

Barcode Scanner

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1. Overview and Operation

Overview

Since History Data Display Object can only update history data when window is changed, we can preset 2 windows to place the same objects to update the data instantly once the window is changed.

In the following example, we use Barcode Scanner to read data and immediately display on History Data Display Object, then change window via MACRO and PLC Control Object.

Demo Project - Barcode Scanner

No.	Time	Date	Received data
14	14:51:23	01/06/11	083078111137
13	14:48:25	01/06/11	1P50-14000-257R
12	14:48:23	01/06/11	CN
11	14:48:20	01/06/11	2P1
10	14:48:17	01/06/11	2P1
9	14:48:13	01/06/11	4718967545415
8	14:48:08	01/06/11	9789867638175
7	14:48:04	01/06/11	9789867638199
6	14:47:28	01/06/11	9789866948671
5	14:47:22	01/06/11	4712568721889
4	14:47:06	01/06/11	9789866700859
3	14:46:51	01/06/11	9555076303094
2	14:46:48	01/06/11	4710716334523
1	14:46:43	01/06/11	8848014805042

0012

Number of bytes of reading data

083078111137

Designate bar code data save address

Flag

When reading data is complete, the status will be changed from OFF to ON.

System Tag LB-9064 (When ON) enable USB barcode device. (disable keyboard)

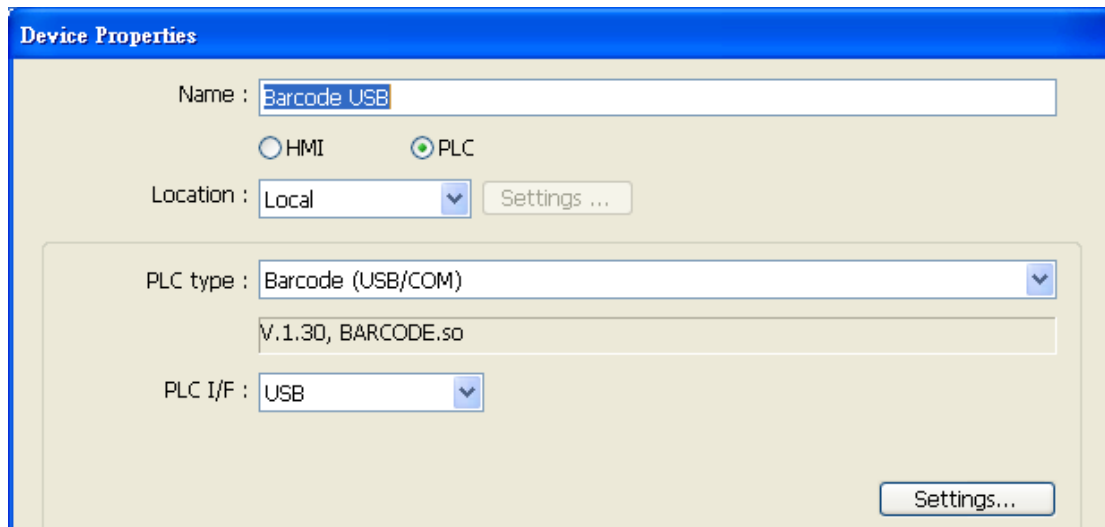
Editor: Nicolas

Operation

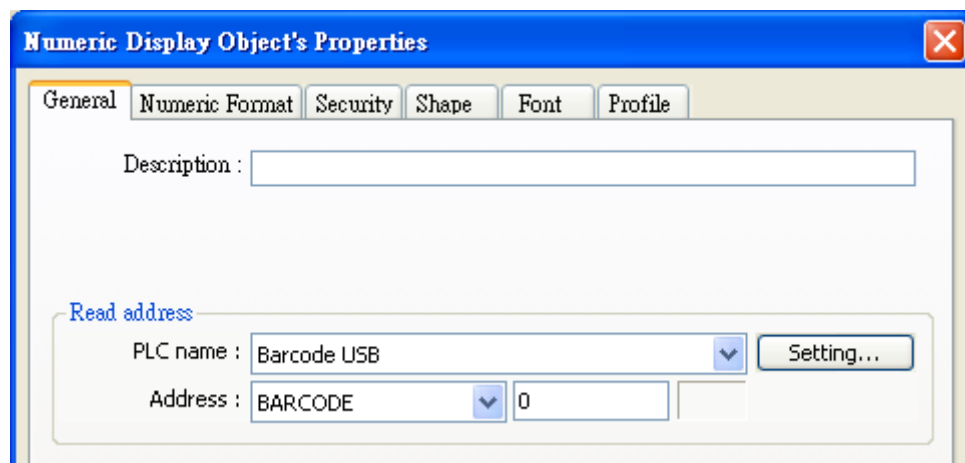
When the complete data is read, Flag will be set to ON, and at the same time the Flag will trigger the Macro to change window. Since the Flag won't automatically return OFF, user can set it to OFF in MACRO.

2. Setting up the Screen

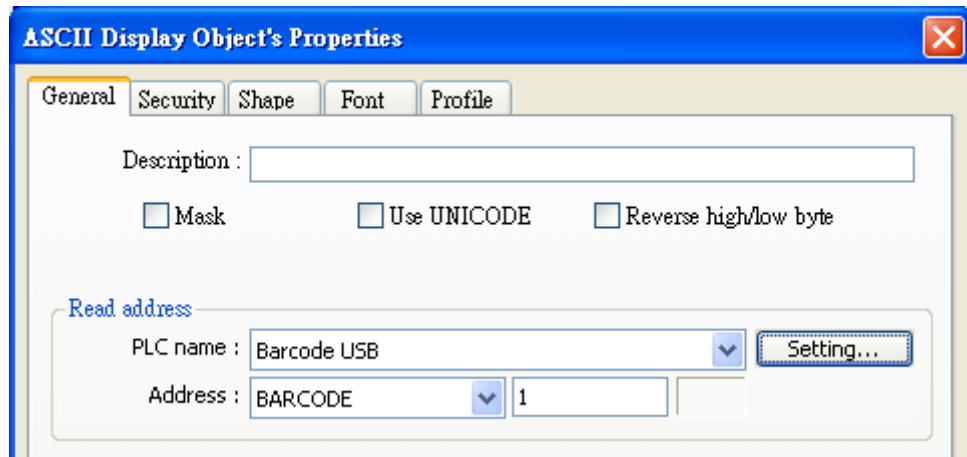
1. Firstly, add Barcode Device in system parameter settings, either **[USB]** or **[COM]** interface will do. "USB Barcode" is used in this demo project.



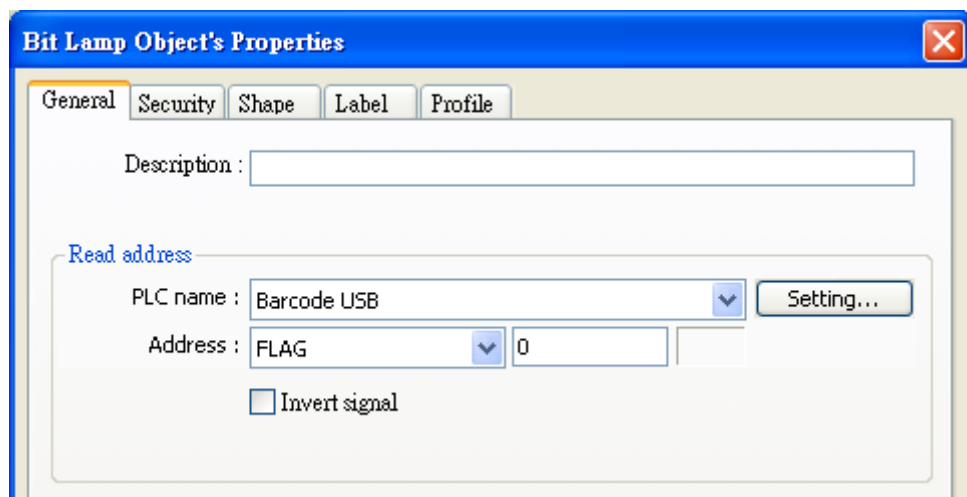
2. On Common Window (no.4), create a Numeric Display Object to display the number of bytes of reading data, set the **[Address]** to **[BARCODE 0]**.



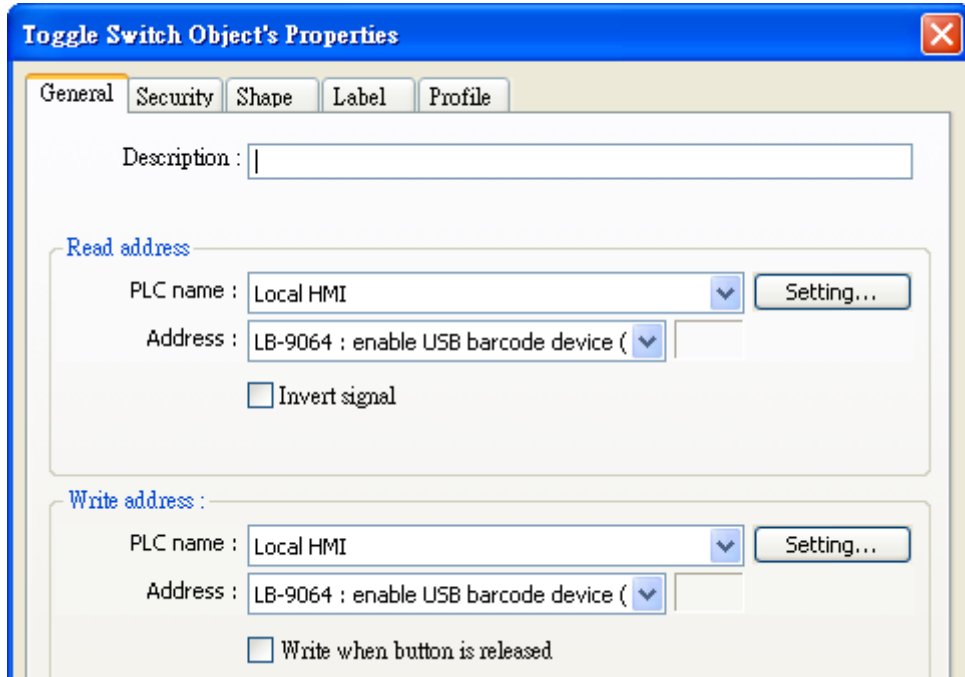
3. On Common Window (no.4), create an ASCII Display Object to display the designated barcode data save address, set the **[Address]** to **[BARCODE 1]**, **[No. of word]** to "8".



4. On Common Window (no.4), create a Bit Lamp Object to be the indicator of Flag. Upon completion of reading data, the status will be changed from OFF to ON. Set the **[Address]** to **[FLAG 0]**.



5. On Common Window (no.4), create a Toggle Switch Object to enable/disable USB Barcode Device, set the **[Address]** to **[LB-9064]**.



Toggle Switch Object's Properties

General Security Shape Label Profile

Description :

Read address

PLC name : Local HMI

Address : LB-9064 : enable USB barcode device ()

☐ Invert signal

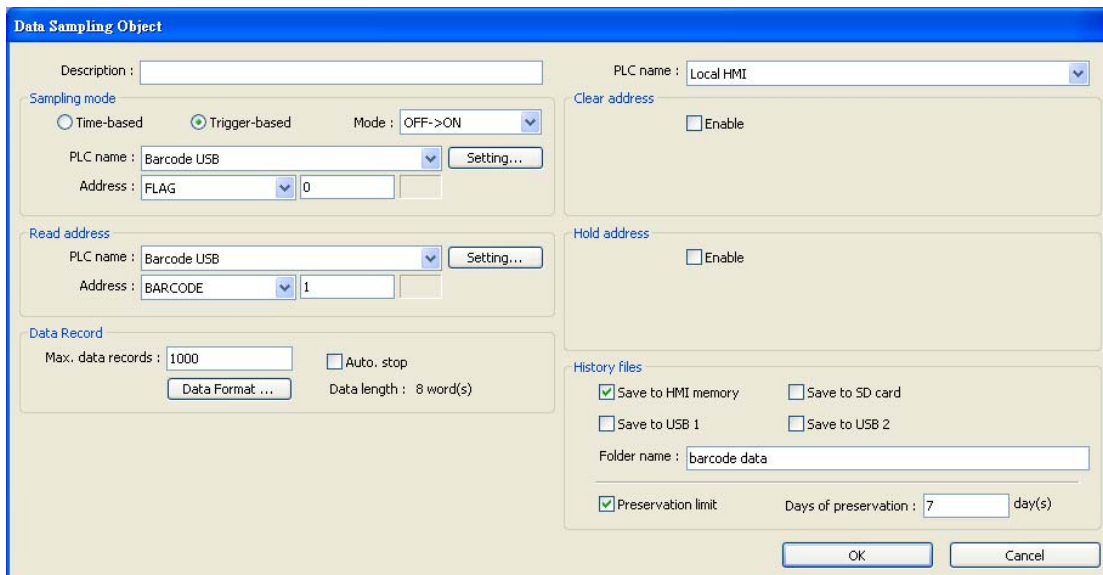
Write address :

PLC name : Local HMI

Address : LB-9064 : enable USB barcode device ()

☐ Write when button is released

6. Create and set a Data Sampling Object, set **[Read Address]** to **[BARCODE 1]**, **[Sampling Mode]** to **[Trigger-Based]** with **[Address]** **[FLAG 0]** (OFF to ON). In this way when reading the complete data, Flag 0 will be set to ON to sample the barcode data. Set **[Data Format]** to **[string: 8 words]**.



Data Sampling Object

Description :

PLC name : Local HMI

Sampling mode

☐ Time-based ☒ Trigger-based Mode : OFF->ON

PLC name : Barcode USB

Address : FLAG 0

Read address

PLC name : Barcode USB

Address : BARCODE 1

Data Record

Max. data records : 1000 ☐ Auto. stop Data length : 8 word(s)

Clear address

☐ Enable

Hold address

☐ Enable

History files

☒ Save to HMI memory ☐ Save to SD card

☐ Save to USB 1 ☐ Save to USB 2

Folder name : barcode data

☒ Preservation limit Days of preservation : 7 day(s)

7. On Window no. 10 create a History Data Display Object. The **[Data Sampling Object index]** refers to the Data Sampling Object no. After the

setting is finished, copy this object to Window no. 11; please note that this object should be placed on the same position in same size on Window no. 10 and 11.

History Data Display Object's Properties

General | Data Format | Title | Shape | Profile

Data Sampling Object index : 1

Grid

☒ Enable

Color : Column interval : 0

Profile color

☒ Transparent

Text

Font : Comic Sans MS Size : 11

Time

☒ Time HH:MM:SS Color :

Date

☒ Date MM/DD/YY Color :

☒ Sequence no. Color :

☐ Time ascending ☒ Time descending

History control

PLC name : Local HMI Setting...

Address : LW 10

8. Edit Macro for changing window.

Macro ID 1:

`macro_command main()`

`short win10 = 10, win11 = 11 //window number`

`bool off=0 //off status`

`SetData(win11, "Local HMI", LW, 0, 1)`

DELAY (200) // Delay 200ms for data to be updated and written to History Data Display Object then change window.

SetData(win10, "Local HMI", LW, 0, 1)

SetData(off, "Barcode USB", FLAG, 0, 1) //set FLAG to off

end macro_command

9. Set PLC Control Object to trigger Macro and change window.

Change window: **[Trigger Address]** should be set in correspondence with the Macro, in this demo project it's set to **[LW0]**.

The screenshot shows the 'PLC Control' configuration window. It has a blue title bar and a light beige background. The 'Description' field is empty. The 'PLC name' dropdown is set to 'Local HMI'. Under the 'Attribute' section, 'Type of control' is set to 'Change window'. There are three checkboxes: 'Active only when designated window opened' (unchecked), 'Turn on back light' (unchecked), and 'Clear data after window changed' (checked). Under the 'Trigger address' section, the 'PLC name' dropdown is also set to 'Local HMI', and there is a 'Setting...' button. The 'Address' is set to 'LW' in a dropdown, with the value '0' in a text box, and a '16-bit Unsigned' label.

Trigger Macro: **[Trigger Address]** set to **[FLAG 0]** (OFF->ON).

PLC Control

Description :

PLC name :

Attribute

Type of control :

☐ Active only when designated window opened

Macro name :

Trigger address

PLC name :

Address :

Trigger mode :

3. Addresses

The Object Addresses used in this demo project are listed below: Users can change Addresses and Object ID base on actual usage.

Object	Address	Object ID	Detail
Window 4			
Numeric Display	BARCODE-0	ND_0	Number of bytes of reading data
ASCII Display	BARCODE-1	AD_0	Designate barcode data save address
Bit Lamp	FLAG-0	BL_0	When reading data is completed, the status will be changed from OFF to ON
Toggle Switch	LB-9064	TS_0	System Tag LB-9064 (When ON) enable USB barcode device (disable keyboard)
Window 10 & 11			
History Data Display	LW-10	DD_0	Display barcode data