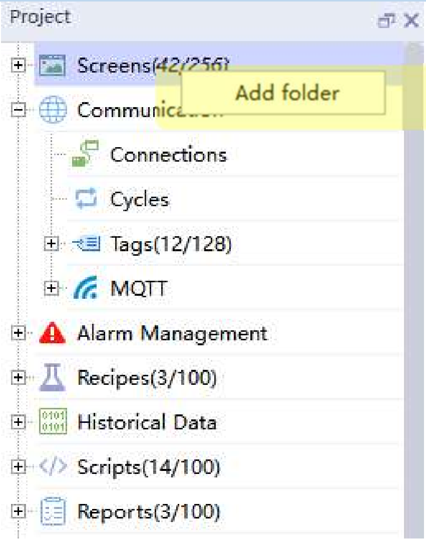
➢ Add a folder

Screen/Tags/Recipe/Script/Report support this operation.


Project
Screens(42/256)
Communication
Connections
Cycles
Tags(12/128)
MQTT
Alarm Management
Recipes(3/100)
Historical Data
Scripts(14/100)
Reports(3/100)
Status Lists
Text Lists
Graphics Lists
Runtime User Administration
Resource


Project
Screens(42/256)
Add folder
Communication
Connections
Cycles
Tags(12/128)
MQTT
Alarm Management
Recipes(3/100)
Historical Data
Scripts(14/100)
Reports(3/100)

Right Click

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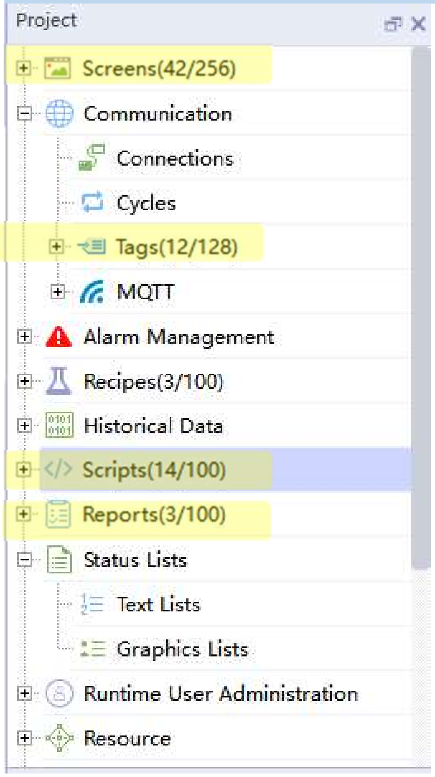
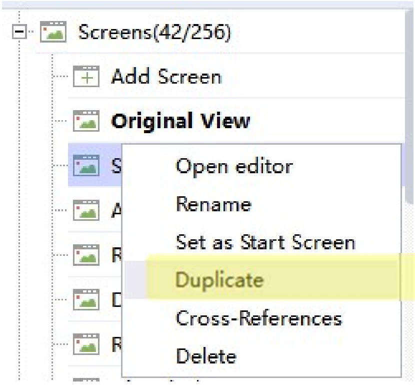
➢ Create copy file

Screen/Tags/Script/Report support this operation.


Project
Screens(42/256)
Communication
Connections
Cycles
Tags(12/128)
MQTT
Alarm Management
Recipes(3/100)
Historical Data
Scripts(14/100)
Reports(3/100)
Status Lists
Text Lists
Graphics Lists
Runtime User Administration
Resource

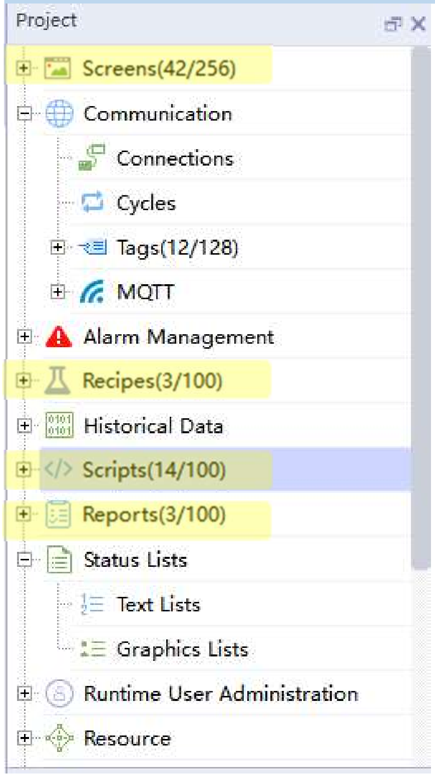

Screens(42/256)
Add Screen
Original View
Open editor
Rename
Set as Start Screen
Duplicate
Cross-References
Delete

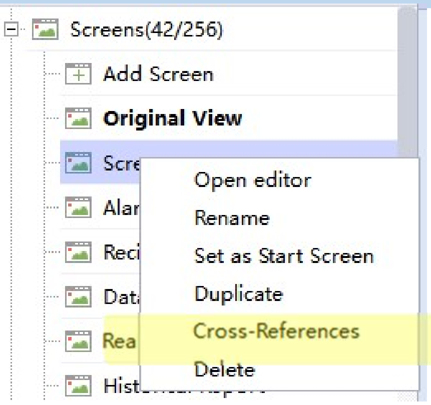
Right Click

Back to Contents

➢ Cross Reference

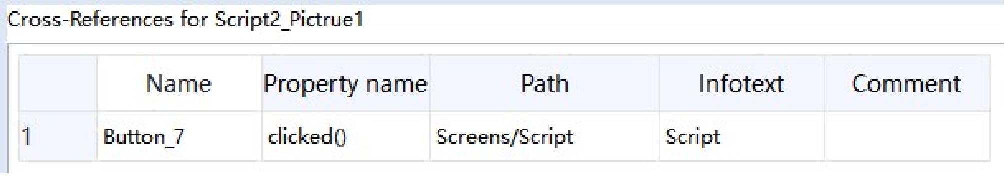
Screen/Recipe/Script/Report support this operation.


Project
Screens(42/256)
Communication
Connections
Cycles
Tags(12/128)
MQTT
Alarm Management
Recipes(3/100)
Historical Data
Scripts(14/100)
Reports(3/100)
Status Lists
Text Lists
Graphics Lists
Runtime User Administration
Resource


Screens(42/256)
Add Screen
Original View
Scre
Alar
Reci
Dat
Rea
Hist
Open editor
Rename
Set as Start Screen
Duplicate
Cross-References
Delete

Right Click

To find which control invoke the screen/recipe/report/script



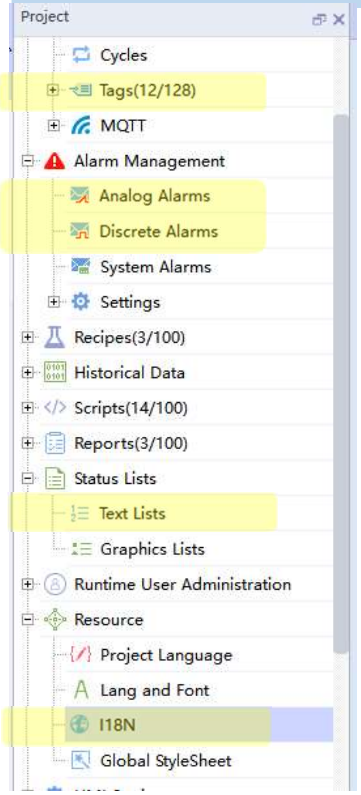
Cross-References for Script2_Pictrue1

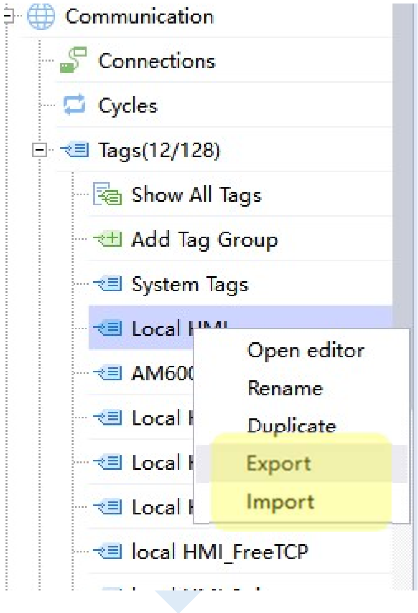
	Name	Property name	Path	Infotext	Comment
1	Button_7	clicked()	Screens/Script	Script	

Device Tree Operation

➢ Import/Export

Tags/Analog Alarm/Discrete Alarm/Text List/Resource(I18N) support this operation.


Project
Cycles
Tags(12/128)
MQTT
Alarm Management
Analog Alarms
Discrete Alarms
System Alarms
Settings
Recipes(3/100)
Historical Data
Scripts(14/100)
Reports(3/100)
Status Lists
Text Lists
Graphics Lists
Runtime User Administration
Resource
Project Language
Lang and Font
I18N
Global StyleSheet


Communication
Connections
Cycles
Tags(12/128)
Show All Tags
Add Tag Group
System Tags
Local HMI
AM600
Local
Local
Local
local HMI_FreeTCP
Open editor
Rename
Duplicate
Export
Import

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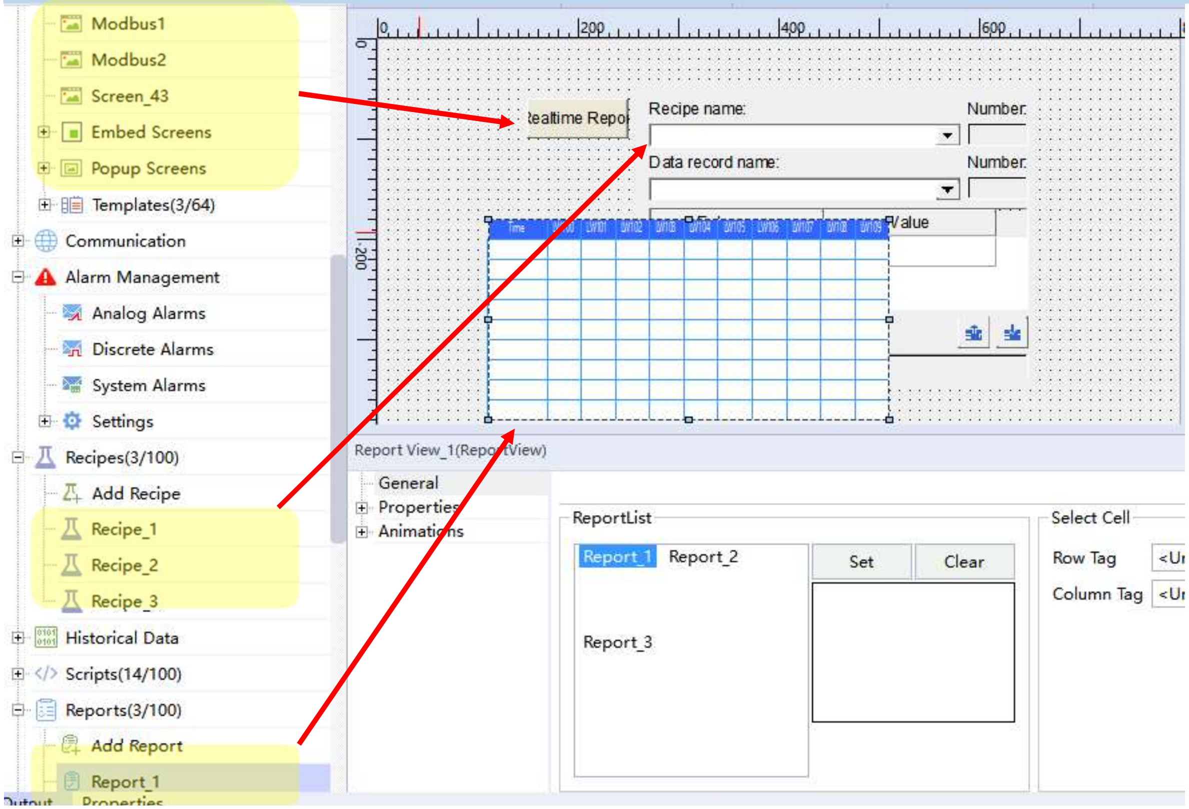
➢ Screen/recipe/report

Drag screen/recipe/report/tags etc., then drop to screen, the configured controls will generate automatically.


Modbus1
Modbus2
Screen_43
Embed Screens
Popup Screens
Templates(3/64)
Communication
Alarm Management
Analog Alarms
Discrete Alarms
System Alarms
Settings
Recipes(3/100)
Add Recipe
Recipe_1
Recipe_2
Recipe_3
Historical Data
Scripts(14/100)
Reports(3/100)
Add Report
Report_1
Properties
0
200
400
600
Realtime Repo
Recipe name:
Number:
Data record name:
Number:
Value
Time
Report View_1(ReportView)
General
Properties
Animations
ReportList
Report_1
Report_2
Report_3
Set
Clear
Select Cell
Row Tag
Column Tag

Drag and Drop

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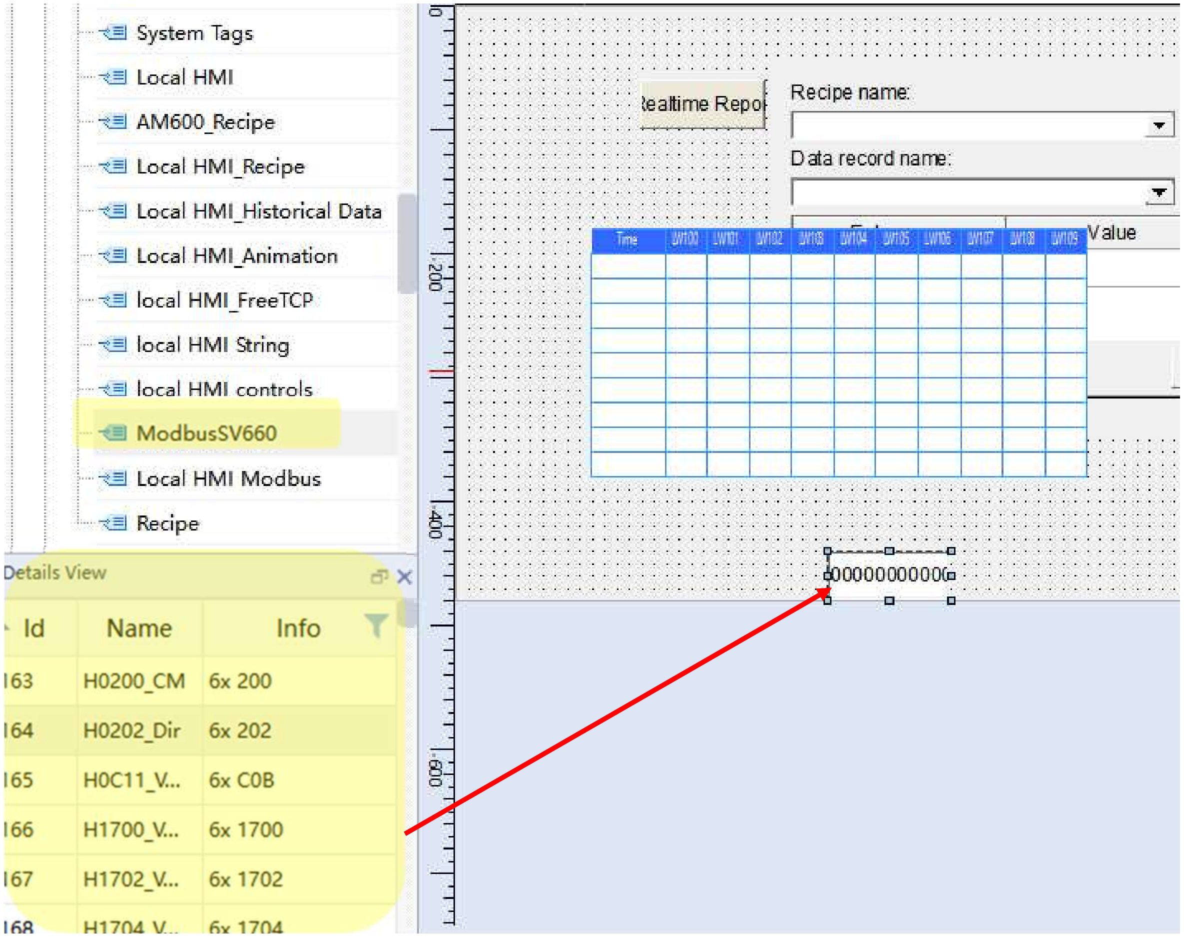
➢ Tags



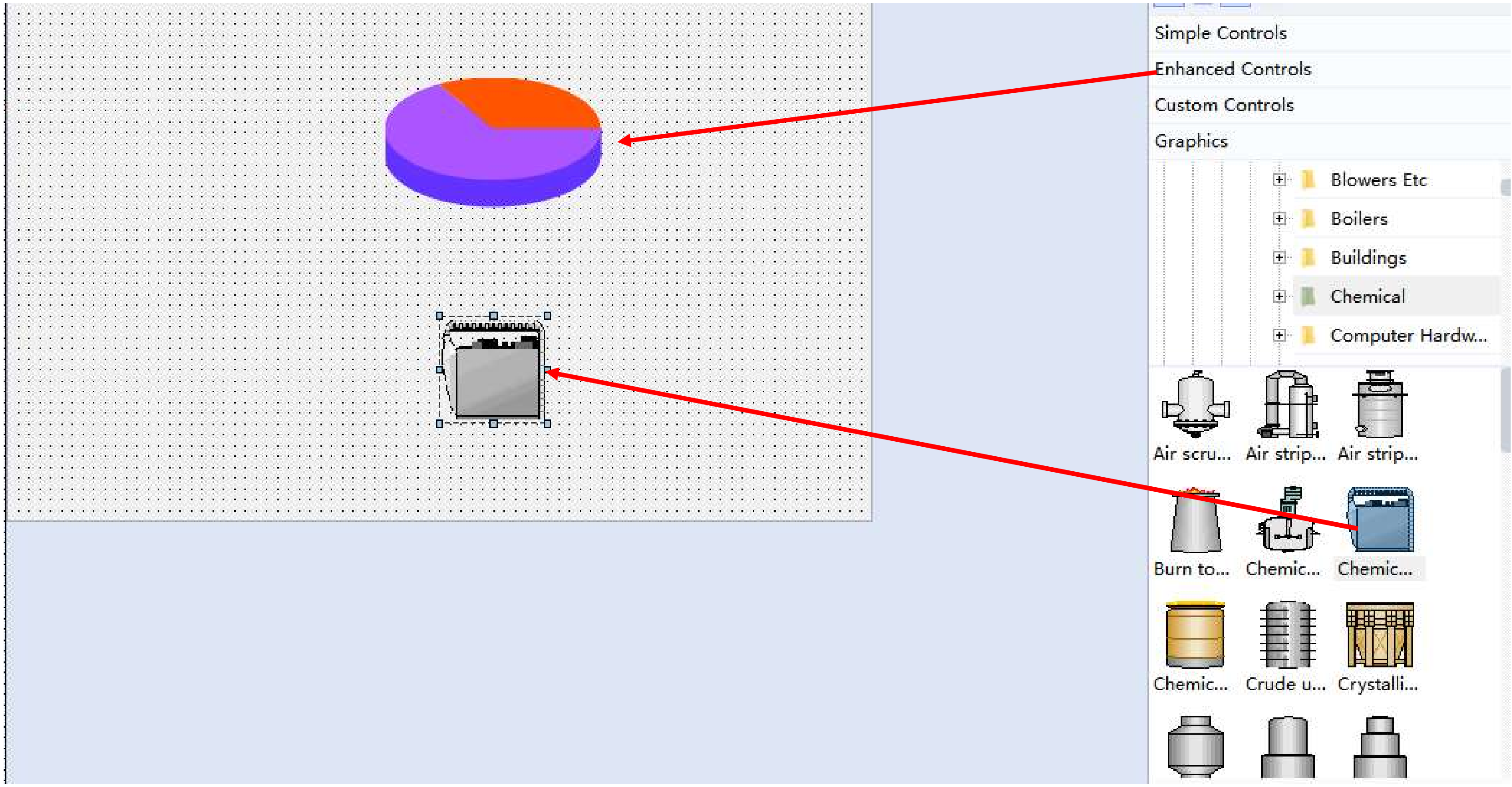
- System Tags
- Local HMI
- AM600_Recipe
- Local HMI_Recipe
- Local HMI_Historical Data
- Local HMI_Animation
- local HMI_FreeTCP
- local HMI String
- local HMI controls
- ModbusSV660
- Local HMI Modbus
- Recipe

Details View

Id	Name	Info
163	H0200_CM	6x 200
164	H0202_Dir	6x 202
165	H0C11_V...	6x C0B
166	H1700_V...	6x 1700
167	H1702_V...	6x 1702
168	H1704_V...	6x 1704

Realtime Repo
Recipe name:
Data record name:
Value
Time
000000000000
0
200
400
600

➢ Controls/Graphics


Simple Controls
Enhanced Controls
Custom Controls
Graphics
Blowers Etc
Boilers
Buildings
Chemical
Computer Hardw...
Air scru...
Air strip...
Air strip...
Burn to...
Chemic...
Chemic...
Chemic...
Crude u...
Crystalli...

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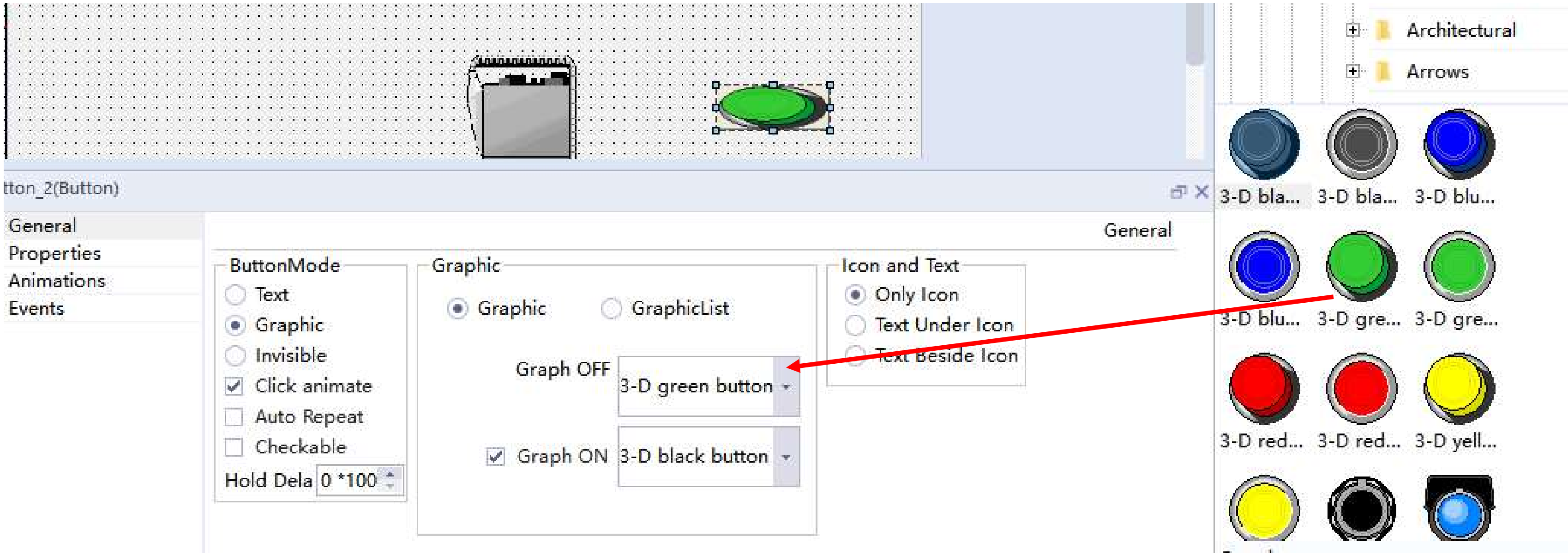
➢ Controls/Graphics

***Note: Graphics can be directly drag to a controls edit box.**



tton_2(Button)

- General
- Properties
- Animations
- Events

General

ButtonMode
- ○ Text
- ● Graphic
- ○ Invisible
- ☑ Click animate
- ☐ Auto Repeat
- ☐ Checkable
- Hold Dela 0 *100

Graphic
- ● Graphic
- ○ GraphicList
- Graph OFF: 3-D green button
- ☑ Graph ON: 3-D black button

Icon and Text
- ● Only Icon
- ○ Text Under Icon
- ○ Text Beside Icon

Architectural
Arrows
3-D bla...
3-D bla...
3-D blu...
3-D blu...
3-D gre...
3-D gre...
3-D red...
3-D red...
3-D yell...

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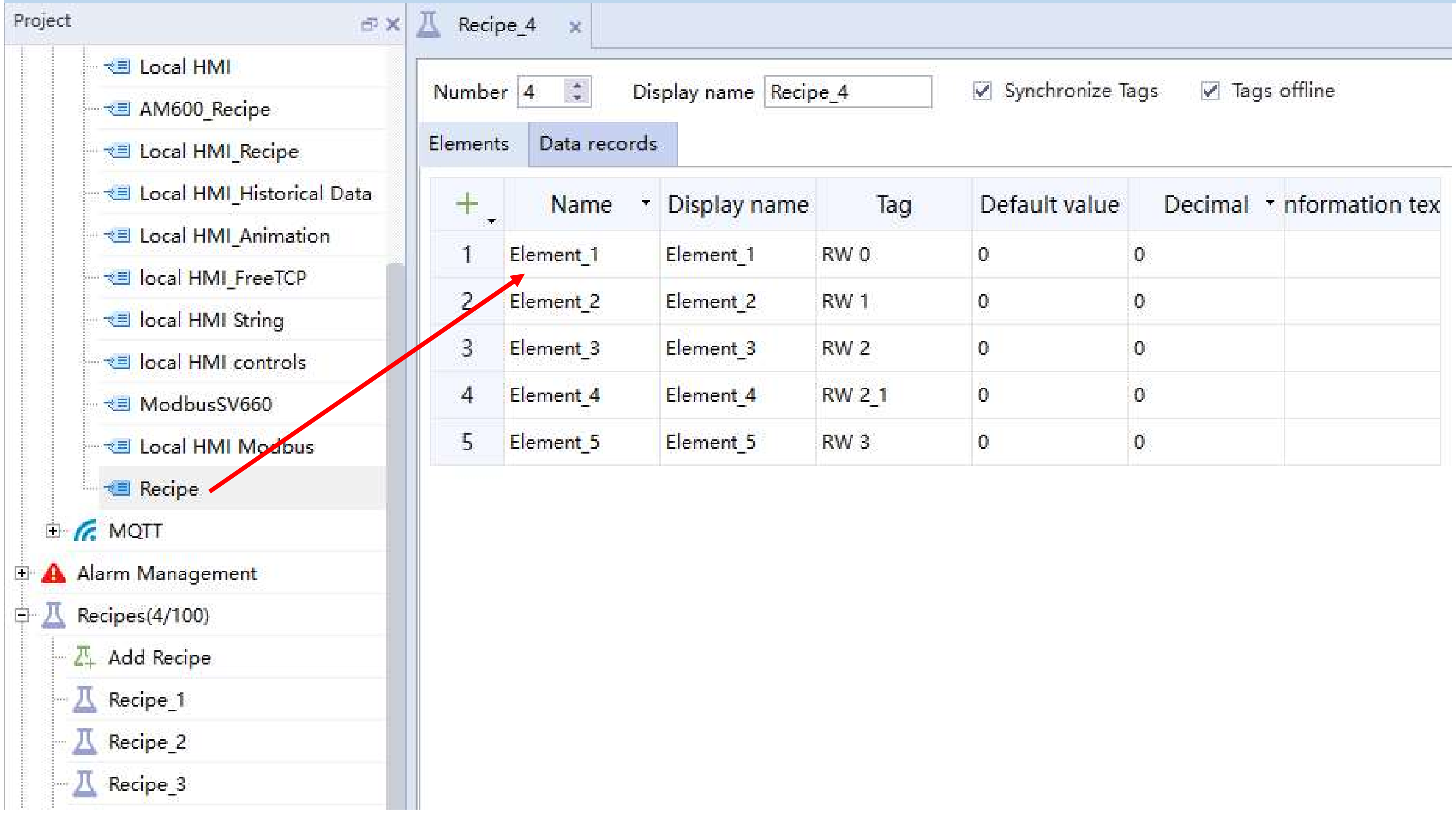
➢ Tag Group to Recipe

Create a new tag group and add variables, then add a new recipe. Drag the tag group to the recipe directly.


Project
Local HMI
AM600_Recipe
Local HMI_Recipe
Local HMI_Historical Data
Local HMI_Animation
local HMI_FreeTCP
local HMI String
local HMI controls
ModbusSV660
Local HMI Modbus
Recipe
MQTT
Alarm Management
Recipes(4/100)
Add Recipe
Recipe_1
Recipe_2
Recipe_3
Recipe_4
Elements
Data records

Number 4 Display name Recipe_4 ☑ Synchronize Tags ☑ Tags offline

	Name	Display name	Tag	Default value	Decimal	nformation tex
1	Element_1	Element_1	RW 0	0	0	
2	Element_2	Element_2	RW 1	0	0	
3	Element_3	Element_3	RW 2	0	0	
4	Element_4	Element_4	RW 2_1	0	0	
5	Element_5	Element_5	RW 3	0	0	

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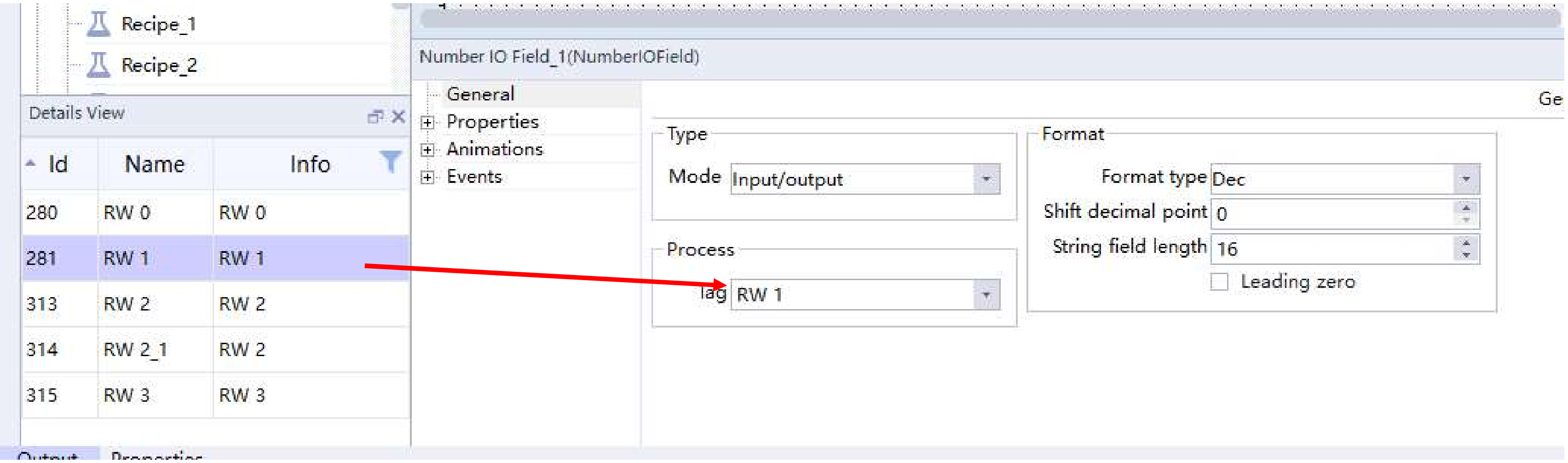
➢ Variable to Edit Box



Recipe_1
Recipe_2
Details View
Output
Properties
General
Properties
Animations
Events
Ge

Id	Name	Info
280	RW 0	RW 0
281	RW 1	RW 1
313	RW 2	RW 2
314	RW 2_1	RW 2
315	RW 3	RW 3

Number IO Field_1(NumberIOField)

Type
Mode Input/output

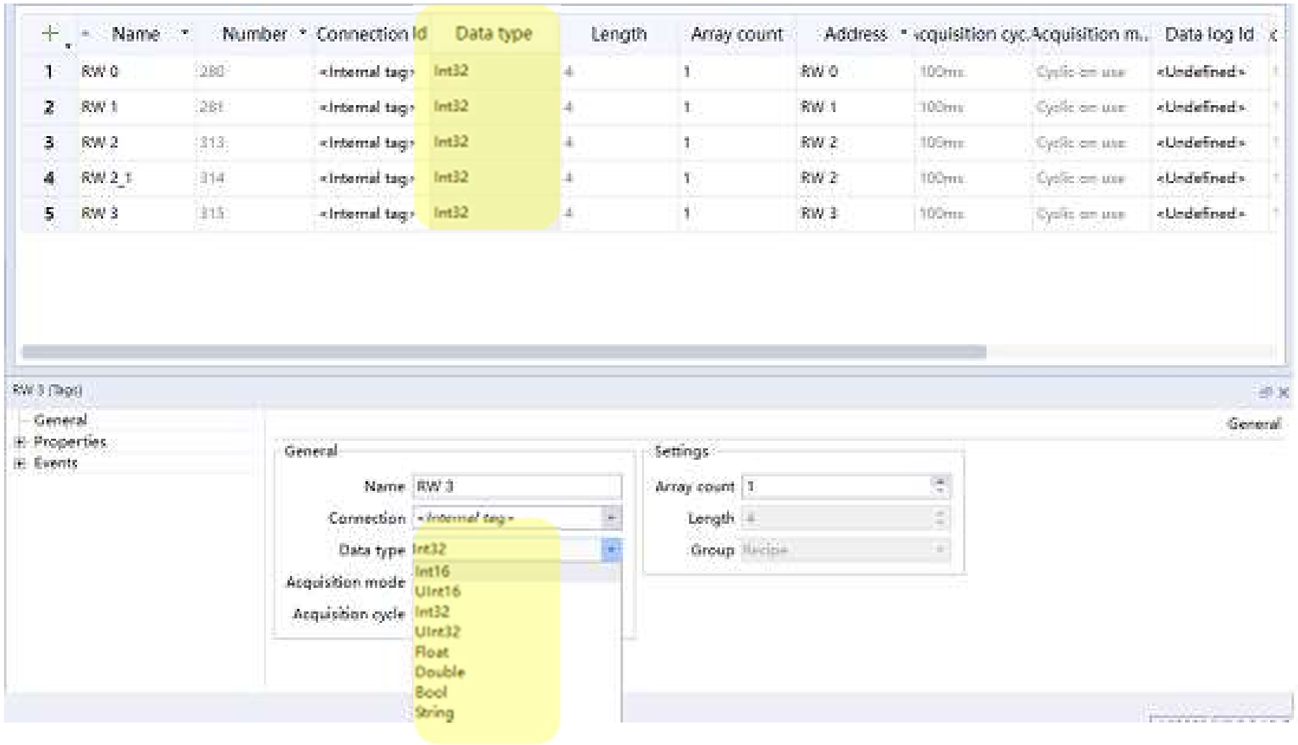
Process
Tag RW 1

Format
Format type Dec
Shift decimal point 0
String field length 16
☐ Leading zero

Batch Modification

➢ Table

Select multi rows in table, then modify in the property view.



	Name	Number	Connection Id	Data type	Length	Array count	Address	cquisition cyc.	Acquisition m..	Data log Id
1	RW 0	280	<Internal tag>	Int32	4	1	RW 0	100ms	Cyclic on use	<Undefined>
2	RW 1	281	<Internal tag>	Int32	4	1	RW 1	100ms	Cyclic on use	<Undefined>
3	RW 2	313	<Internal tag>	Int32	4	1	RW 2	100ms	Cyclic on use	<Undefined>
4	RW 2_1	314	<Internal tag>	Int32	4	1	RW 2	100ms	Cyclic on use	<Undefined>
5	RW 3	315	<Internal tag>	Int32	4	1	RW 3	100ms	Cyclic on use	<Undefined>

RW 3 (Tags)

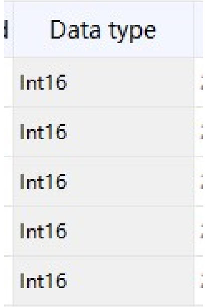
General

Name: RW 3
Connection: <Internal tag>
Data type: Int32

Settings

Array count: 1
Length: 4
Group: Recipe

General
Properties
Events
General
Acquisition mode
Acquisition cycle
Int16
UInt16
Int32
UInt32
Float
Double
Bool
String

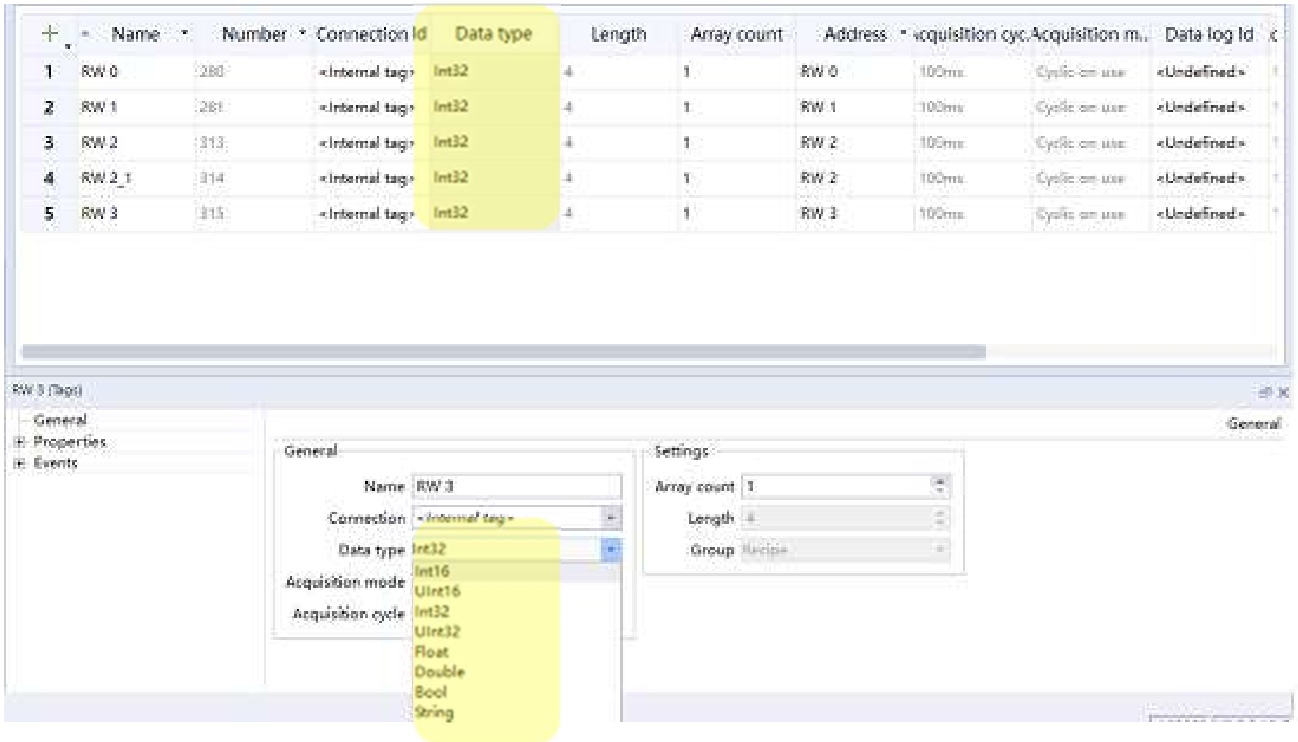


Data type
Int16
Int16
Int16
Int16
Int16

Batch Modification

➢ Controls

Select multi rows in table, then modify in the property view.



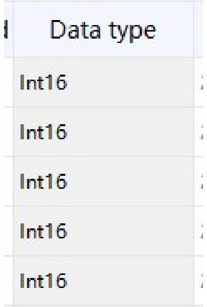
	Name	Number	Connection Id	Data type	Length	Array count	Address	cquisition cyc.	Acquisition m..	Data log Id
1	RW 0	280	<Internal tag>	Int32	4	1	RW 0	100ms	Cyclic on use	<Undefined>
2	RW 1	281	<Internal tag>	Int32	4	1	RW 1	100ms	Cyclic on use	<Undefined>
3	RW 2	313	<Internal tag>	Int32	4	1	RW 2	100ms	Cyclic on use	<Undefined>
4	RW 2_1	314	<Internal tag>	Int32	4	1	RW 2	100ms	Cyclic on use	<Undefined>
5	RW 3	315	<Internal tag>	Int32	4	1	RW 3	100ms	Cyclic on use	<Undefined>

RW 3 (Tags)

General
Name: RW 3
Connection: <Internal tag>
Data type: Int32
Acquisition mode
Acquisition cycle

Settings
Array count: 1
Length: 4
Group: Recipe

General
Properties
Events
General
Int16
UInt16
Int32
UInt32
Float
Double
Bool
String



Data type
Int16
Int16
Int16
Int16
Int16

IT7000 Functionality

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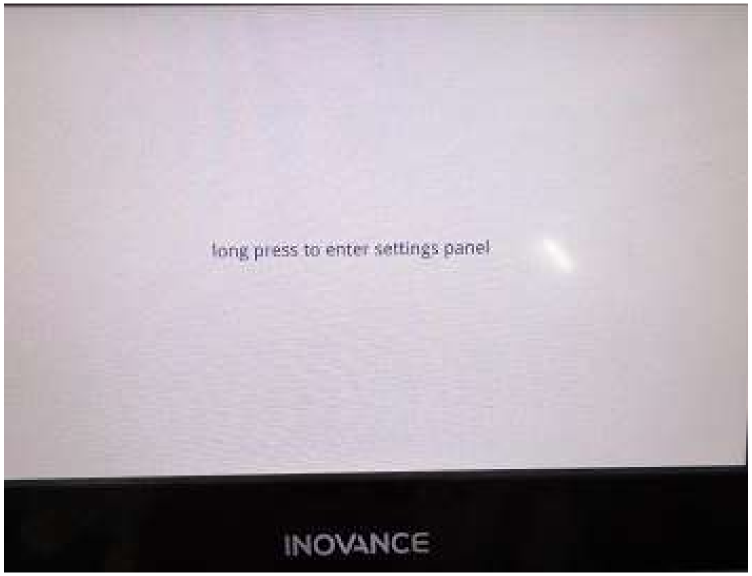
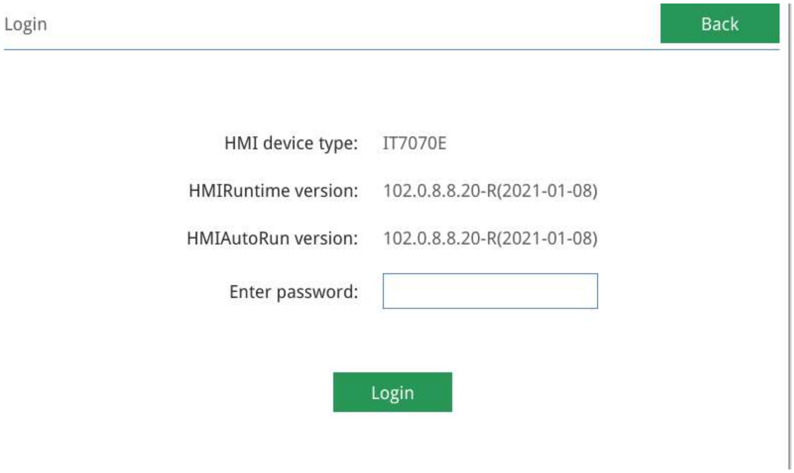
How to get into control panel?

Method 1: When the HMI power on, below view will appear for several seconds, if want to get into control panel please keep press the panel, then input the password(default password is: 111111).


long press to enter settings panel
INOVANCE


Login
Back
Login

HMI device type: IT7070E

HMIRuntime version: 102.0.8.8.20-R(2021-01-08)

HMIAutoRun version: 102.0.8.8.20-R(2021-01-08)

Enter password:

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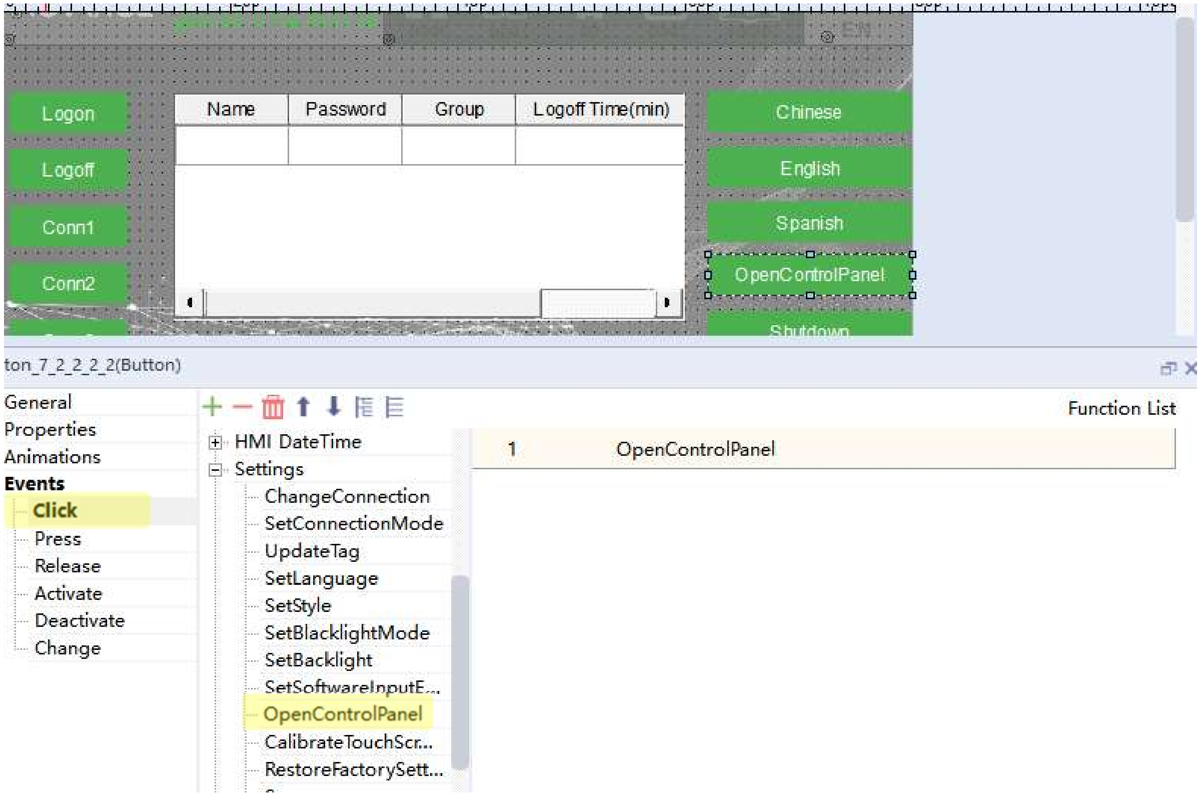
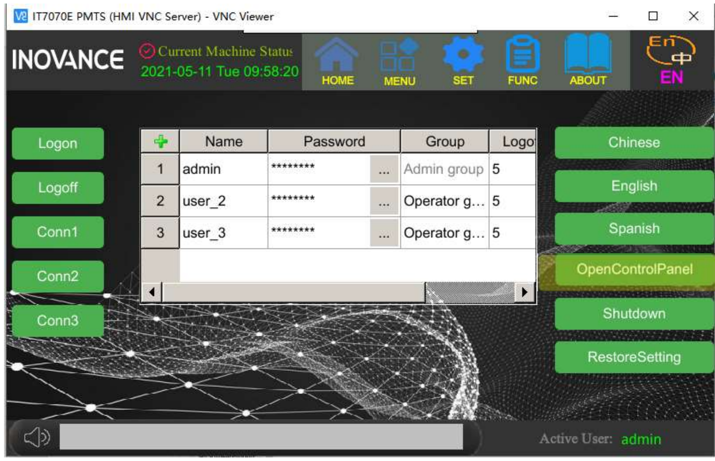
➢ How to get into control panel?

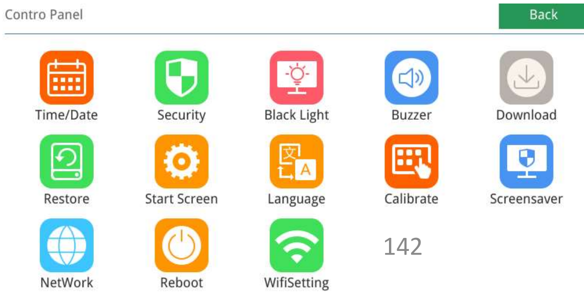
Method 2: Or using system function 'OpenControlPanel'. This way is recommended because users can get into control panel at any time they want (no need to power off-on the HMI).


Logon
Logoff
Conn1
Conn2
Name
Password
Group
Logoff Time(min)
Chinese
English
Spanish
OpenControlPanel
Shutdown
ton_7_2_2_2_2(Button)
General
Properties
Animations
Events
Click
Press
Release
Activate
Deactivate
Change
Function List
HMI DateTime
Settings
ChangeConnection
SetConnectionMode
UpdateTag
SetLanguage
SetStyle
SetBlacklightMode
SetBacklight
SetSoftwareInputE...
OpenControlPanel
CalibrateTouchScr...
RestoreFactorySett...

1 OpenControlPanel


IT7070E PMTS (HMI VNC Server) - VNC Viewer
INOVANCE
Current Machine Status
2021-05-11 Tue 09:58:20
HOME
MENU
SET
FUNC
ABOUT
EN
Logon
Logoff
Conn1
Conn2
Conn3
Chinese
English
Spanish
OpenControlPanel
Shutdown
RestoreSetting
Active User: admin

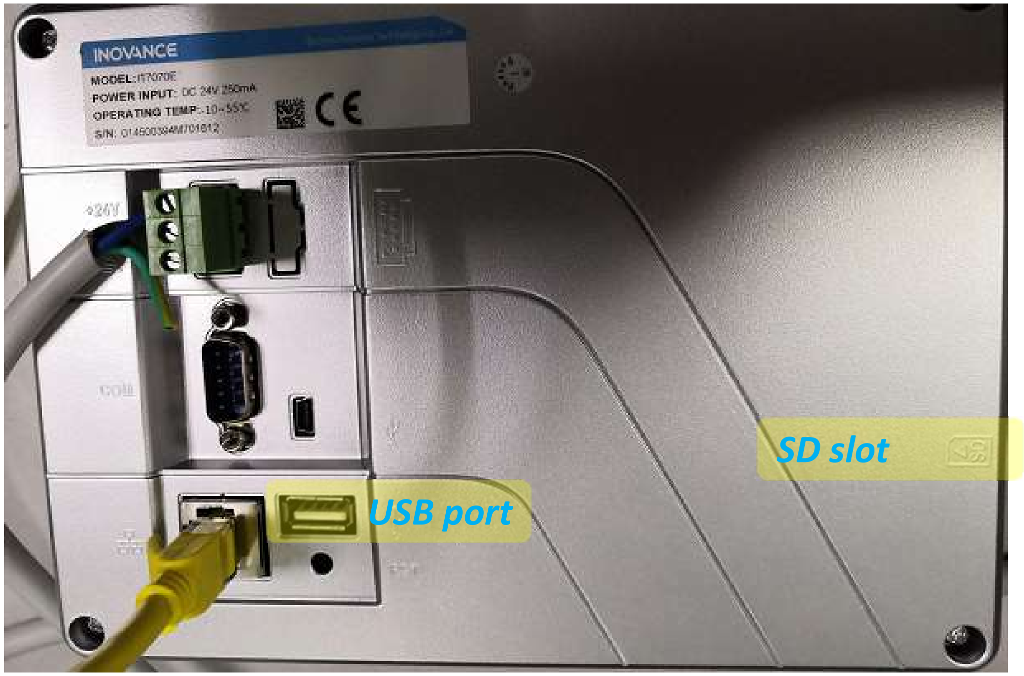
	Name	Password		Group	Logo
1	admin	********	...	Admin group	5
2	user_2	********	...	Operator g...	5
3	user_3	********	...	Operator g...	5


Contro Panel
Back
Time/Date
Security
Black Light
Buzzer
Download
Restore
Start Screen
Language
Calibrate
Screensaver
NetWork
Reboot
WifiSetting

Back to Contents

➢ How to import/export HMI data from/to external memory?

Step1: Insert USB disk or SD card to HMI hardware


SD slot
USB port

Import/Export

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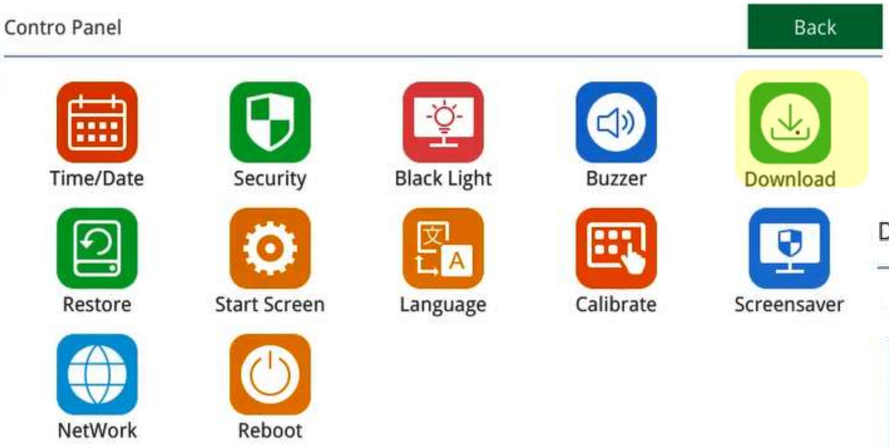
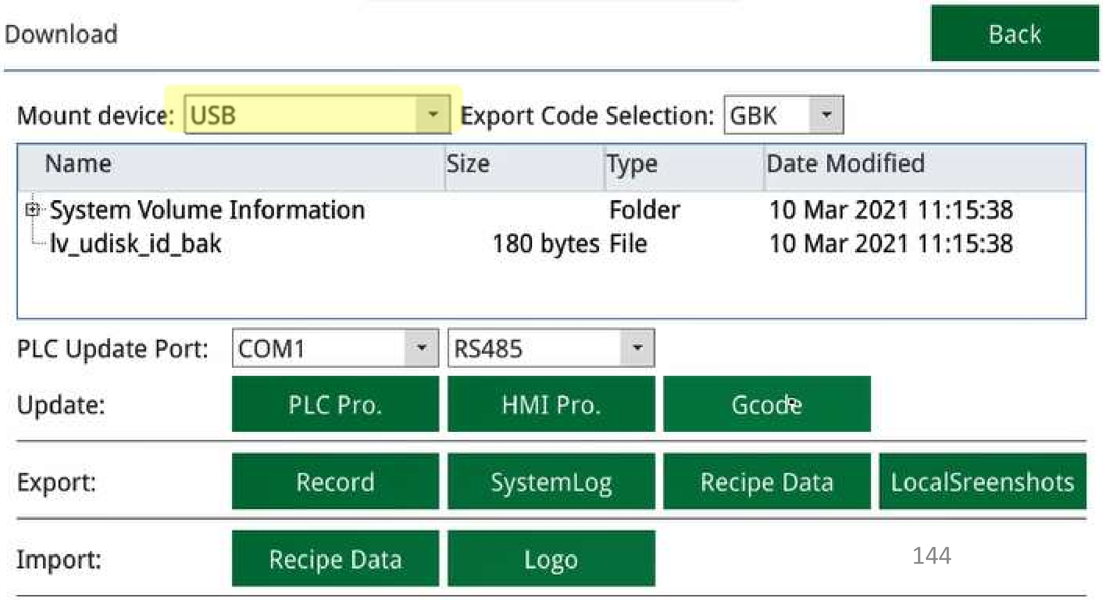
➢ How to import/export HMI data from/to external memory?

Step2: Get into control panel >> download


Contro Panel
Back
Time/Date
Security
Black Light
Buzzer
Download
Restore
Start Screen
Language
Calibrate
Screensaver
NetWork
Reboot


Mount device: USB

Export Code Selection: GBK

Name	Size	Type	Date Modified
System Volume Information		Folder	10 Mar 2021 11:15:38
lv_udisk_id_bak	180 bytes	File	10 Mar 2021 11:15:38

PLC Update Port: COM1 RS485

Download
Back
Update:
PLC Pro.
HMI Pro.
Gcode
Export:
Record
SystemLog
Recipe Data
LocalSreenshots
Import:
Recipe Data
Logo

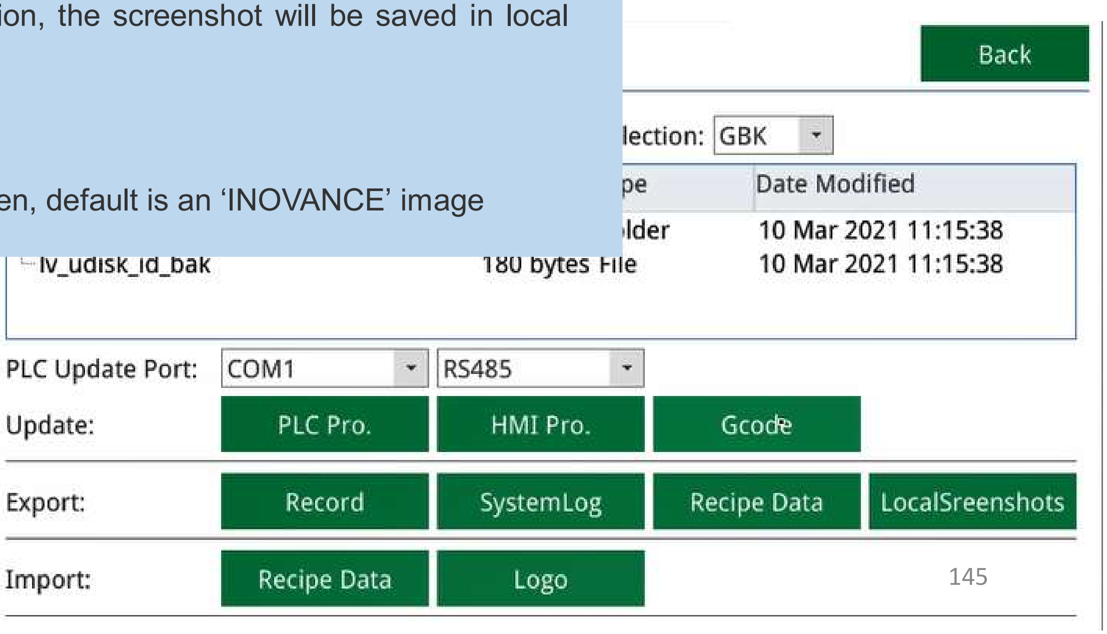
Back to Contents

➢ How to import/export HMI data from/to external memory?

Step3: select external memory path then execute export/import command.

Export:
Record: Datalog/Alarmlog/Operation record
System Log
Recipe Data
Local screenshots: if users configure ‘PrintScreen’ function, the screenshot will be saved in local HMI

Import:
Recipe Data
Logo: while the HMI power on, the image show in the screen, default is an ‘INOVANCE’ image



lection: GBK

	pe	Date Modified
	lder	10 Mar 2021 11:15:38
lv_udisk_id_bak	180 bytes File	10 Mar 2021 11:15:38

PLC Update Port: COM1 RS485

Back
Update:
PLC Pro.
HMI Pro.
Gcode
Export:
Record
SystemLog
Recipe Data
LocalSreenshots
Import:
Recipe Data
Logo

IT7000 & H5U simulation

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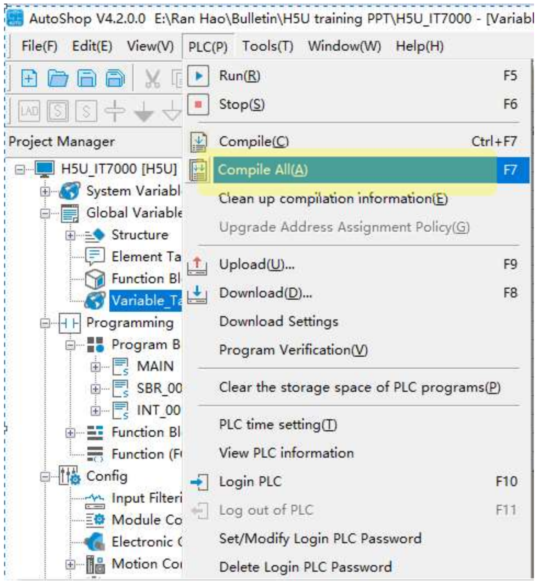
IT7000 support simulation with inovance H5U series PLC without hardware connection. This functionality will help users to improve project development/commissioning efficiency.

➢ H5U

Software: Autoshop V4.2.0.0: https://www.inovance.com/content/details86_19845.html
Step1: Create a new project and compile all without error.


AutoShop V4.2.0.0 E:\Ran Hao\Bulletin\H5U training PPT\H5U_IT7000 - [Variabl
File(F) Edit(E) View(V) PLC(P) Tools(T) Window(W) Help(H)
Project Manager
H5U_IT7000 [H5U]
System Variabl
Global Variable
Structure
Element Ta
Function Bl
Variable_Ta
Programming
Program B
MAIN
SBR_00
INT_00
Function Bl
Function (F
Config
Input Filteri
Module Co
Electronic
Motion Co
Run(R) F5
Stop(S) F6
Compile(C) Ctrl+F7
Compile All(A) F7
Clean up compilation information(E)
Upgrade Address Assignment Policy(G)
Upload(U)... F9
Download(D)... F8
Download Settings
Program Verification(V)
Clear the storage space of PLC programs(P)
PLC time setting(T)
View PLC information
Login PLC F10
Log out of PLC F11
Set/Modify Login PLC Password
Delete Login PLC Password

IT7000 & H5U simulation

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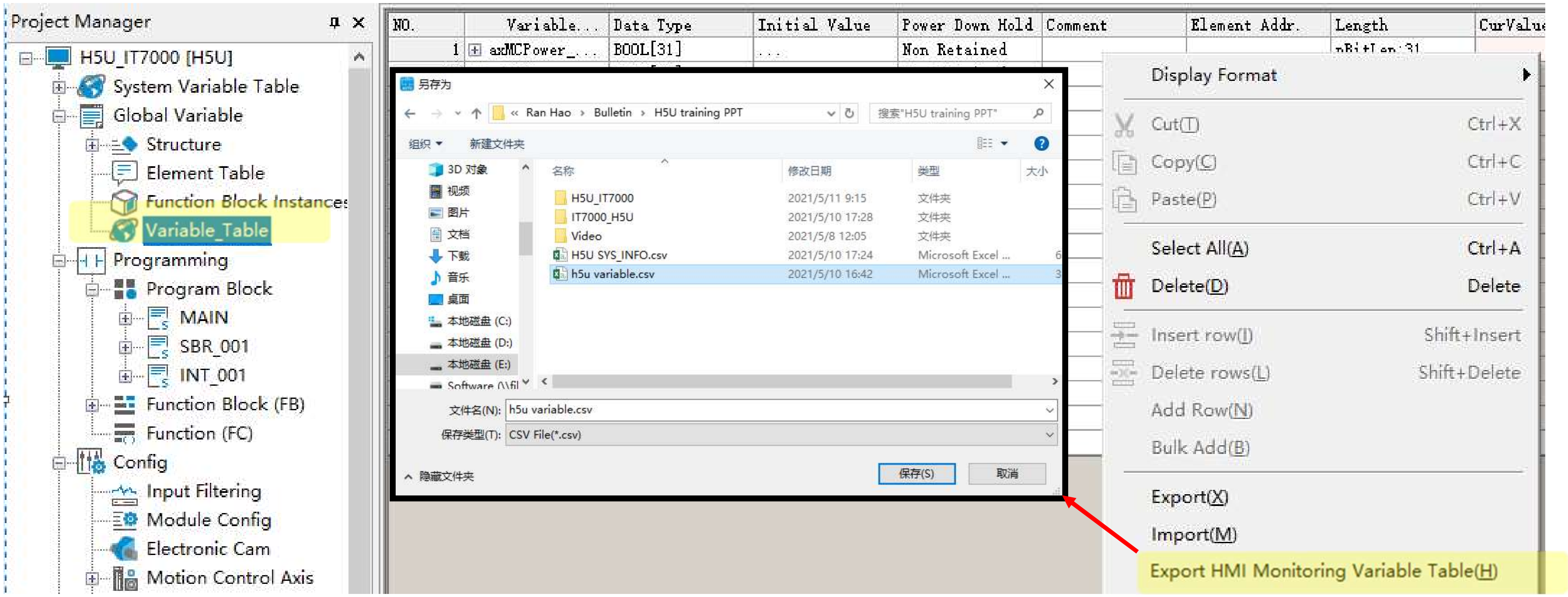
➢ H5U

Step2: Open the variable table and right click to export HMI variables. The export variable table should be .csv format.


Project Manager
H5U_IT7000 [H5U]
System Variable Table
Global Variable
Structure
Element Table
Function Block Instances
Variable_Table
Programming
Program Block
MAIN
SBR_001
INT_001
Function Block (FB)
Function (FC)
Config
Input Filtering
Module Config
Electronic Cam
Motion Control Axis
NO.
Variable...
Data Type
Initial Value
Power Down Hold
Comment
Element Addr.
Length
CurValue
1
axMCPower_...
BOOL[31]
...
Non Retained
另存为
Ran Hao › Bulletin › H5U training PPT
搜索"H5U training PPT"
组织
新建文件夹
3D 对象
视频
图片
文档
下载
音乐
桌面
本地磁盘 (C:)
本地磁盘 (D:)
本地磁盘 (E:)
Software (\\fil
名称
修改日期
类型
大小
H5U_IT7000
2021/5/11 9:15
文件夹
IT7000_H5U
2021/5/10 17:28
文件夹
Video
2021/5/8 12:05
文件夹
H5U SYS_INFO.csv
2021/5/10 17:24
Microsoft Excel ...
h5u variable.csv
2021/5/10 16:42
Microsoft Excel ...
隐藏文件夹
保存(S)
取消
Display Format
Cut(T) Ctrl+X
Copy(C) Ctrl+C
Paste(P) Ctrl+V
Select All(A) Ctrl+A
Delete(D) Delete
Insert row(I) Shift+Insert
Delete rows(L) Shift+Delete
Add Row(N)
Bulk Add(B)
Export(X)
Import(M)
Export HMI Monitoring Variable Table(H)

文件名(N): h5u variable.csv

保存类型(T): CSV File(*.csv)

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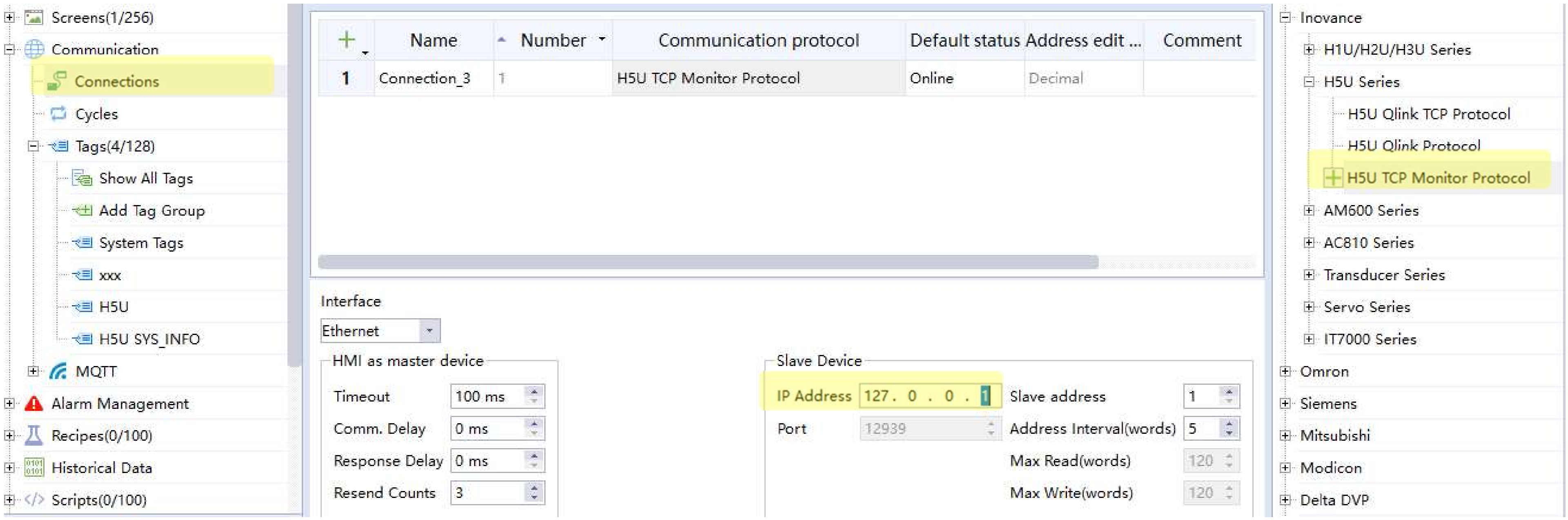
➢ IT7000

Step1: Add a new connection, select ‘H5U TCP Monitoring Protocol’ and set the slave device IP address as 127.0.0.1.


Screens(1/256)
Communication
Connections
Cycles
Tags(4/128)
Show All Tags
Add Tag Group
System Tags
xxx
H5U
H5U SYS_INFO
MQTT
Alarm Management
Recipes(0/100)
Historical Data
Scripts(0/100)
Inovance
H1U/H2U/H3U Series
H5U Series
H5U Qlink TCP Protocol
H5U Qlink Protocol
H5U TCP Monitor Protocol
AM600 Series
AC810 Series
Transducer Series
Servo Series
IT7000 Series
Omron
Siemens
Mitsubishi
Modicon
Delta DVP

	Name	Number	Communication protocol	Default status	Address edit ...	Comment
1	Connection_3	1	H5U TCP Monitor Protocol	Online	Decimal	

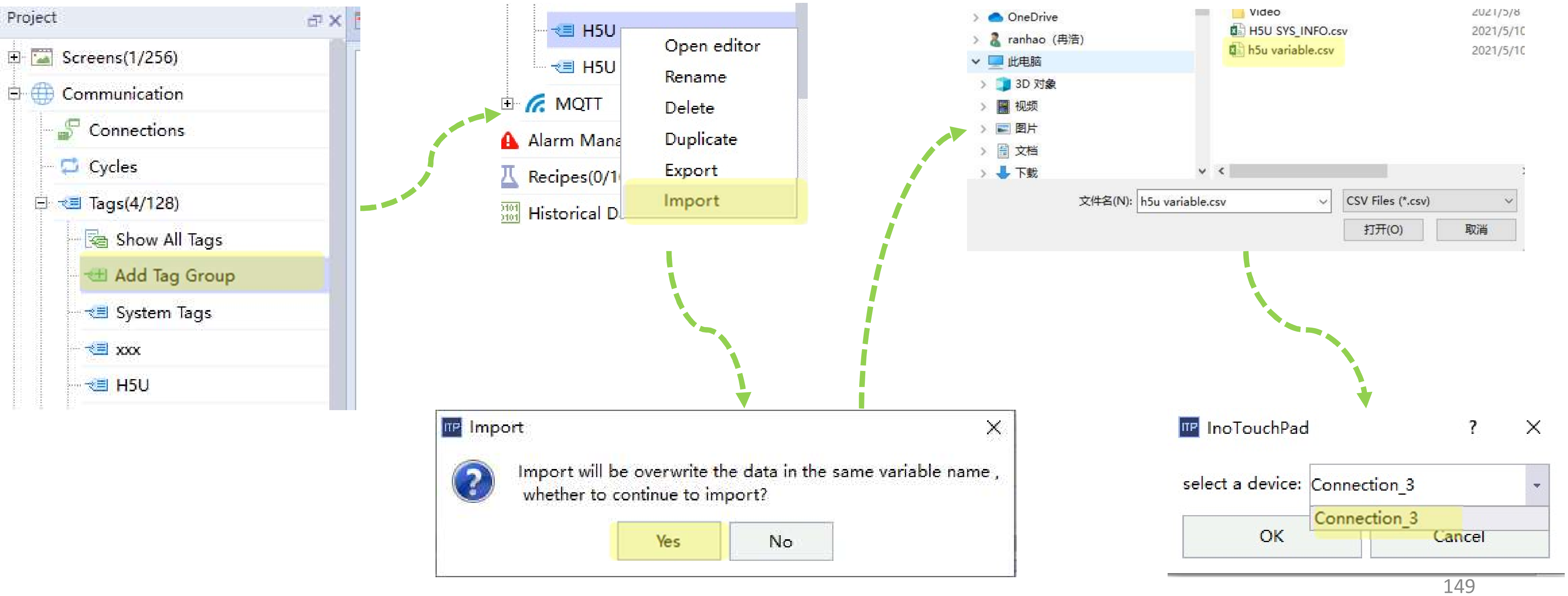
Interface: Ethernet

HMI as master device
Timeout: 100 ms
Comm. Delay: 0 ms
Response Delay: 0 ms
Resend Counts: 3

Slave Device
IP Address: 127. 0 . 0 . 1
Port: 12939
Slave address: 1
Address Interval(words): 5
Max Read(words): 120
Max Write(words): 120

➢ IT7000

Step2: Add a new tag group, select and right click to import variables.


Project
Screens(1/256)
Communication
Connections
Cycles
Tags(4/128)
Show All Tags
Add Tag Group
System Tags
xxx
H5U
H5U
H5U
MQTT
Alarm Mana
Recipes(0/1
Historical D
Open editor
Rename
Delete
Duplicate
Export
Import
OneDrive
ranhao（冉浩）
此电脑
3D 对象
视频
图片
文档
下载
Video
H5U SYS_INFO.csv
h5u variable.csv
2021/5/8
2021/5/10
2021/5/10
文件名(N):
CSV Files (*.csv)
打开(O)
取消
Import
Yes
No
InoTouchPad
?
Connection_3
OK
Cancel

文件名(N): h5u variable.csv

Import will be overwrite the data in the same variable name , whether to continue to import?

select a device: Connection_3

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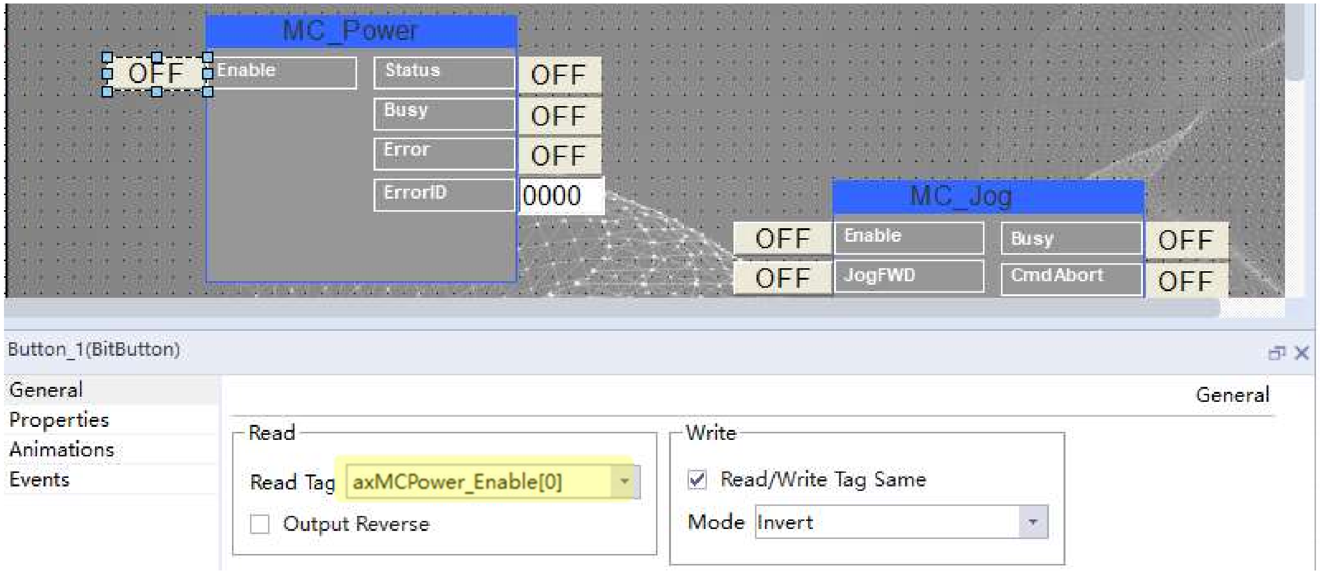
➢ IT7000

Step3: Configure/or map H5U variable to HMI controls


MC_Power
OFF
Enable
Status
Busy
Error
ErrorID
OFF
OFF
OFF
0000
MC_Jog
OFF
OFF
Enable
JogFWD
Busy
CmdAbort
OFF
OFF
General
Properties
Animations
Events
General
Read
Write

Button_1(BitButton)

Read Tag axMCPower_Enable[0]

☐ Output Reverse

☑ Read/Write Tag Same

Mode Invert

IT7000 & H5U simulation

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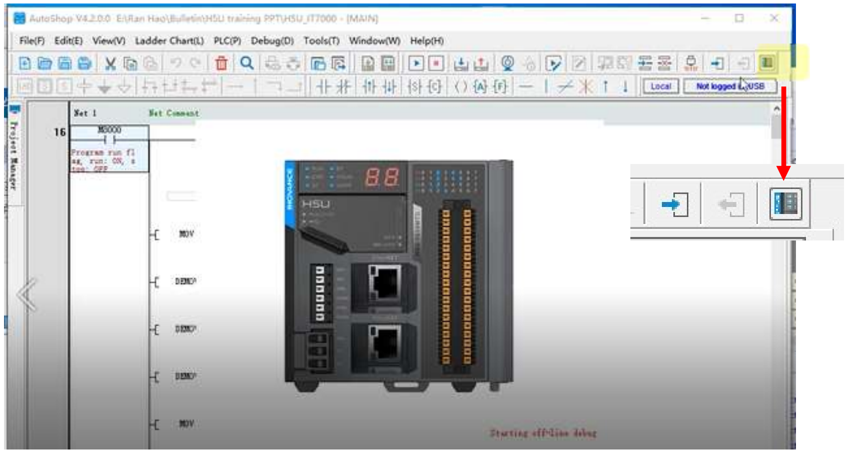
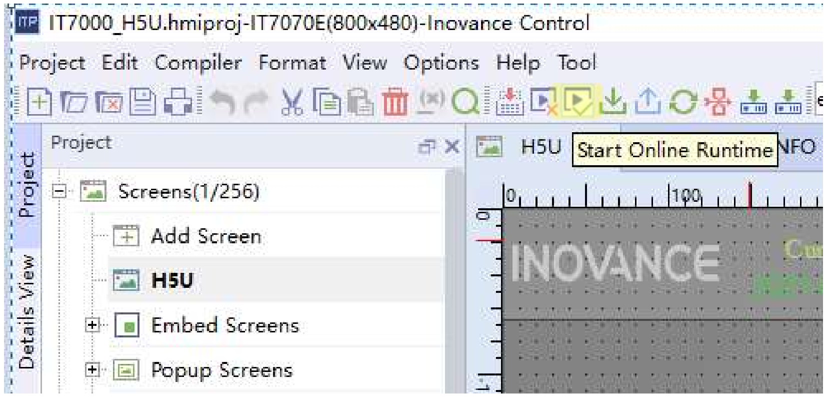
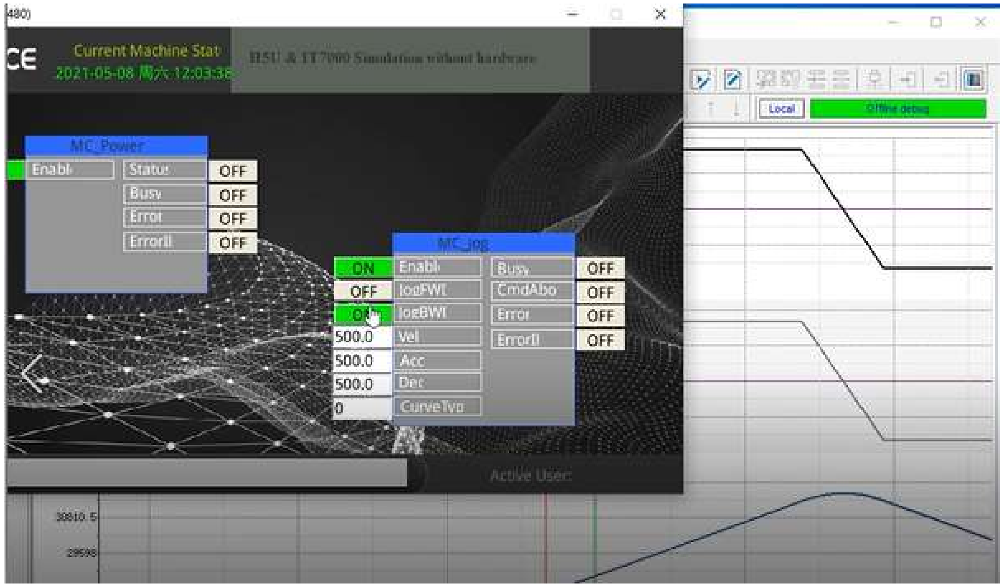
Start to simulation.


File(F) Edit(E) View(V) Ladder Chart(L) PLC(P) Debug(D) Tools(T) Window(W) Help(H)
Local
Not logged in USB
H5U
88
Starting off-line debug


IT7000_H5U.hmiproj-IT7070E(800x480)-Inovance Control
Project Edit Compiler Format View Options Help Tool
Project
H5U
Start Online Runtime
Screens(1/256)
Add Screen
H5U
Embed Screens
Popup Screens
Details View
INOVANCE

effect


Current Machine Stat
2021-05-08 周六 12:03:38
H5U & IT7000 Simulation without hardware
MC_Power
Enabl
Status OFF
Busy OFF
Error OFF
ErrorII OFF
MC_Jog
ON Enabl
OFF JogFWI
ON JogBWI
500.0 Vel
500.0 Acc
500.0 Dec
0 CurveTyp
Busy OFF
CmdAbo OFF
Error OFF
ErrorII OFF
Active User:
Local
Offline debug

IT7000 Instalment

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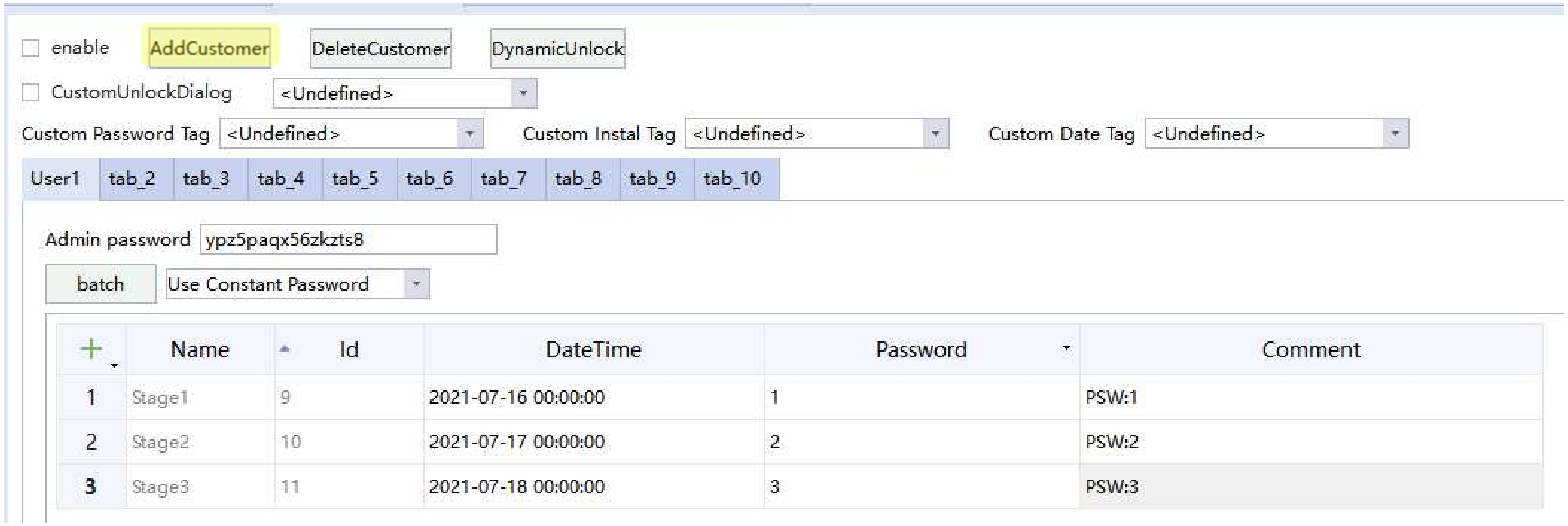
Sometimes the customers/users of OEM need to try the machine or they don’t want to pay all cost at once, to satisfy this kind of requirement, IT7000 provide instalment functionality to manager the authority to use the machine during different times.

The features of this functionality show as below:

- ❑ Support up to 10 customers in one project
- ❑ 3 modes for instalment: constant password/variable password/dynamic password
- ❑ Customized unlock view


☐ enable
AddCustomer
DeleteCustomer
DynamicUnlock
batch
User1
tab_2
tab_3
tab_4
tab_5
tab_6
tab_7
tab_8
tab_9
tab_10
+

☐ CustomUnlockDialog <Undefined>

Custom Password Tag <Undefined>

Custom Instal Tag <Undefined>

Custom Date Tag <Undefined>

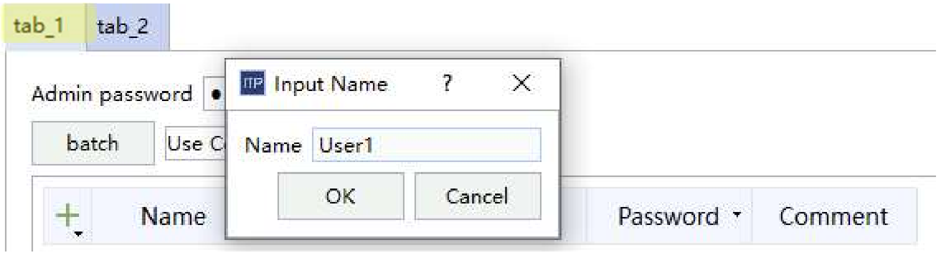
Admin password ypz5paqx56zkzts8

Use Constant Password

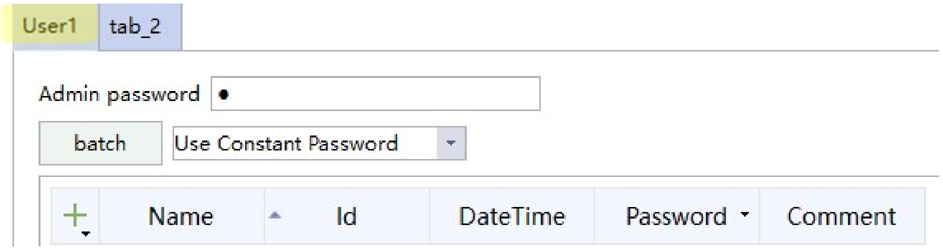
	Name	Id	DateTime	Password	Comment
1	Stage1	9	2021-07-16 00:00:00	1	PSW:1
2	Stage2	10	2021-07-17 00:00:00	2	PSW:2
3	Stage3	11	2021-07-18 00:00:00	3	PSW:3

➢ Constant Password

Constant password: while using constant password, the instalment password and time is certain value(s)
Step1> double click the tab* to modify customer name

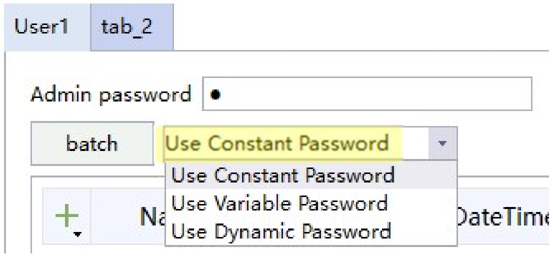

tab_1
tab_2
Admin password
batch
Use C
Input Name
?
OK
Cancel
Name
Password
Comment

Name: User1


User1
tab_2
Admin password
batch
Name
Id
DateTime
Password
Comment

Use Constant Password

Step2> select <Use Constant Password>

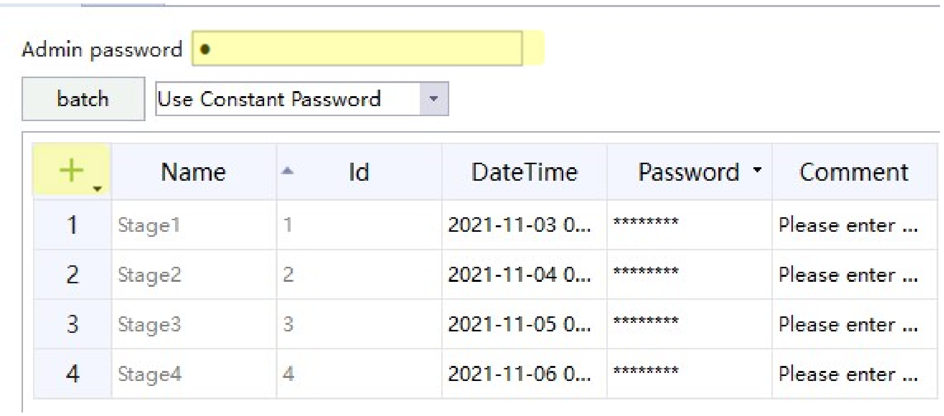

User1
tab_2
Admin password
batch
Use Constant Password
Use Variable Password
Use Dynamic Password
Na
DateTime

Use Constant Password

Back to Contents

➢ Constant Password

Step3> Create new instalment stage information by click <+> icon. Users can set the <Admin password> in this page. At the same time, for each stage, the <DataTime> and <Password> can be set separately.



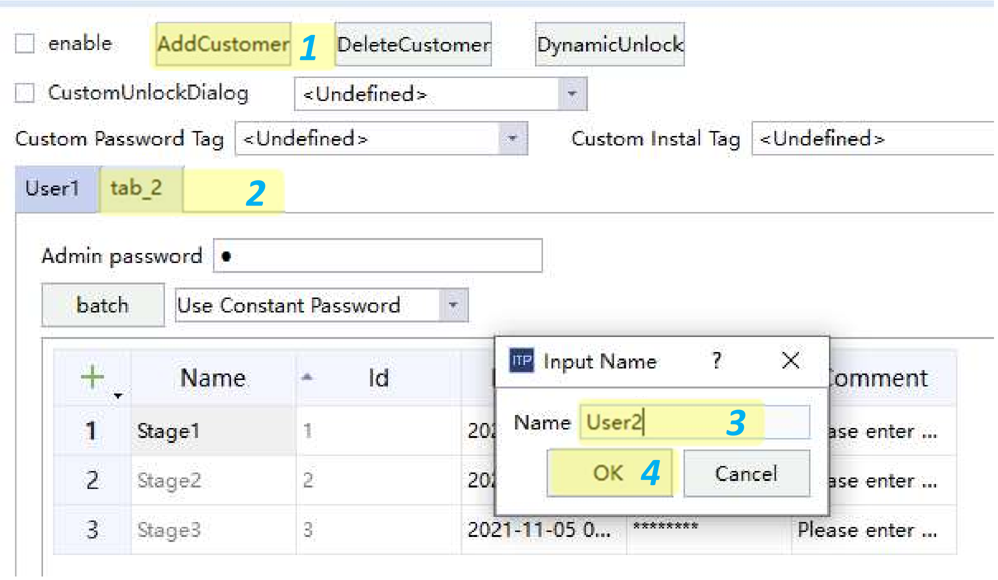
Admin password ●

Use Constant Password

+	Name	Id	DateTime	Password	Comment
1	Stage1	1	2021-11-03 0...	********	Please enter ...
2	Stage2	2	2021-11-04 0...	********	Please enter ...
3	Stage3	3	2021-11-05 0...	********	Please enter ...
4	Stage4	4	2021-11-06 0...	********	Please enter ...

➢ Variable Password

Variable password: The date time and password can be set as variable
Step1> double click the tab* to add a new user, and select the <Use Variable Password>


☐ enable
AddCustomer
1
DeleteCustomer
DynamicUnlock
☐ CustomUnlockDialog
User1
tab_2
2
batch
Input Name
?
×
3
OK
4
Cancel

<Undefined>

Custom Password Tag <Undefined>

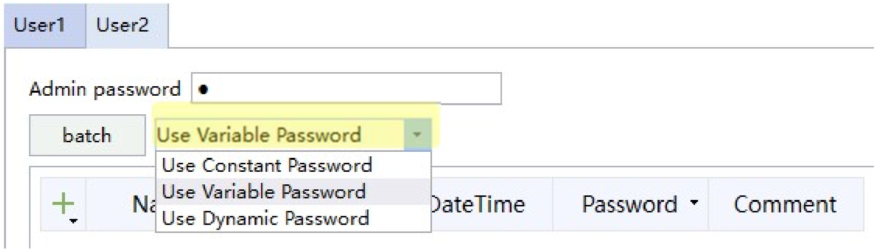
Custom Instal Tag <Undefined>

Admin password •

Use Constant Password

Name User2

	Name	Id			Comment
1	Stage1	1	202		ase enter ...
2	Stage2	2	202		ase enter ...
3	Stage3	3	2021-11-05 0...	********	Please enter ...


User1
User2
batch
Use Constant Password
Use Variable Password
Use Dynamic Password
+
Na
DateTime
Password
Comment

Admin password •

Use Variable Password

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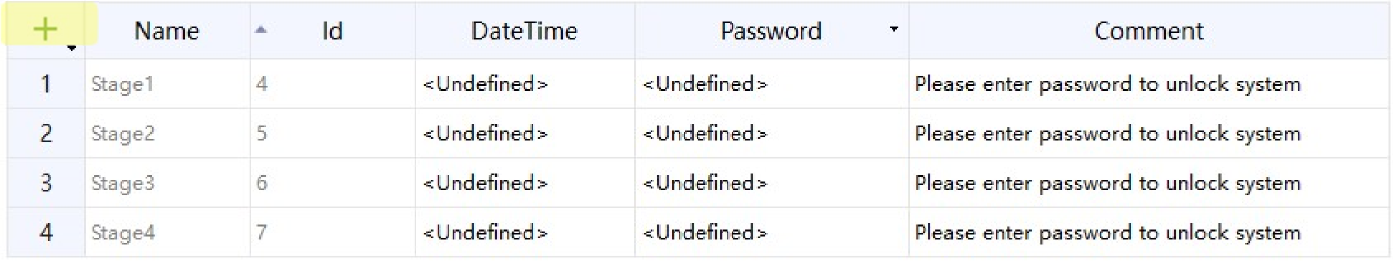
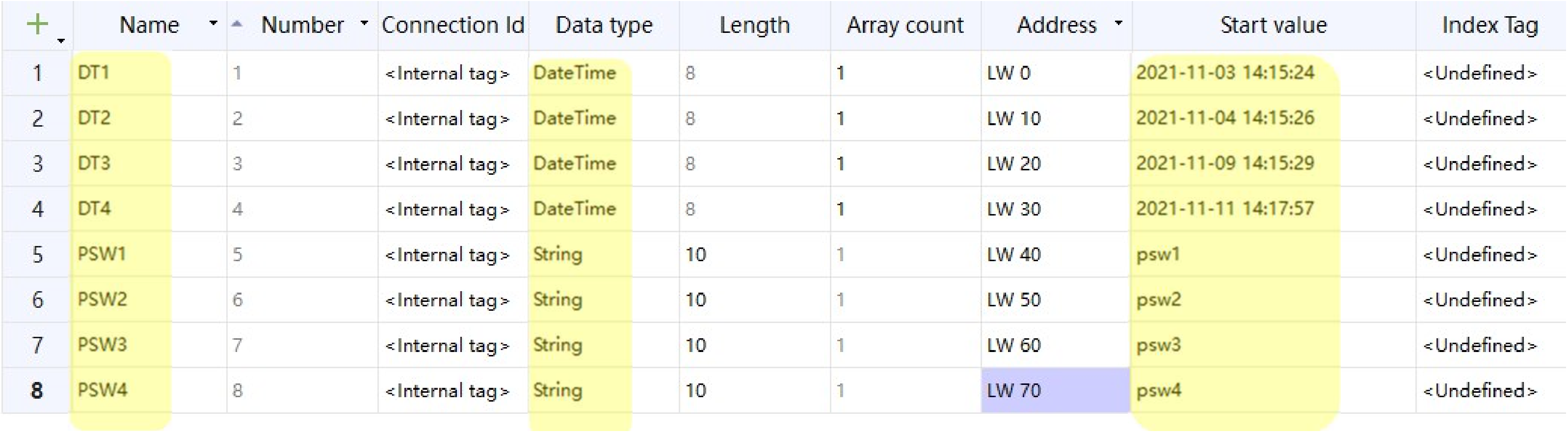
➢ Variable Password

Step2> Add instalment stage



	Name	Id	DateTime	Password	Comment
1	Stage1	4	<Undefined>	<Undefined>	Please enter password to unlock system
2	Stage2	5	<Undefined>	<Undefined>	Please enter password to unlock system
3	Stage3	6	<Undefined>	<Undefined>	Please enter password to unlock system
4	Stage4	7	<Undefined>	<Undefined>	Please enter password to unlock system

Step3> Create variable in tag group and set the initial value for these variables.



	Name	Number	Connection Id	Data type	Length	Array count	Address	Start value	Index Tag
1	DT1	1	<Internal tag>	DateTime	8	1	LW 0	2021-11-03 14:15:24	<Undefined>
2	DT2	2	<Internal tag>	DateTime	8	1	LW 10	2021-11-04 14:15:26	<Undefined>
3	DT3	3	<Internal tag>	DateTime	8	1	LW 20	2021-11-09 14:15:29	<Undefined>
4	DT4	4	<Internal tag>	DateTime	8	1	LW 30	2021-11-11 14:17:57	<Undefined>
5	PSW1	5	<Internal tag>	String	10	1	LW 40	psw1	<Undefined>
6	PSW2	6	<Internal tag>	String	10	1	LW 50	psw2	<Undefined>
7	PSW3	7	<Internal tag>	String	10	1	LW 60	psw3	<Undefined>
8	PSW4	8	<Internal tag>	String	10	1	LW 70	psw4	<Undefined>

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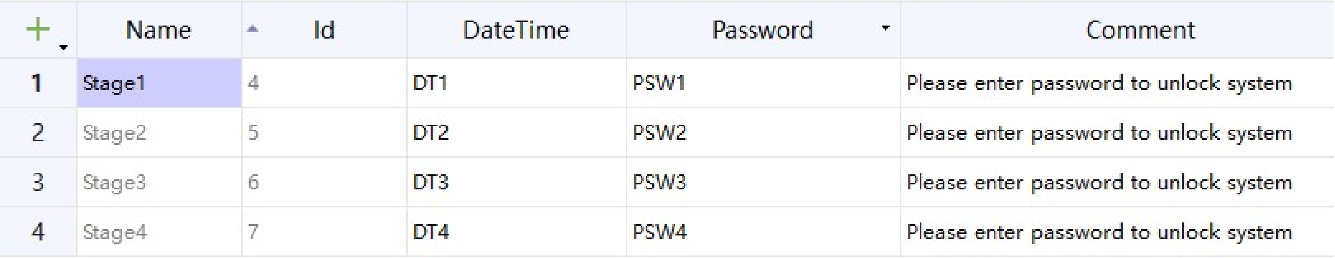
➢ Variable Password

Step4> Map these variables to <DateTime> and <Password>



+	Name	Id	DateTime	Password	Comment
1	Stage1	4	DT1	PSW1	Please enter password to unlock system
2	Stage2	5	DT2	PSW2	Please enter password to unlock system
3	Stage3	6	DT3	PSW3	Please enter password to unlock system
4	Stage4	7	DT4	PSW4	Please enter password to unlock system

Take note:
The difference between variable password and constant password is:
While using constant password, the stage time and password cannot be modified and once the stage passed, it cannot be enabled again. But while using variable password, even though one stage is passed, users can modify the date time and password (have to modify password, or the stage will not work!) to reuse this stage. For example, in a 4 stages instalment project, the first stage original date value is 2021/10/01, but users want to reuse the stage in 2021/10/08, then they can modify the corresponding variable for data time and password to re-enabled the first stage. However, if all stages passed(which means all instalments unlocked), this operation will not work, and the instalment cannot be re-enabled.

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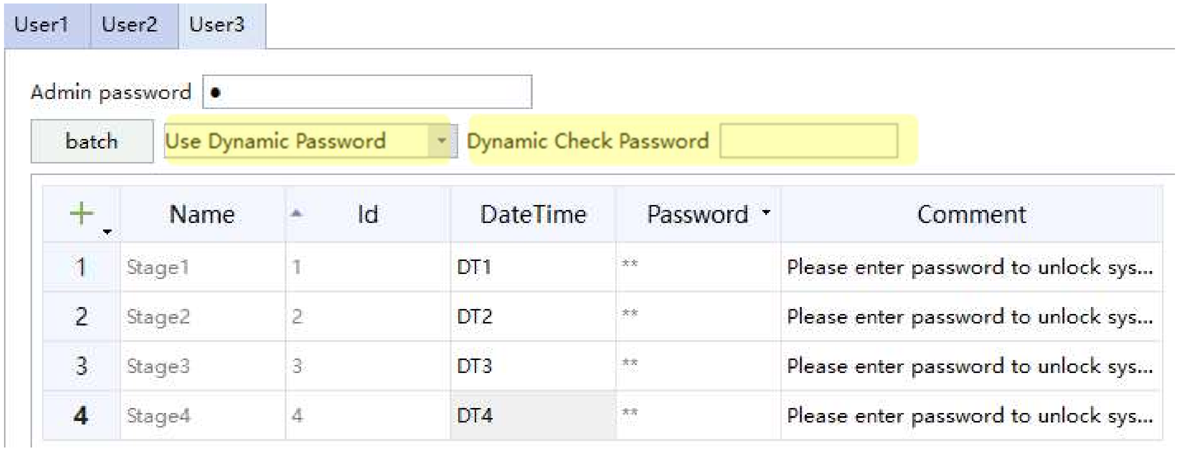
➢ Dynamic Password

Dynamic password: similar with variable password, but only need to configure the data time
The configuration steps please refer to variable password.
Take note: the <Dynamic Check Password> used to generate the dynamic password



Admin password ●

Use Dynamic Password

Dynamic Check Password

+	Name	Id	DateTime	Password	Comment
1	Stage1	1	DT1	**	Please enter password to unlock sys...
2	Stage2	2	DT2	**	Please enter password to unlock sys...
3	Stage3	3	DT3	**	Please enter password to unlock sys...
4	Stage4	4	DT4	**	Please enter password to unlock sys...

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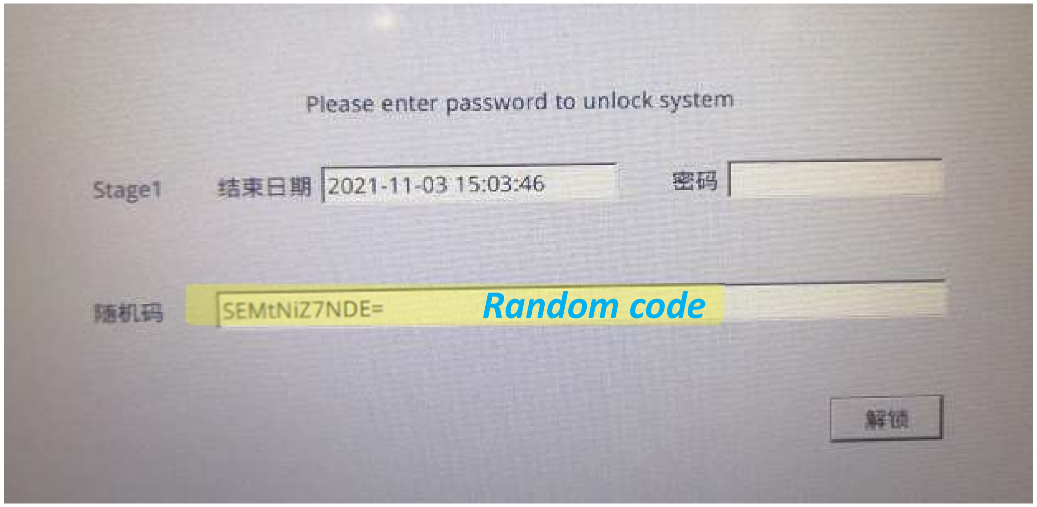
➢ Dynamic Password

While the HMI up to instalment stage, below screen will show in HMI and generate the random code:



Please enter password to unlock system

Stage1 结束日期 2021-11-03 15:03:46 密码

随机码 SEMtNiZ7NDE=

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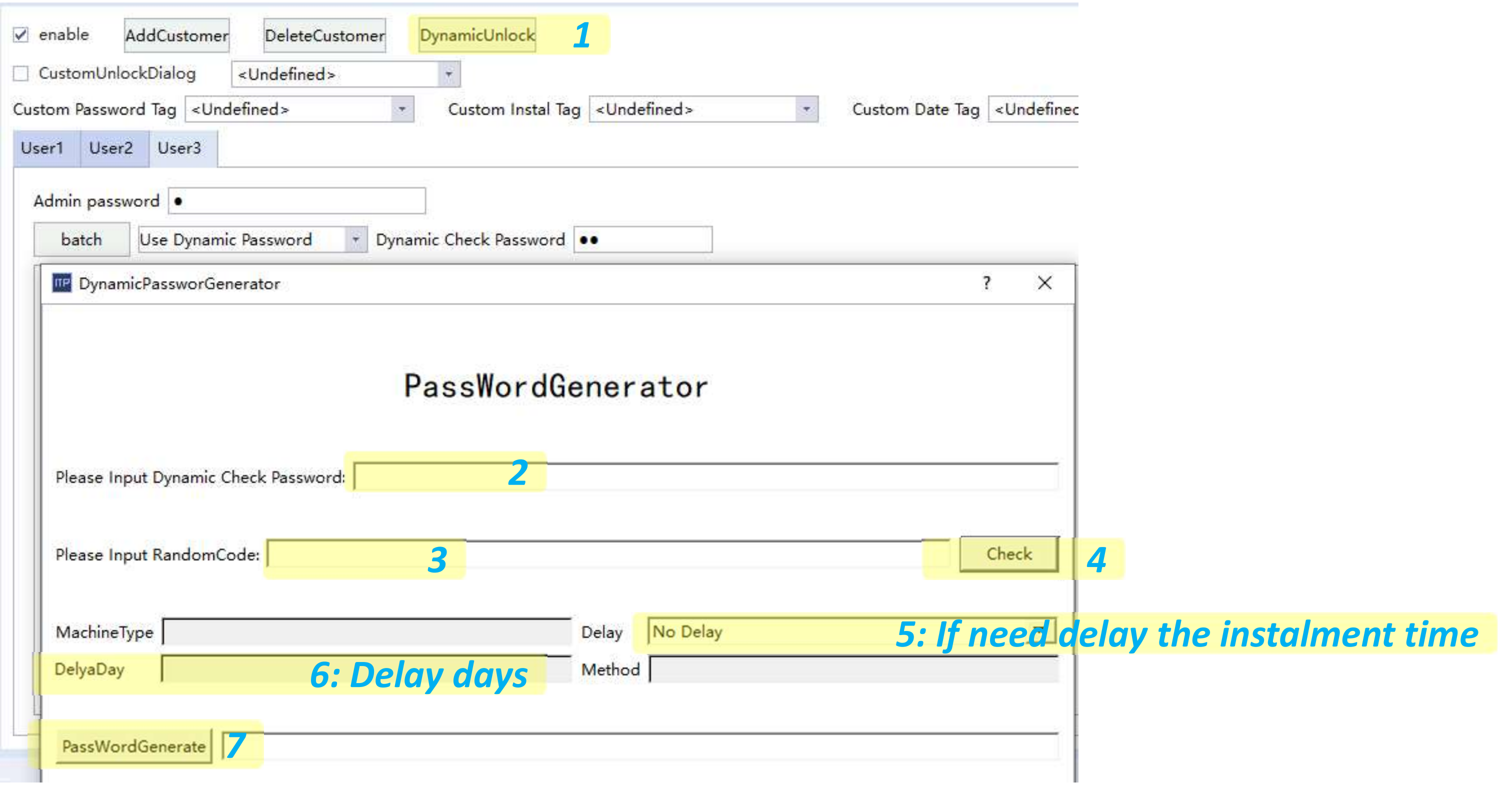
Dynamic Password

Click <DynamicUnlock>, then a <DynamicPasswordGenerator> tool will pop up. Enter the <Dynamic Check Password> and <RandomCode>


AddCustomer
DeleteCustomer
DynamicUnlock
User1
User2
User3
batch
DynamicPassworGenerator
?
X
PassWordGenerator
Please Input Dynamic Check Password:
Please Input RandomCode:
Check
MachineType
DelyaDay
Method
PassWordGenerate

☑ enable

☐ CustomUnlockDialog <Undefined>

Custom Password Tag <Undefined>

Custom Instal Tag <Undefined>

Custom Date Tag <Undefinec

Admin password ●

Use Dynamic Password

Dynamic Check Password ●●

Delay No Delay

1

2

3

4

5: If need delay the instalment time

6: Delay days

7

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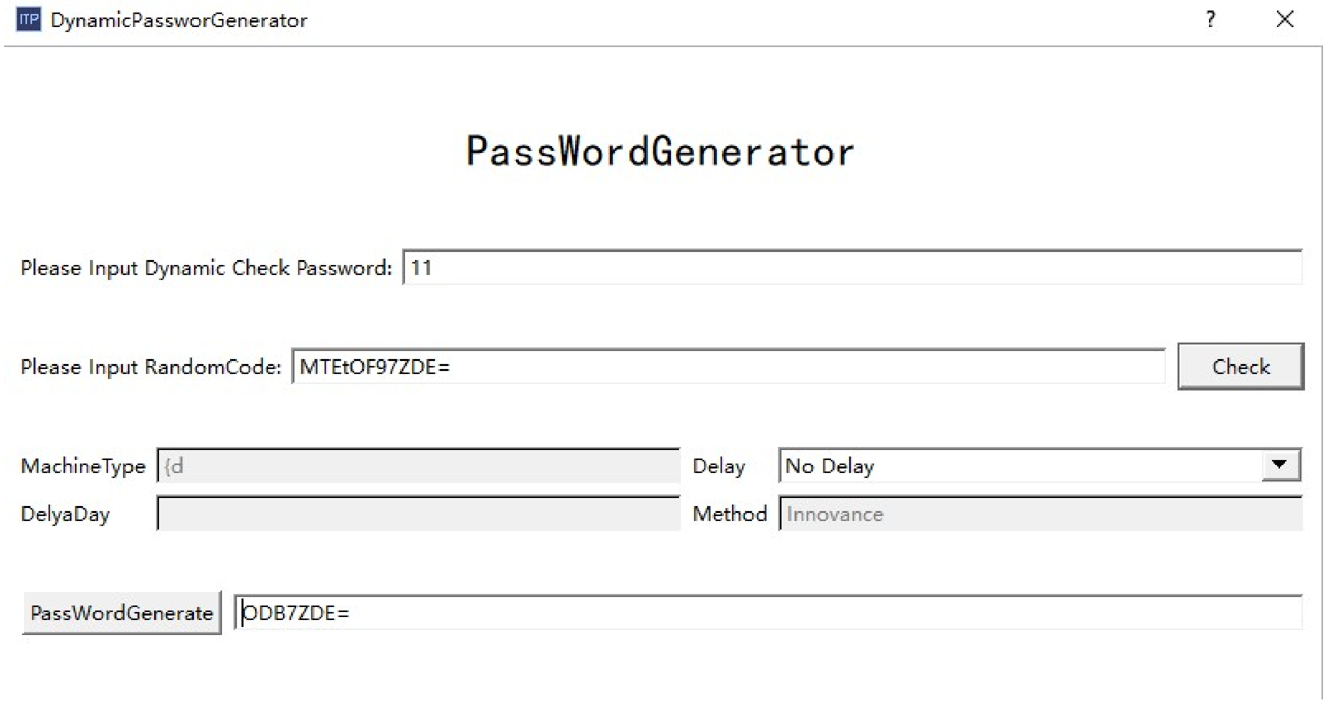
➢ Dynamic Password

Using the generator tool to generate a password, enter it in HMI to unlock(or delay) current instalment stage


DynamicPassworGenerator
?
PassWordGenerator
Check
PassWordGenerate

Please Input Dynamic Check Password: 11

Please Input RandomCode: MTEtOF97ZDE=

MachineType: {d

Delay: No Delay

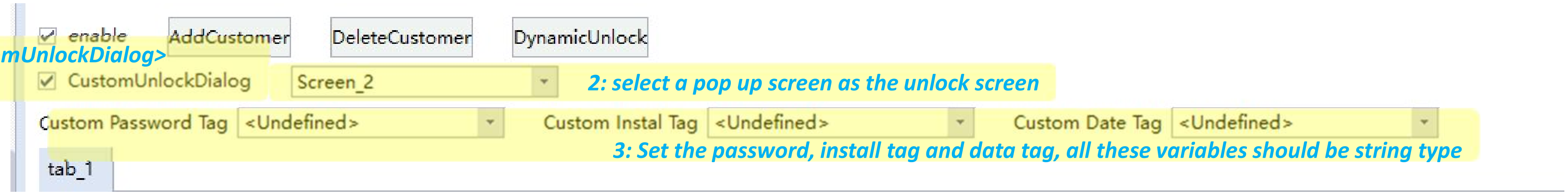
DelyaDay:

Method: Innovance

PassWordGenerate: ODB7ZDE=

Customized Unlock Dialog

IT7000 support users to customize the unlock view while instalment stage up to preset time.


enable
AddCustomer
DeleteCustomer
DynamicUnlock
tab_1

☑ enable

☑ CustomUnlockDialog Screen_2

Custom Password Tag <Undefined>

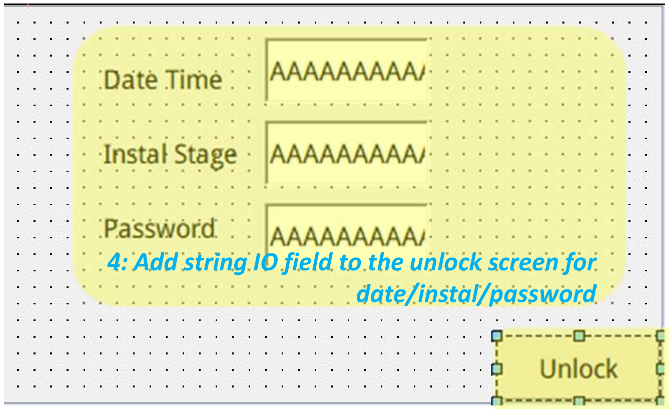
Custom Instal Tag <Undefined>

Custom Date Tag <Undefined>

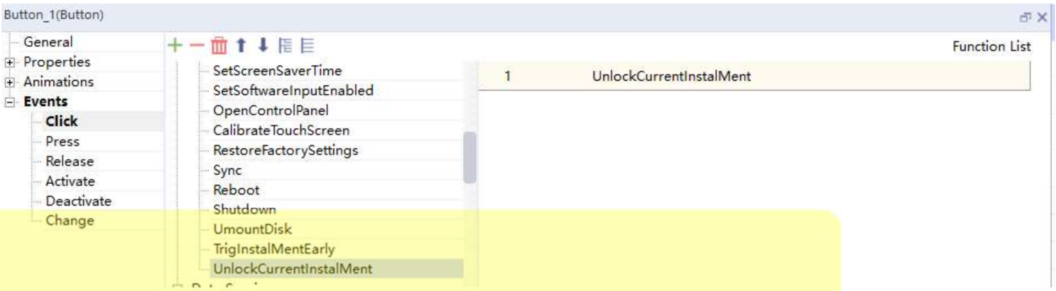
1: Select <CustomUnlockDialog>

2: select a pop up screen as the unlock screen

3: Set the password, install tag and data tag, all these variables should be string type


Date Time
AAAAAAAAA/
Instal Stage
AAAAAAAAA/
Password
AAAAAAAAA/
Unlock

4: Add string IO field to the unlock screen for date/instal/password

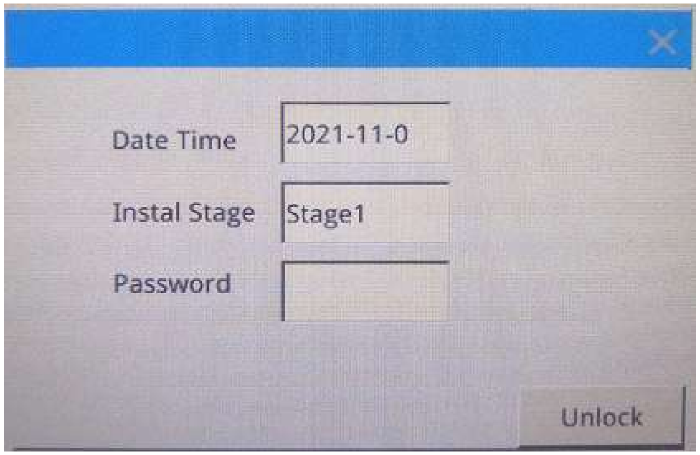

Button_1(Button)
General
Properties
Animations
Events
Click
Press
Release
Activate
Deactivate
Change
SetScreenSaverTime
SetSoftwareInputEnabled
OpenControlPanel
CalibrateTouchScreen
RestoreFactorySettings
Sync
Reboot
Shutdown
UmountDisk
TrigInstalMentEarly
UnlockCurrentInstalMent
Function List

Function List
1 UnlockCurrentInstalMent

5: add a button, and map the event <UnlockCurrentInstalment> to the button event

➢ Customized Unlock Dialog

The effect of customized unlock dialog show as below.
Take note, customized unlock dialog is not available for dynamic password mode.



Date Time: 2021-11-0

Instal Stage: Stage1

Password:

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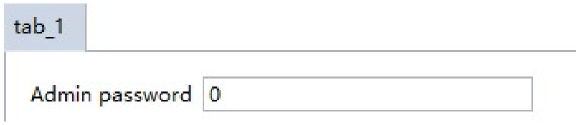
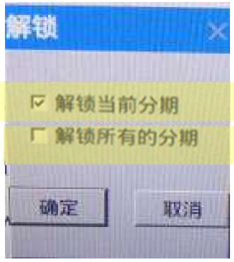
Admin Password

Admin password have the highest authority, users can enter the admin password to unlock current instalment or unlock all instalment.



tab_1

Admin password: 0



解锁

☑ 解锁当前分期

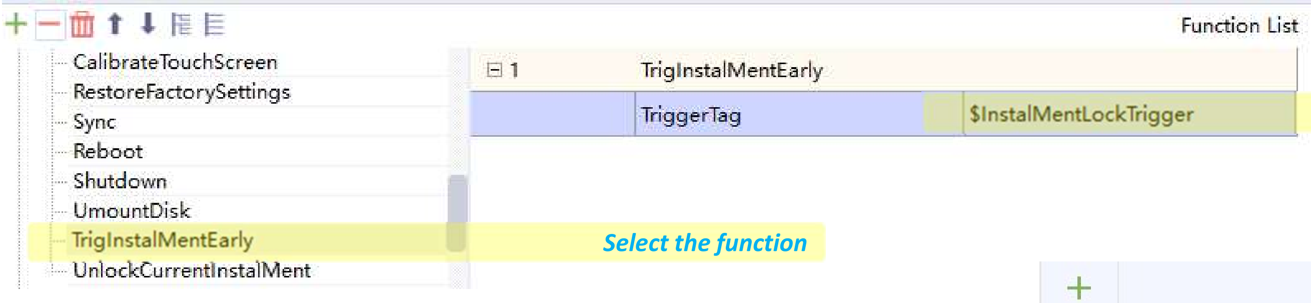
☐ 解锁所有的分期

Unlock current instalment

Unlock all instalments

➢ Trigger instalment in advance

Control event bind to system function <TrigInstalmentEarly> to trigger the instalment in advance, select system variable <$InstalMentLockTrigger> as the trigger tag. While corresponding control event triggered, the next instalment will be triggered in advance.



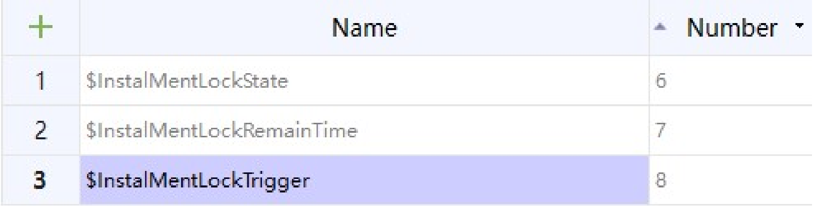
- CalibrateTouchScreen
- RestoreFactorySettings
- Sync
- Reboot
- Shutdown
- UmountDisk
- TrigInstalMentEarly
- UnlockCurrentInstalMent

Function List

⊟ 1	TrigInstalMentEarly	
	TriggerTag	$InstalMentLockTrigger

Select the function

Select system variable



+	Name	Number
1	$InstalMentLockState	6
2	$InstalMentLockRemainTime	7
3	$InstalMentLockTrigger	8

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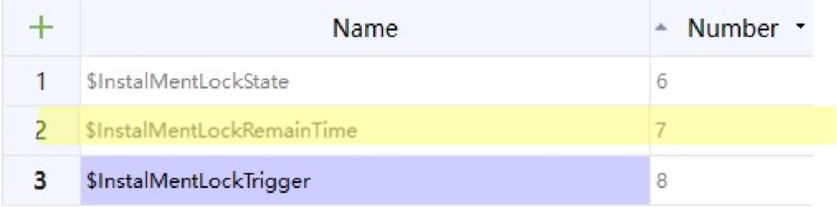
Remaining time to next instalment stage

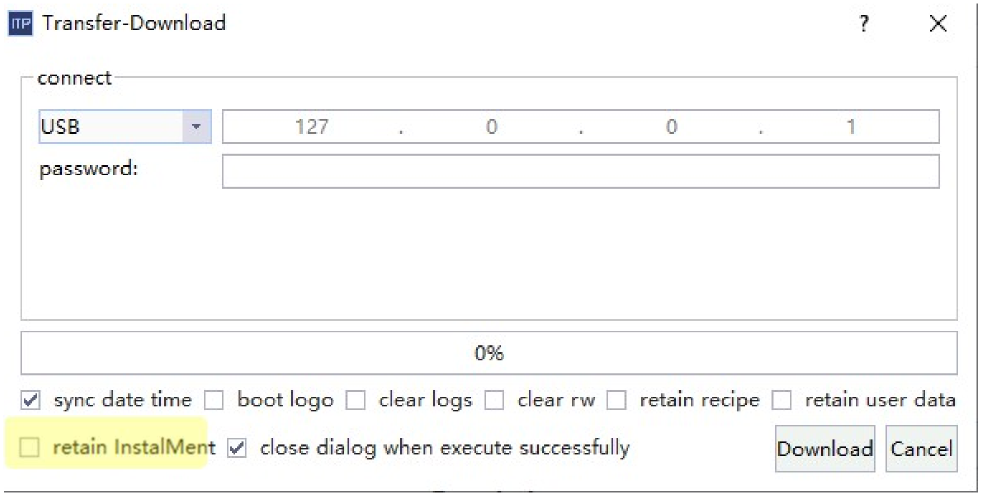
System variable <$InstalMentLockRemainTime> used to show the remaining time to next instalment stage, the unit is minute.



+	Name	Number
1	$InstalMentLockState	6
2	$InstalMentLockRemainTime	7
3	$InstalMentLockTrigger	8

Retain Instalment

While download the project, select <Retain InstalMent> to retain the instalment information, which means the unlocked instalment will not be triggered again even though users download the new project into the HMI. If this option unchecked, all instalment information will be updated.



Transfer-Download

connect: USB, 127 . 0 . 0 . 1

password:

0%

☑ sync date time ☐ boot logo ☐ clear logs ☐ clear rw ☐ retain recipe ☐ retain user data

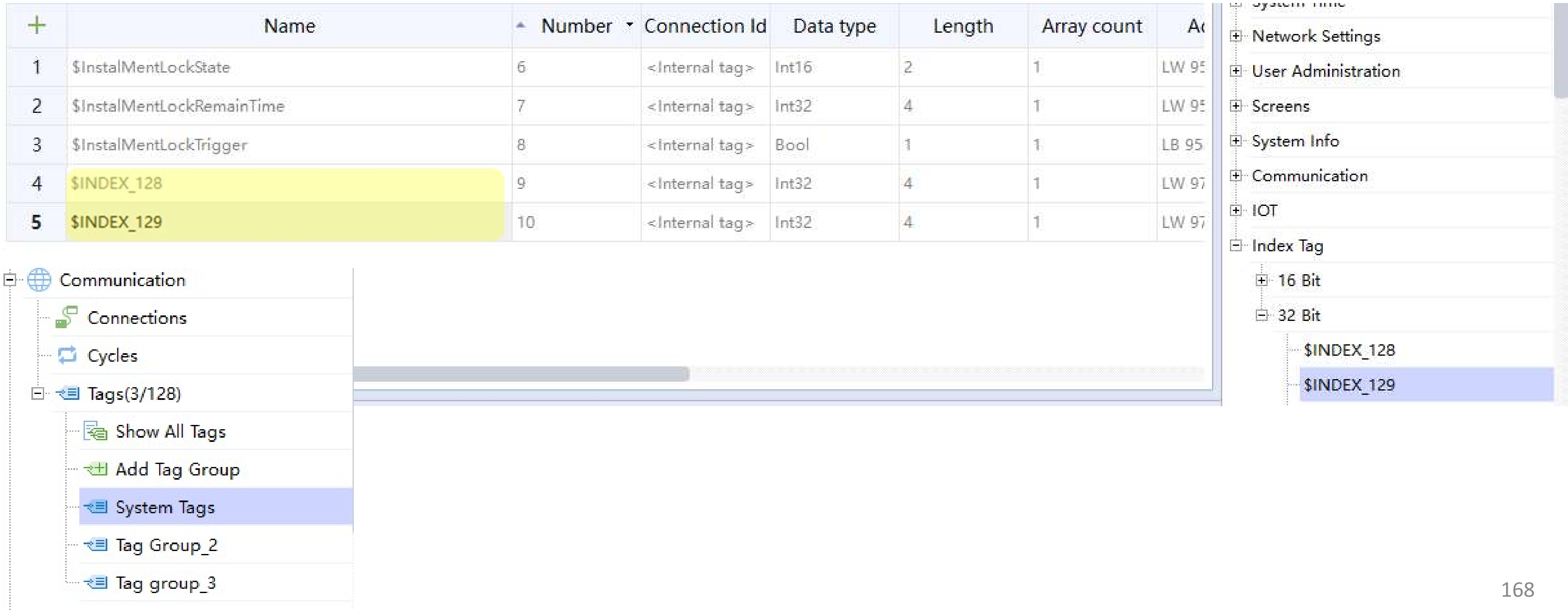
☐ retain InstalMent ☑ close dialog when execute successfully

IT7000 Variable Index

Back to Contents

IT7000 provide 128 16-bit index registers and 128 32-bit index registers, users can do address operation by configure index registers. This function support to access different register address with only 1 control. The steps to use variable index show as below:

Step1: Add the index tag in <System Tags>



+	Name	Number	Connection Id	Data type	Length	Array count	Ac
1	$InstalMentLockState	6	<Internal tag>	Int16	2	1	LW 95
2	$InstalMentLockRemainTime	7	<Internal tag>	Int32	4	1	LW 95
3	$InstalMentLockTrigger	8	<Internal tag>	Bool	1	1	LB 95
4	$INDEX_128	9	<Internal tag>	Int32	4	1	LW 97
5	$INDEX_129	10	<Internal tag>	Int32	4	1	LW 97

- Communication
  - Connections
  - Cycles
  - Tags(3/128)
    - Show All Tags
    - Add Tag Group
    - System Tags
    - Tag Group_2
    - Tag group_3

- Network Settings
- User Administration
- Screens
- System Info
- Communication
- IOT
- Index Tag
  - 16 Bit
  - 32 Bit
    - $INDEX_128
    - $INDEX_129

IT7000 Variable Index

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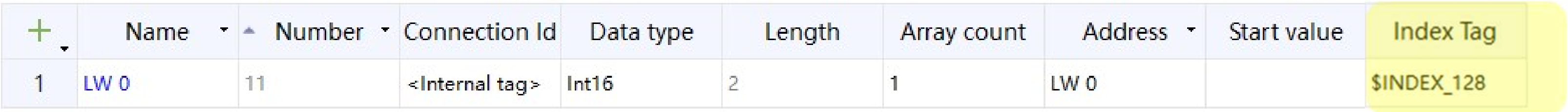
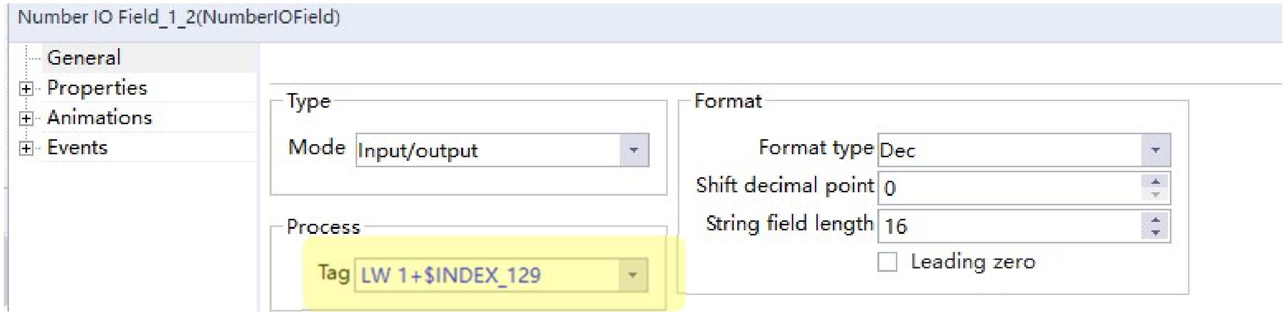
Step2: Using (or bind) index variable, there are 2 method:
>in variable table column <Index Tag> to add the index variable
>manually add the index variable while configuring the control’s address



+	Name	Number	Connection Id	Data type	Length	Array count	Address	Start value	Index Tag
1	LW 0	11	<Internal tag>	Int16	2	1	LW 0		$INDEX_128



Number IO Field_1_2(NumberIOField)

Type
Mode: Input/output

Process
Tag: LW 1+$INDEX_129

Format
Format type: Dec
Shift decimal point: 0
String field length: 16
☐ Leading zero

IT7000 Variable Index

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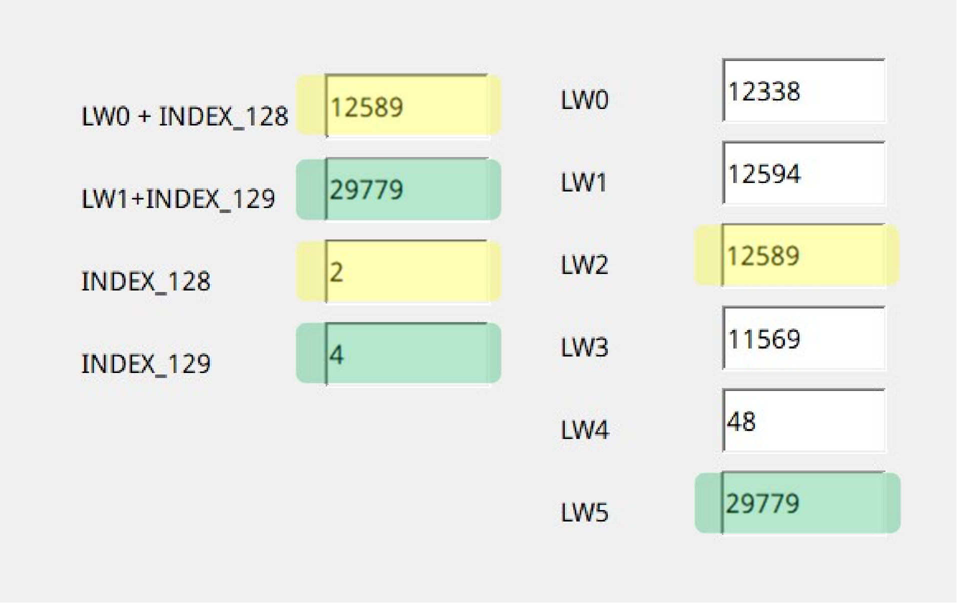
The effect of variable with index

***For basic usage of variable, please refer to Variables(Tags)**



LW0 + INDEX_128	12589
LW1+INDEX_129	29779
INDEX_128	2
INDEX_129	4

LW0	12338
LW1	12594
LW2	12589
LW3	11569
LW4	48
LW5	29779

USB disk or SD card Operation

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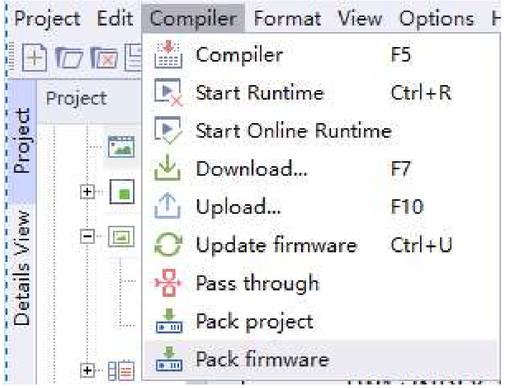
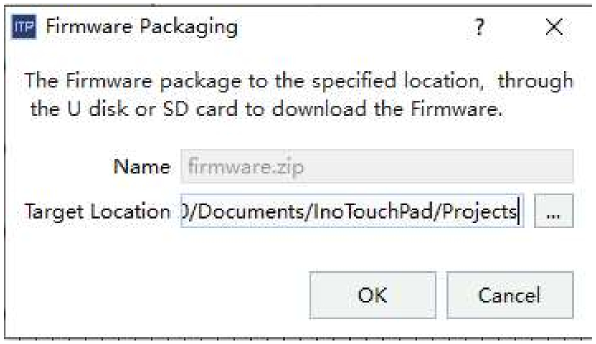
Besides export/import data by external device(USB or SD card), IT7000 also support update HMI program/firmware and PLC program by using USB disk or SD card.

➢ Upgrade HMI program/firmware by SD/USB

Step1: Select <Compiler> → <Pack firmware> to pack the firmware（<Pack project> to pack the project), select the target location(or save path), then click Ok to continue.


Project
Edit
Compiler
Format
View
Options
Project
Details View
Compiler F5
Start Runtime Ctrl+R
Start Online Runtime
Download... F7
Upload... F10
Update firmware Ctrl+U
Pass through
Pack project
Pack firmware


Firmware Packaging
?
×
...
OK
Cancel

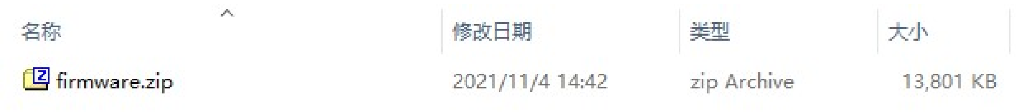
The Firmware package to the specified location, through the U disk or SD card to download the Firmware.

Name firmware.zip

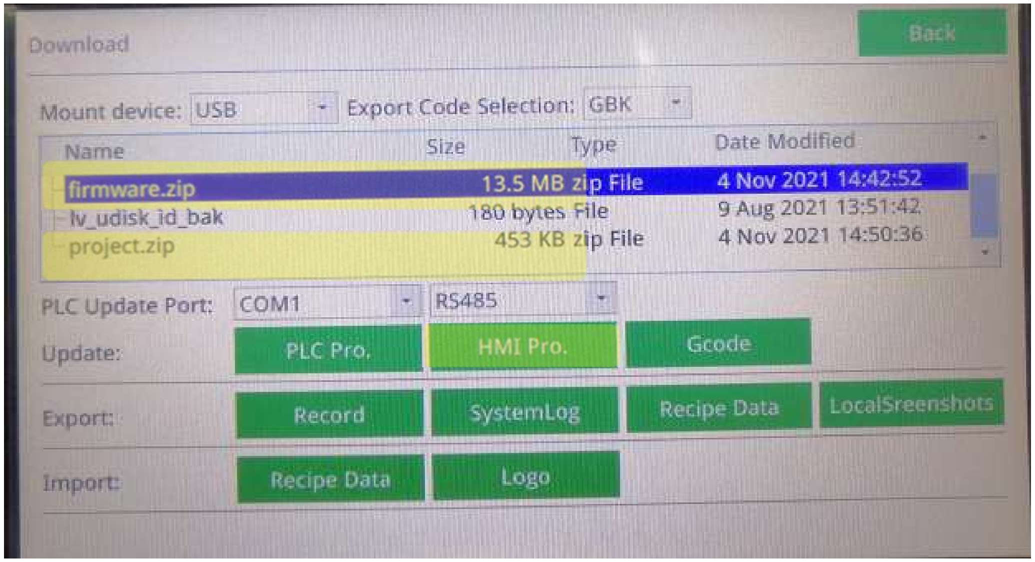
Target Location)/Documents/InoTouchPad/Projects

➢ Upgrade HMI program/firmware by SD/USB

Step2: Copy the firmware/or project into SD card/USB disk, then insert the SD card/USB disk to HMI, get into the control panel of HMI, select the firmware or project, then click <HMI Pro.> to upgrade program or firmware.



名称	修改日期	类型	大小
firmware.zip	2021/11/4 14:42	zip Archive	13,801 KB



Download
Back

Mount device: USB
Export Code Selection: GBK

Name	Size	Type	Date Modified
firmware.zip	13.5 MB	zip File	4 Nov 2021 14:42:52
lv_udisk_id_bak	180 bytes	File	9 Aug 2021 13:51:42
project.zip	453 KB	zip File	4 Nov 2021 14:50:36

PLC Update Port: COM1 RS485

Update:
PLC Pro.
HMI Pro.
Gcode
Export:
Record
SystemLog
Recipe Data
LocalSreenshots
Import:
Recipe Data
Logo

USB disk or SD card Operation

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➢ Upgrade underlying software(kernel) with SD

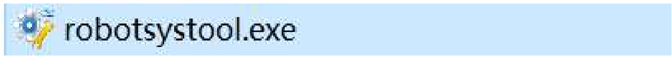
1. Prepare a SD(TF) card, recommend the memory storage not over 32G.

SanDisk
Ultra
16GB
micro SD HC I

2. Insert the SD card to a SD card read and insert the SD card read to PC USB port.

SDXC
MicroSDXC

3. Double click to open the SD card tool. Users can get this tool from the local inovance representative office.


robotsystool.exe

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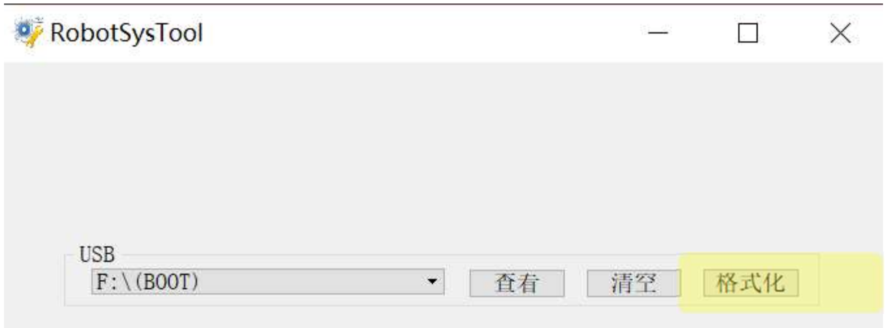
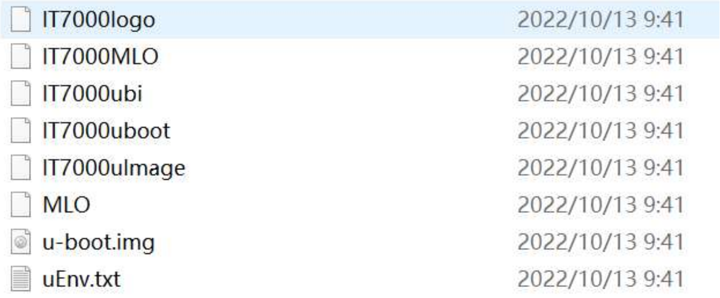
Upgrade firmware with SD

4. Select the SD card, and execute the format command



5. Copy the kernel files to the root directive of the SD card



IT7000logo	2022/10/13 9:41
IT7000MLO	2022/10/13 9:41
IT7000ubi	2022/10/13 9:41
IT7000uboot	2022/10/13 9:41
IT7000uImage	2022/10/13 9:41
MLO	2022/10/13 9:41
u-boot.img	2022/10/13 9:41
uEnv.txt	2022/10/13 9:41

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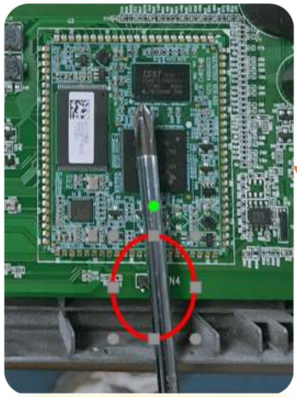
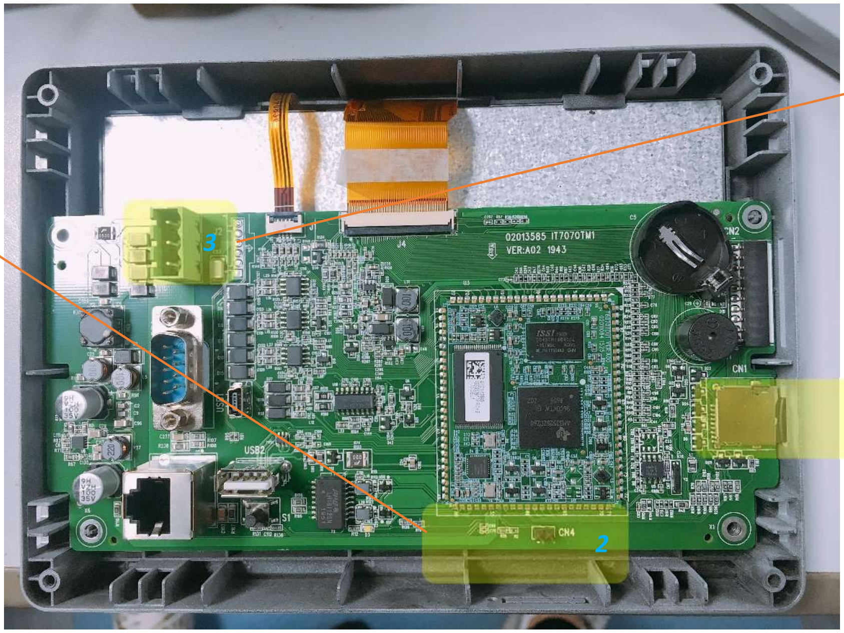
➢ Upgrade firmware with SD

6. Open the back cover of IT7000, and insert the SD card with kernel



2: to use a screw driver or a jumper cap to short connect:
IT7070: CN4
IT7100/7150: CN3



3: keep the CN4(or CN3) in short circuit status, and power on the HMI until the buzzer sound, after that, HMI start to upgrade kernel and users can remove the screw driver or jumper cap. Waiting about 1 min, the buzzer will sound again with longer time, which means that the kernel upgrade done.
Then unplug the SD card and repower the HMI.

1: insert the SD card

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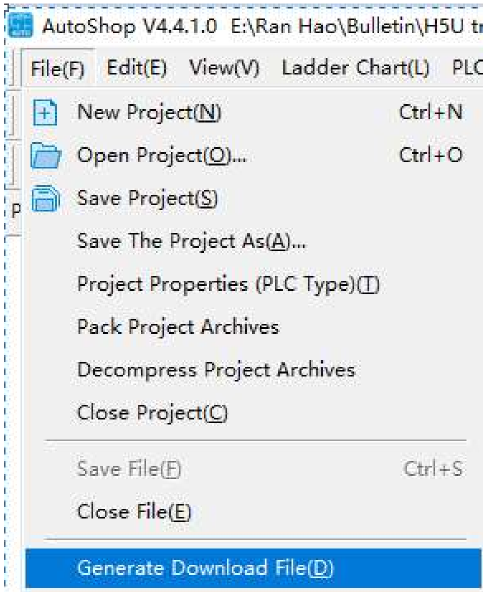
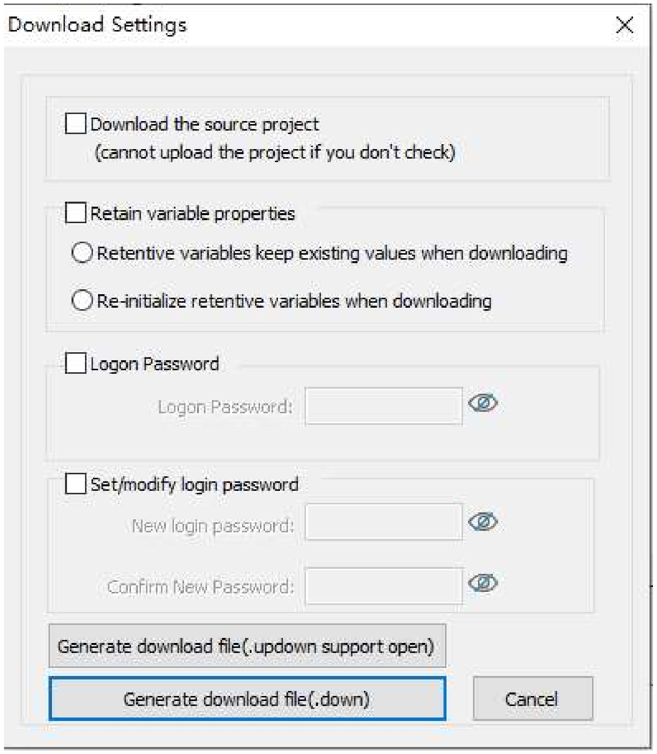
➢ Upgrade PLC program by SD/USB

Step1: Open the PLC project in AutoShop, select <File> → <Generate Download File>, in the pop up dialog, set the download file properties, then click <Generate download file> to generate a .down file or .updown file.


AutoShop V4.4.1.0 E:\Ran Hao\Bulletin\H5U t
File(F) Edit(E) View(V) Ladder Chart(L) PLC
New Project(N) Ctrl+N
Open Project(O)... Ctrl+O
Save Project(S)
Save The Project As(A)...
Project Properties (PLC Type)(T)
Pack Project Archives
Decompress Project Archives
Close Project(C)
Save File(F) Ctrl+S
Close File(E)
Generate Download File(D)


Download Settings

☐ Download the source project
(cannot upload the project if you don't check)

☐ Retain variable properties
○ Retentive variables keep existing values when downloading
○ Re-initialize retentive variables when downloading

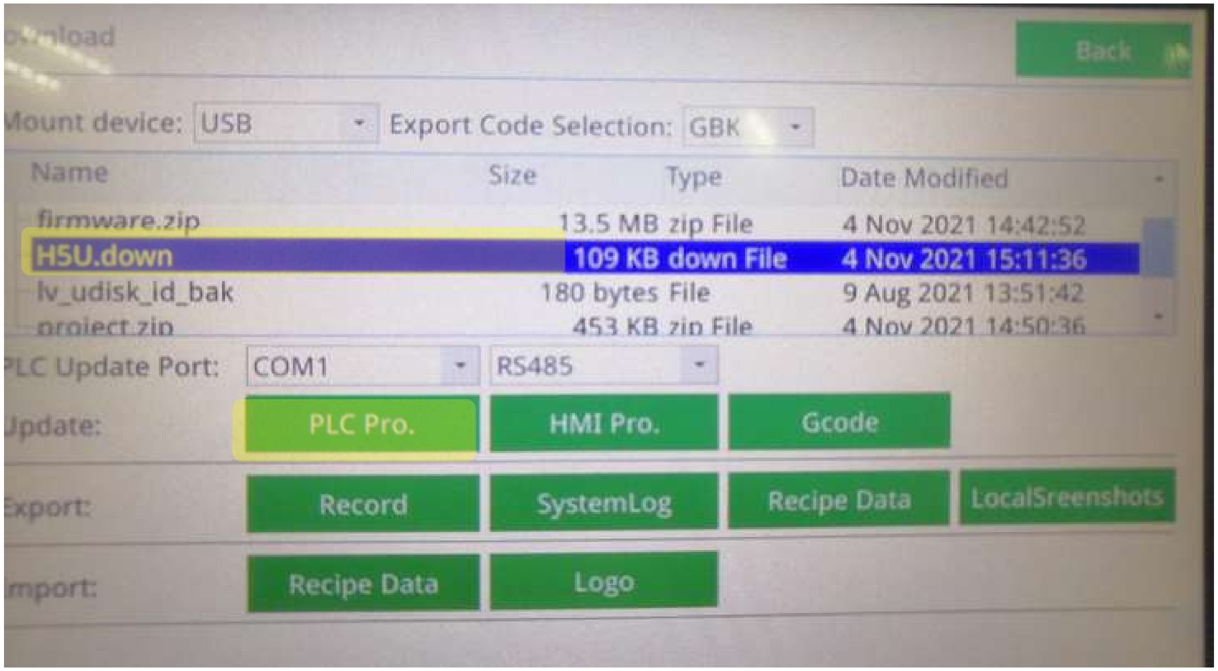
☐ Logon Password
Logon Password:

☐ Set/modify login password
New login password:
Confirm New Password:

Generate download file(.updown support open)
Generate download file(.down)
Cancel

➢ Upgrade PLC program by SD/USB

Step2: Copy the download file to SD card/or USB disk, then insert the SD card/USB disk to HMI, get into the control panel of HMI, select the download file, then click <PLC Pro.> to upgrade PLC program.
***Take note: The PLC need connect to HMI**


ownload
Back

Mount device: USB   Export Code Selection: GBK

Name	Size	Type	Date Modified
firmware.zip	13.5 MB	zip File	4 Nov 2021 14:42:52
H5U.down	109 KB	down File	4 Nov 2021 15:11:36
lv_udisk_id_bak	180 bytes	File	9 Aug 2021 13:51:42
project.zip	453 KB	zip File	4 Nov 2021 14:50:36

PLC Update Port: COM1   RS485

pdate:
PLC Pro.
HMI Pro.
Gcode
xport:
Record
SystemLog
Recipe Data
LocalSreenshots
mport:
Recipe Data
Logo

IT7000 Application Example

IT7000 Application

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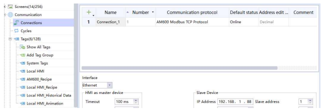
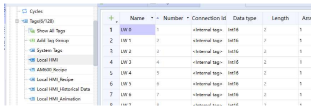
New Project

Create Project
Device type
Settings
Project name
Location
Recent
OK
Cancel

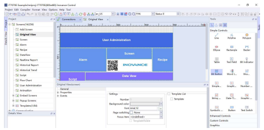
Create Communication Connection


Name
Number
Communication protocol
Comment
Connection_1
AM600 Modbus TCP Protocol
Online
Interface
Ethernet
Slave Device
IP Address

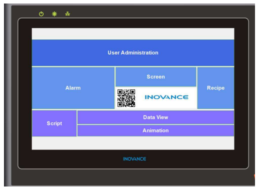
Add Tags(variables)


Name
Number
Connection Id
Data type
Length
Show All Tags
Add Tag Group
System Tags
Local HMI
AM600_Recipe
Local HMI_Recipe
Local HMI_Historical Data
Local HMI_Animation
LW 0
LW 1
LW 2
LW 3
LW 4
LW 5
LW 6
Int16

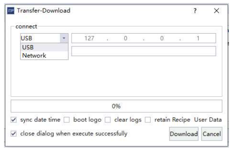
Screen Configuration



Simulation


User Administration
Alarm
Screen
Recipe
INOVANCE
Script
Data View
Animation
INOVANCE

Download


Transfer-Download
connect
USB
USB
Network
127 . 0 . 0 . 1
0%
sync date time
boot logo
clear logs
retain Recipe
User Data
close dialog when execute successfully
Download
Cancel

Create a Project

INOVANCE

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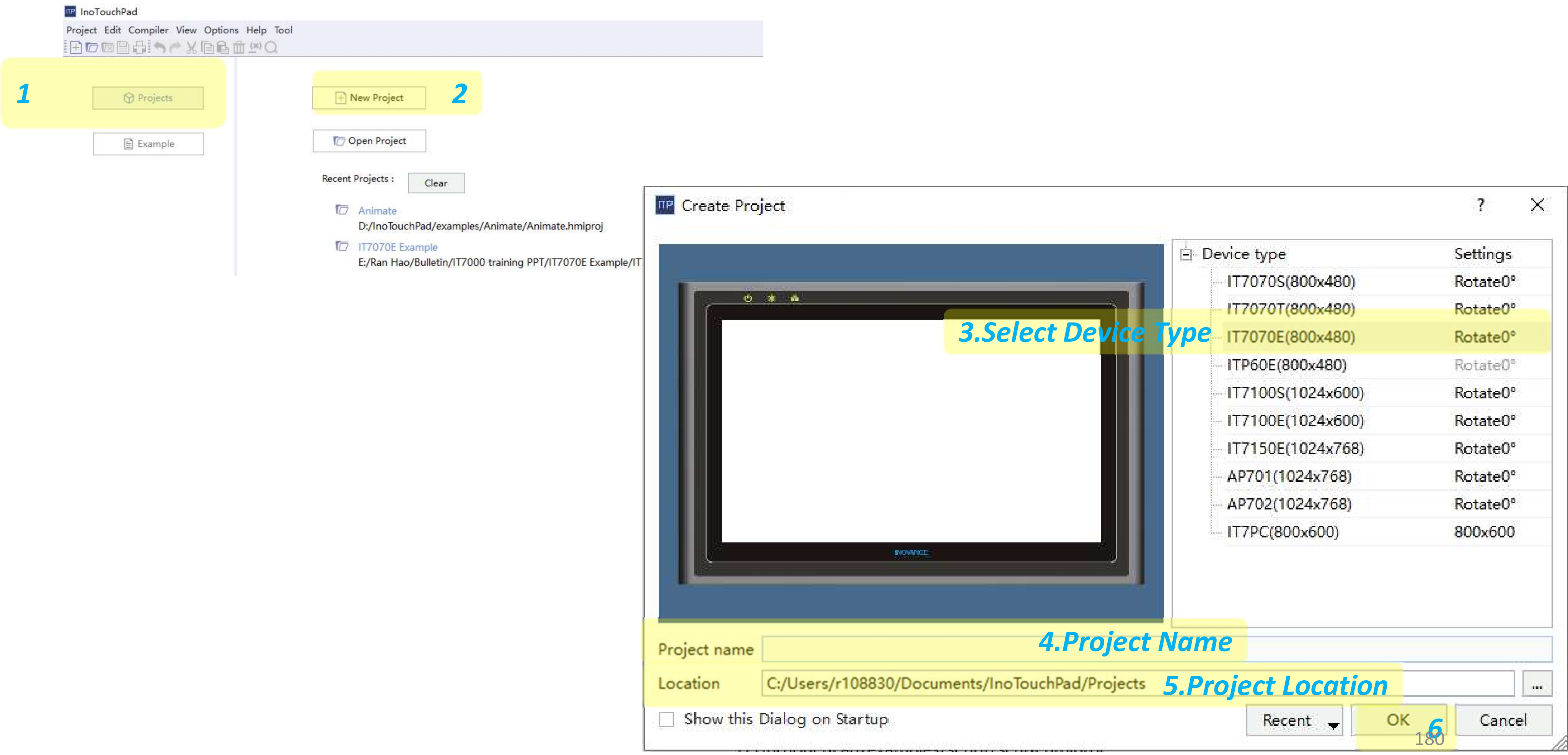
InoTouchPad
Project Edit Compiler View Options Help Tool
Projects
Example
New Project
Open Project
Clear
Create Project
?
Recent
OK
Cancel
...

1

2

Recent Projects :

Animate
D:/InoTouchPad/examples/Animate/Animate.hmiproj

IT7070E Example
E:/Ran Hao/Bulletin/IT7000 training PPT/IT7070E Example/IT

3.Select Device Type

Device type	Settings
IT7070S(800x480)	Rotate0°
IT7070T(800x480)	Rotate0°
IT7070E(800x480)	Rotate0°
ITP60E(800x480)	Rotate0°
IT7100S(1024x600)	Rotate0°
IT7100E(1024x600)	Rotate0°
IT7150E(1024x768)	Rotate0°
AP701(1024x768)	Rotate0°
AP702(1024x768)	Rotate0°
IT7PC(800x600)	800x600

Project name

4.Project Name

Location C:/Users/r108830/Documents/InoTouchPad/Projects

5.Project Location

☐ Show this Dialog on Startup

6

Create Connections & Add Tags

INOVANCE

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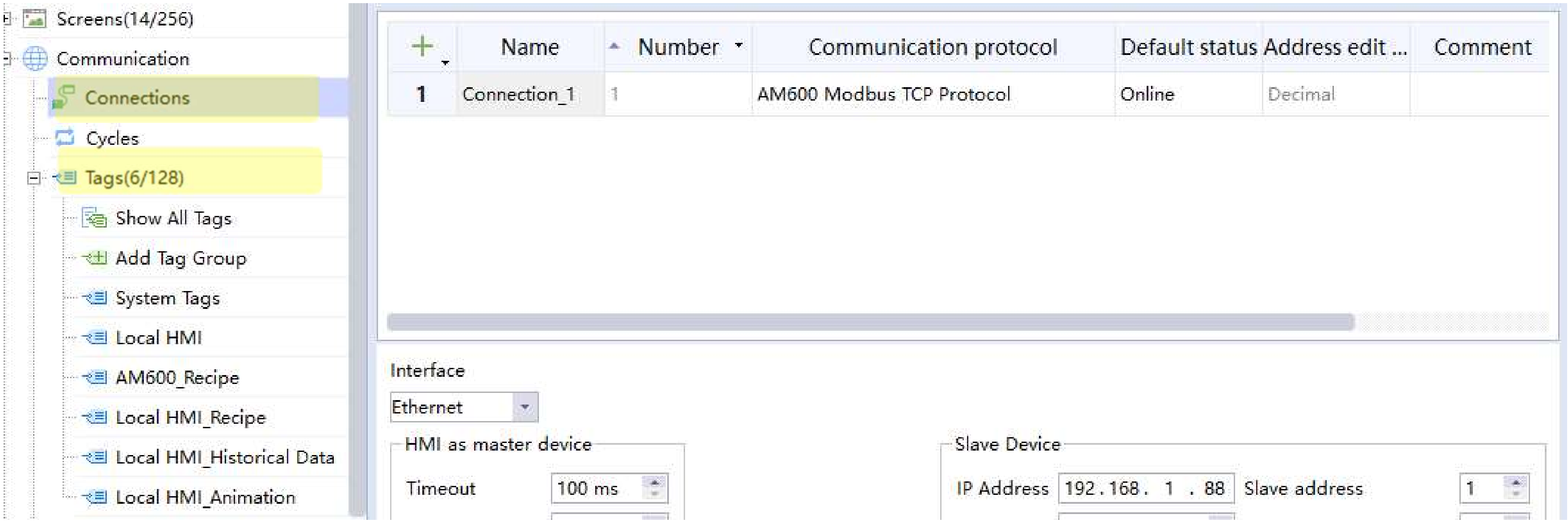
Screens(14/256)
Communication
Connections
Cycles
Tags(6/128)
Show All Tags
Add Tag Group
System Tags
Local HMI
AM600_Recipe
Local HMI_Recipe
Local HMI_Historical Data
Local HMI_Animation

	Name	Number	Communication protocol	Default status	Address edit ...	Comment
1	Connection_1	1	AM600 Modbus TCP Protocol	Online	Decimal	

Interface: Ethernet

HMI as master device

Timeout: 100 ms

Slave Device

IP Address: 192 . 168 . 1 . 88

Slave address: 1

Screen Configuration

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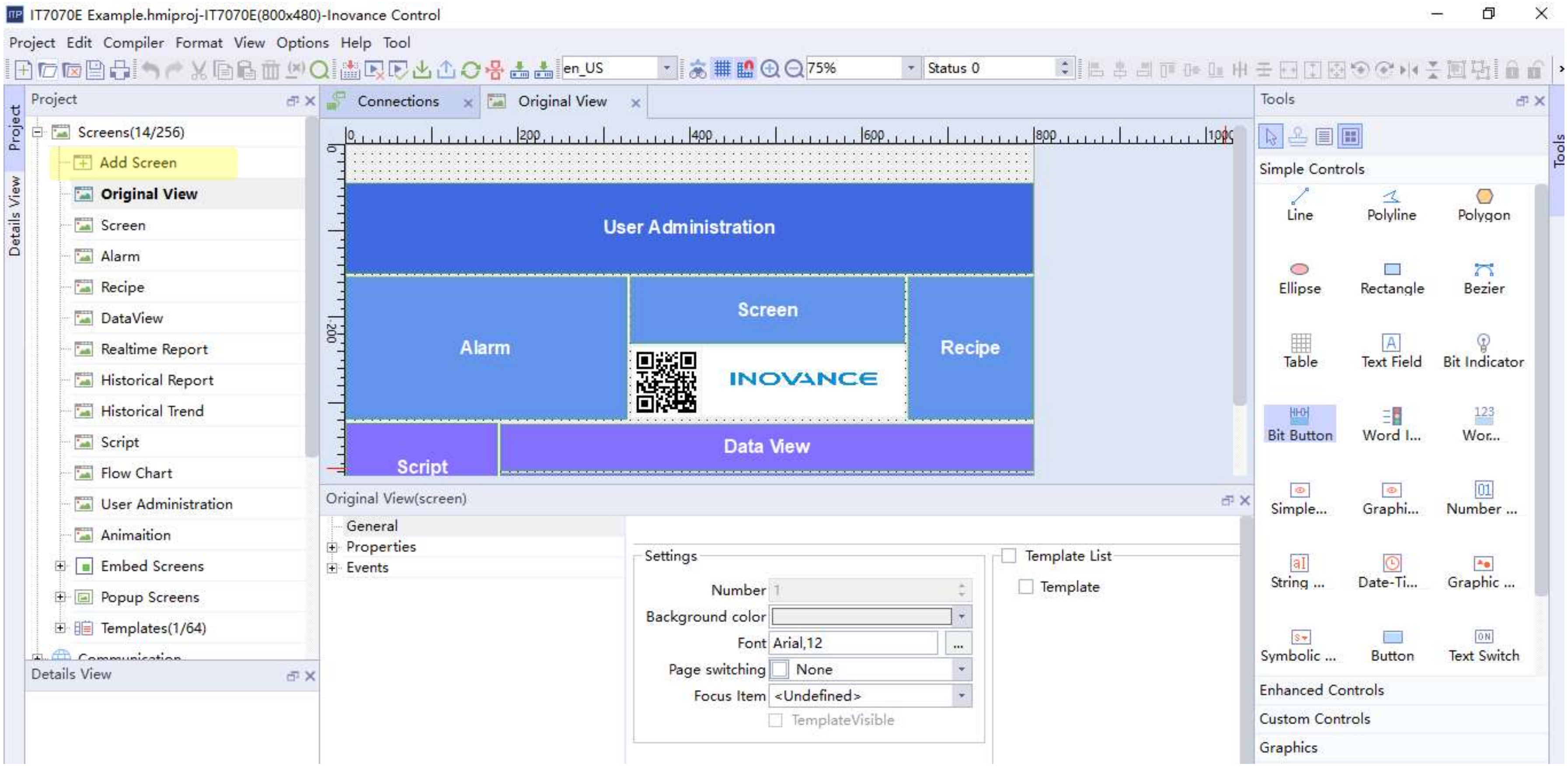
IT7070E Example.hmiproj-IT7070E(800x480)-Inovance Control

Settings

Number: 1

Background color

Font: Arial,12

Page switching: ☐ None

Focus Item: <Undefined>

☐ TemplateVisible

☐ Template List

☐ Template

Project
Edit
Compiler
Format
View
Options
Help
Tool
en_US
75%
Status 0
Project
Details View
Screens(14/256)
Add Screen
Original View
Screen
Alarm
Recipe
DataView
Realtime Report
Historical Report
Historical Trend
Script
Flow Chart
User Administration
Animaition
Embed Screens
Popup Screens
Templates(1/64)
Communication
Connections
Original View
User Administration
Alarm
Screen
Recipe
INOVANCE
Script
Data View
Original View(screen)
General
Properties
Events
Tools
Simple Controls
Line
Polyline
Polygon
Ellipse
Rectangle
Bezier
Table
Text Field
Bit Indicator
Bit Button
Word I...
Wor...
Simple...
Graphi...
Number ...
String ...
Date-Ti...
Graphic ...
Symbolic ...
Button
Text Switch
Enhanced Controls
Custom Controls
Graphics

Simulation

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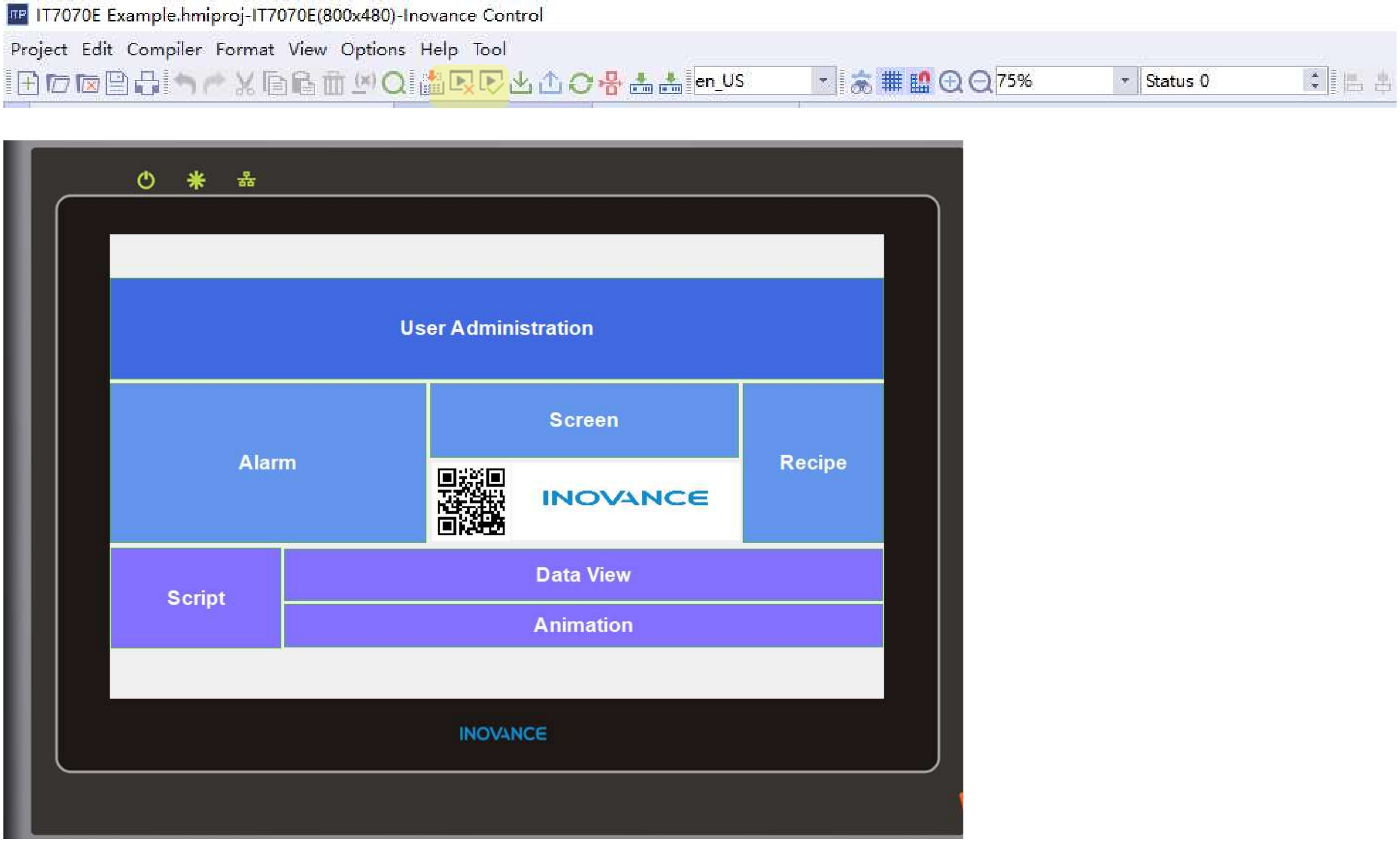

IT7070E Example.hmiproj-IT7070E(800x480)-Inovance Control

Project
Edit
Compiler
Format
View
Options
Help
Tool
en_US
75%
Status 0
User Administration
Alarm
Screen
INOVANCE
Recipe
Script
Data View
Animation
INOVANCE

Download/Upload

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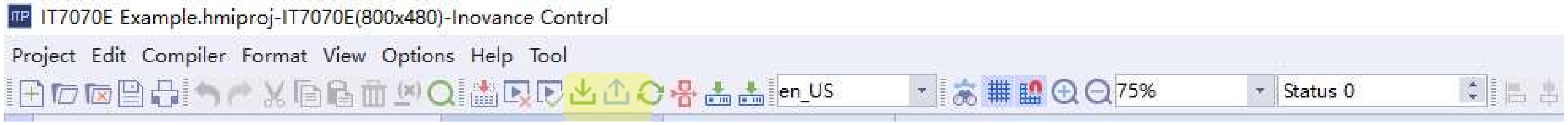
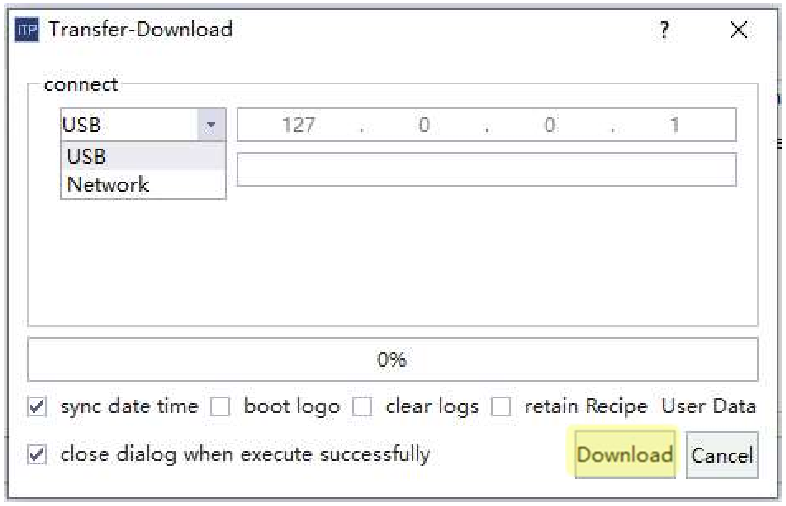

IT7070E Example.hmiproj-IT7070E(800x480)-Inovance Control

Project Edit Compiler Format View Options Help Tool
en_US
75%
Status 0


Transfer-Download

connect: USB — 127 . 0 . 0 . 1

?
USB
Network
0%

☑ sync date time ☐ boot logo ☐ clear logs ☐ retain Recipe User Data

☑ close dialog when execute successfully

Download
Cancel

*When using network(Ethernet) connection to download/upload, please make sure IP address of HMI and PC share same network segments(first 3 segments of an IP address). For example, HMI default IP address is 192.168.1.100, when PC IP address is set as. 192.168.1.X(X can be set as any number between 0~255 except 100)

Example

IT7070E Example 20210430.7z

INOVANCE

Forward Always Progressing