![RusAutomation logo]

User Manual for DOP-W Series

DOP-W Series have 3 Models type with DOP-W105B, DOP-W127B and DOP-W157B.

Before introduce function of DOP-W series, there is something to describe how to enter system menu and how to download the screen data to HMI.

■ How to enter system menu

➢ Method 1、Please start the DOPSoft software and create System Menu button, after downloading the screen data to HMI, press the System Menu button to enter the system menu.

➢ Method 2、Please press at blank space for a while, and then will hear Buzzer sound and display as below following windows for asking users Enter the system menu.
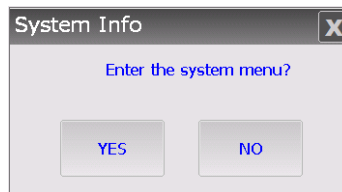

■ How to download the screen data to HMI

DOP-W Series did not provide download or upload via USB translation. It is only way for download and upload screen data via Ethernet or COM Port. The default Upload and Download way is Ethernet. Detailed explanation for download and upload, please refer to P.252~2509 of Chapter 2 in DOPSoft User Manual. The default Upload and Download way is Ethernet.
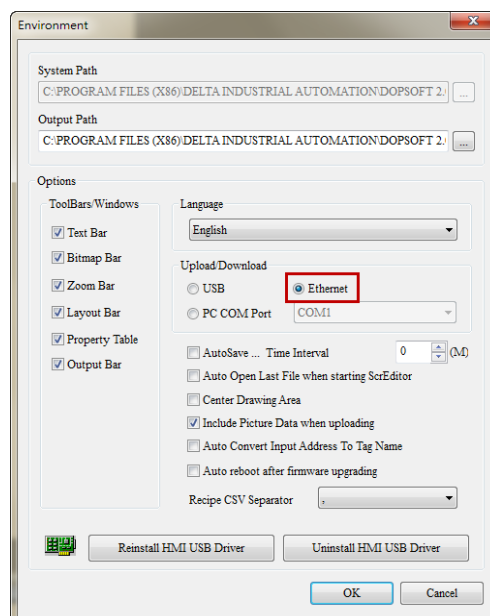
If users select Ethernet to download, please enter the system menu to set DHCP to OFF and set the IP address manually at first.
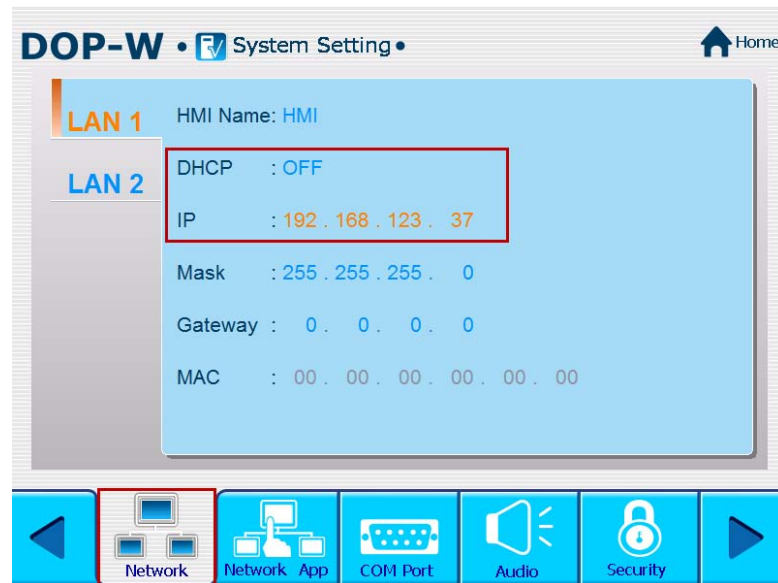

DOP-W Series provide two Ethernet LAN devices to download and upload screen data or recipe, get firmware information and reset HMI. It also could plan two Ethernet LAN devices in different domains for application. As below will introduce functions for DOP-W Series.

1、Password Setting

Password setting is used to divide user level with HMI. The security level involved 0 to 7 and has default password in every security level. DOP-W Series also provide multi-account and password to let several users log in to HMI.

NOTE：
- ✓ Password cannot be set as empty.
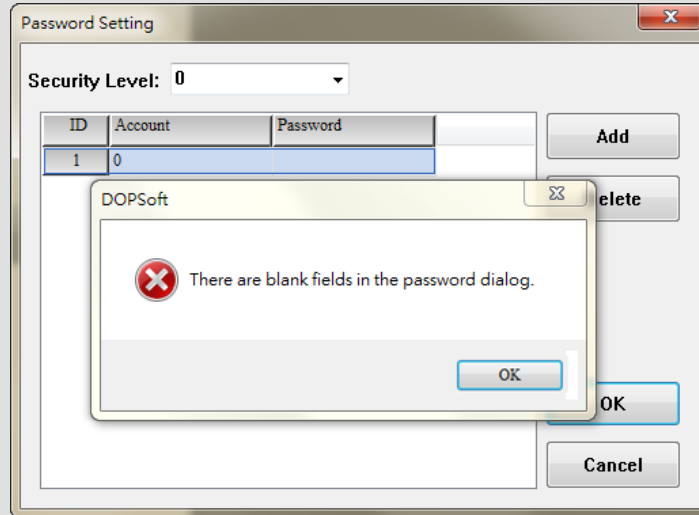
- ✓ Please do not set the same account in the same security level, but it could set the same password in the same security level.
- ✓ The account could set the same in different security level. For example, if security level 0 set account to 123, the 123 account also could set in security level1.
- ✓ The length limitation for account and password is 24 characters.
- ✓ The account and password are case insensitive. It will only display the capital letters.

| Security Level 0	No protection function is available. Any person can operate the system.
Security Levels 1 ~ 7	Entry of password or override with high permission level is required to operate the system.
Security Level 8	This is password for the highest permission level and is higher than those for levels 1 ~ 7. Meanwhile, this password is the protection password once a project is saved and is also used for Check password when download program and system file formatting.

《Table 1-1》 Table of permission levels

When the user wants to change the password in each level, this can be done by changing the password entry through [Options]→ [Password Setting]. The length limitation for account and password is 24 characters. The entered password can have up to 8 digits, which consist of numbers of 0 ~ 9 and alphabets of A ~ F regardless of capitalization or lower-case. The user can choose the digits and characters of the password as preferred with flexibility.
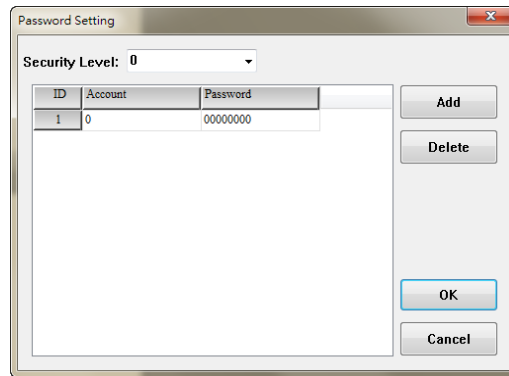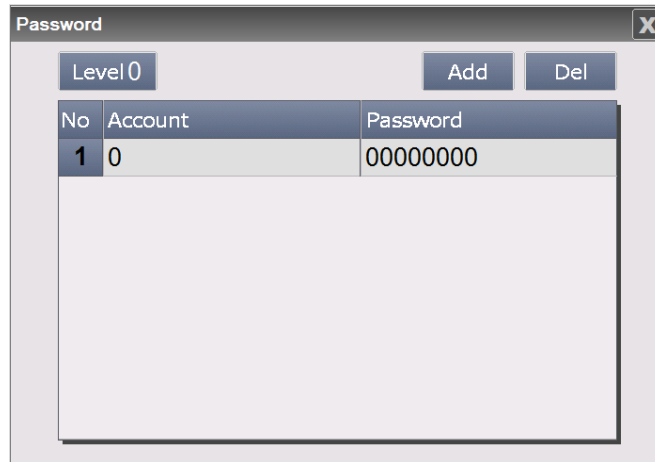

《Figure 1-1》Password Editing

When users set the same account in the same security level, HMI will display Account Duplicate error message.
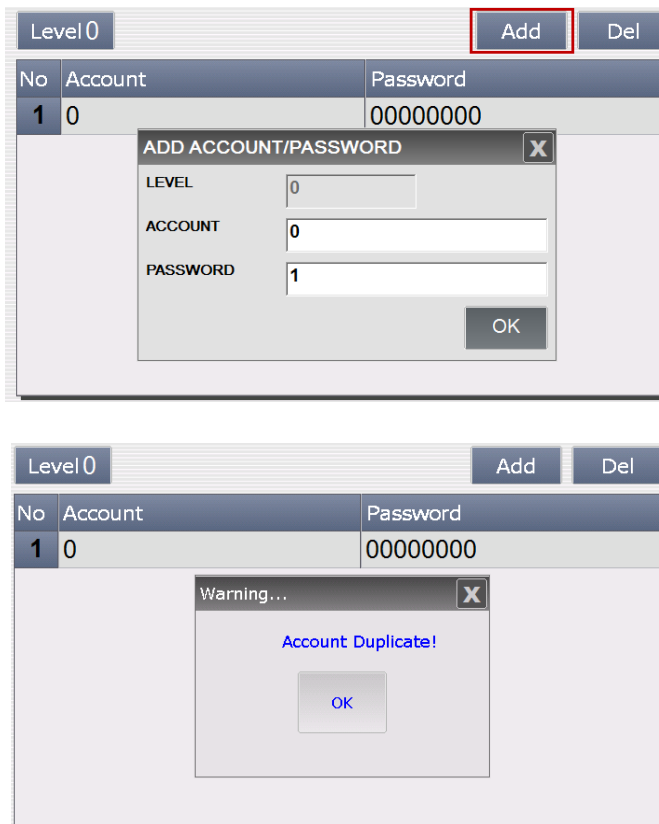
《Figure 1-2》Duplicate for Account setting

Users also could via Password table setup element to change account and password.

《Figure 1-3》Password Table Setup button

Or enter system menu and select System setting → Security to change account and password.
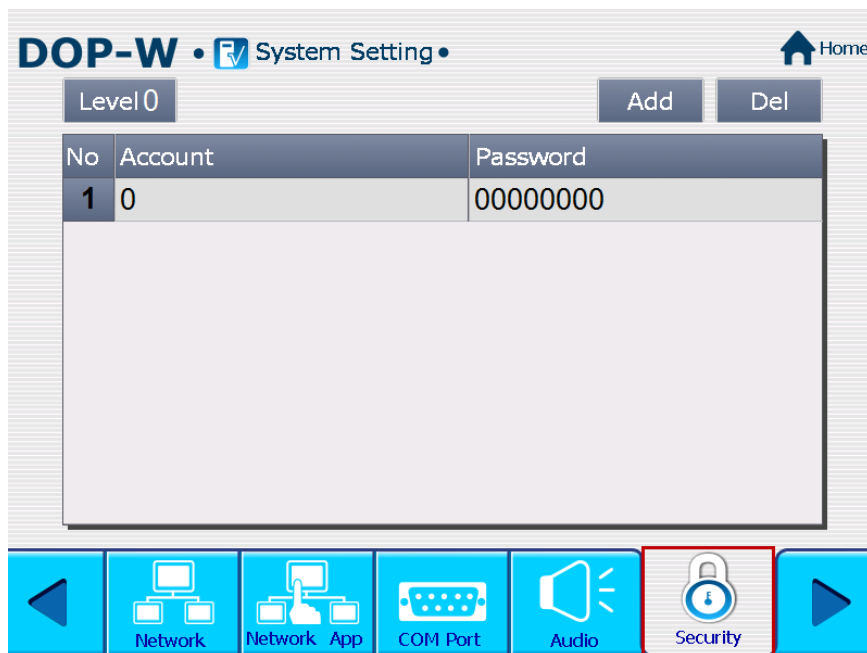
《Figure 1-4》Password setting in system menu

2、Multimedia

DOP-W Series provides multimedia player used to play operation and maintenance instructions video, so that each operator can have a clear and straightforward, and thus more effective to reach work; or standard operating procedures used to play video presentation to help user who establish a good working environment.

Video can be selected directly or video files you would like to play within the Word register values to specify a different video files to play

---

Note：
- ✓ One screen only could establish one video element.
- ✓ Sub screen could not establish video element.
- ✓ Base screen could not establish video element.
- ✓ Video element did not support rotate function.
- ✓ The video format only support WMV file.

Video can be described with three major items:
- (1) Video Lists Output Setting
- (2) Control Address
- (3) Play List

(1) Video Lists Output Setting

This function involves add, delete, export, and where to save the video files.

Users could select Options → Video Lists Output Setting to add video files.
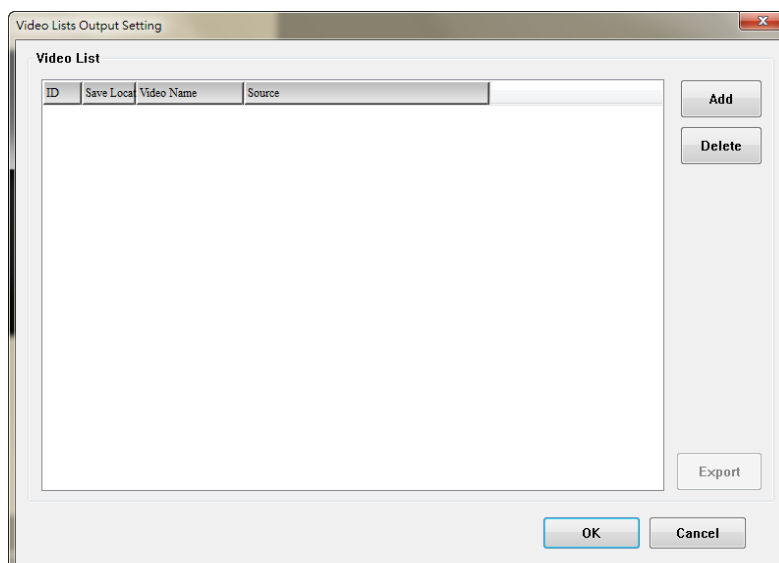
《Figure 2-1》Video Lists Output Setting

(2) Control Address

It is used to control video play or stop.

Users could select Element→Multimedia to create video.
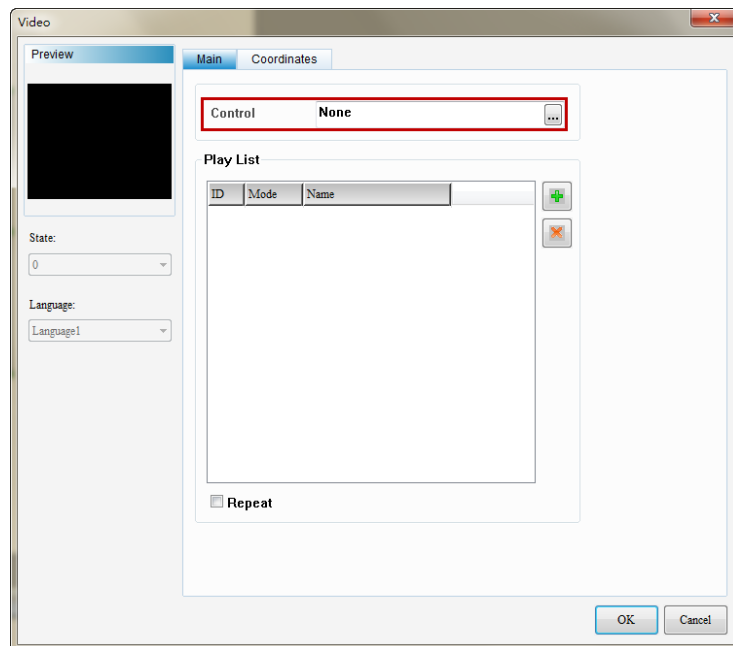
《Figure 2-2》Control Address
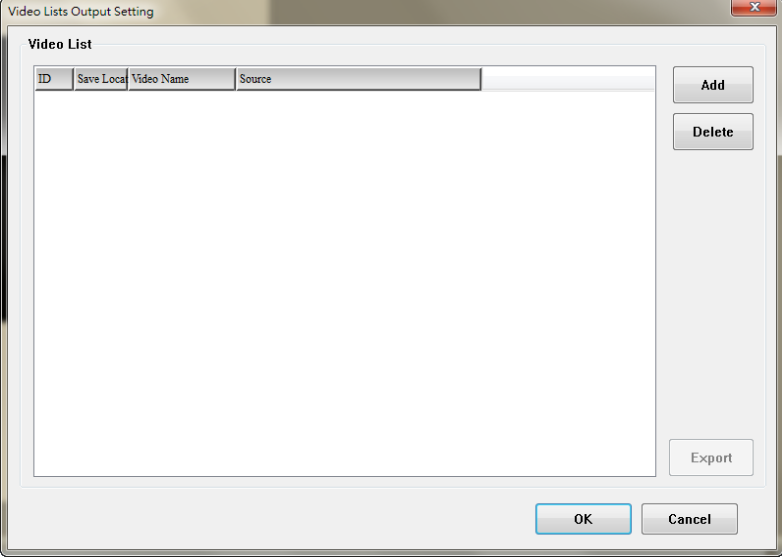
(3) Play List

Play List decides if the video file is to be played through select directly file or set Word register values to specify a different video files to play.
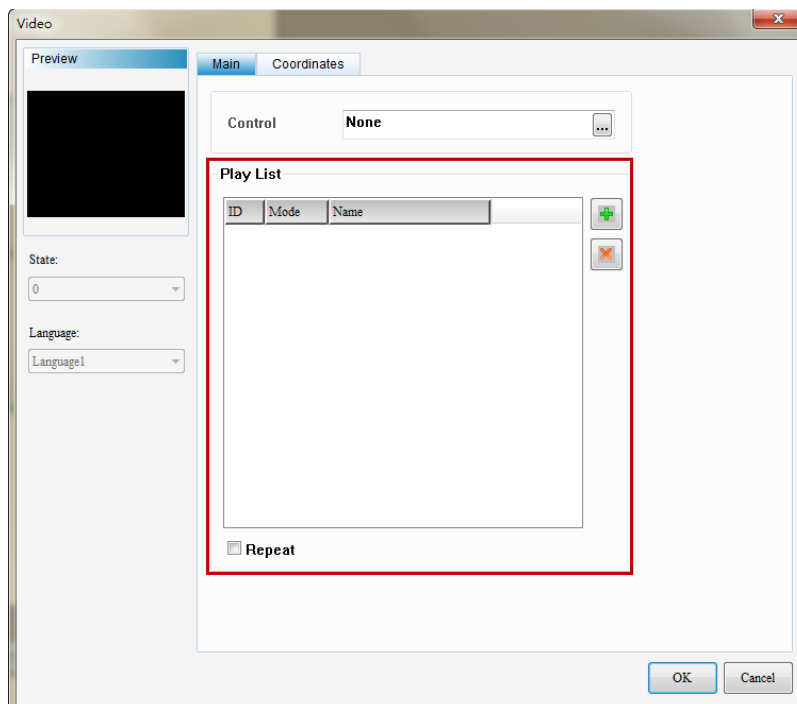
《Figure 2-3》Play List

Video Lists Output Setting, Control address, and Play List are described in the details below.
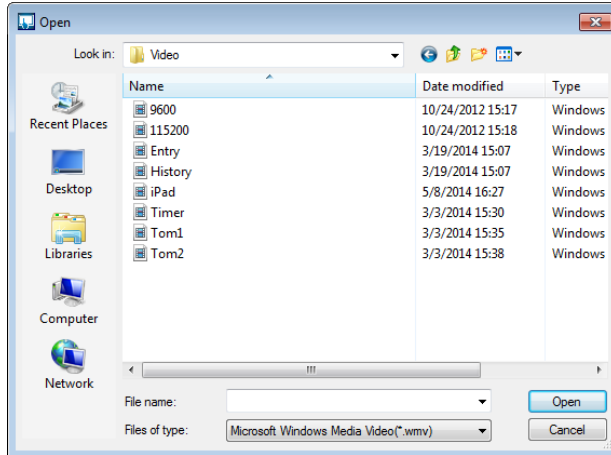
Video Lists Output Setting
《Table 2-1》Video Lists Output Setting
◆   Description of Add, Delete Export button for video file

Video Lists Output Setting
《Table 2-1》Video Lists Output Setting

Add	➢ Once the Add button is clicked, the software will ask the user to select the video file to be played. ➢ The user can add up to 999 (1 ~ 999) video effect files. ➢ If add the 1000th video file, it will display as below following message to inform users.
Delete	➢ Once the video to add is selected, could press Delete button to delete a certain video file ➢ If delete multiple video files, one can click the video file or use SHIFT + left button of mouse or Ctrl + left button of mouse to select multiple file. Once the selection is done, one can click the Delete button to execute deletion of video files.
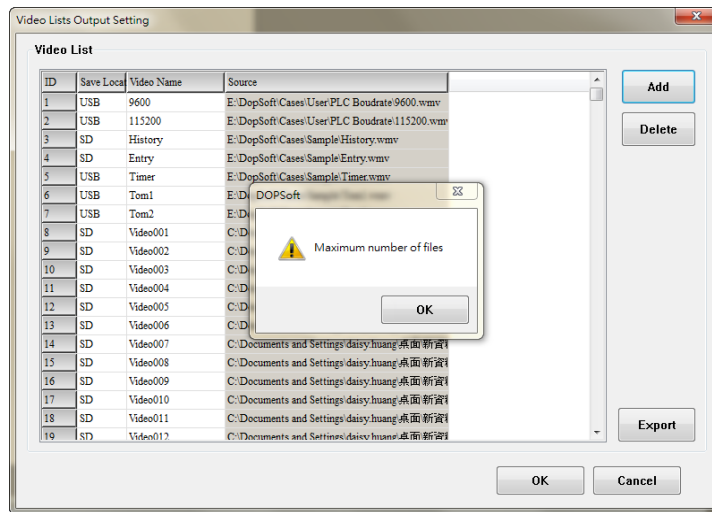
9

Video Lists Output Setting

《Table 2-1》Video Lists Output Setting
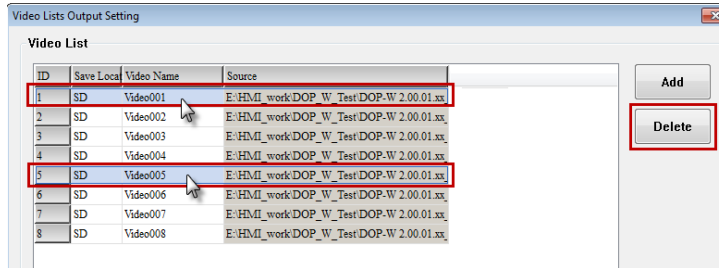
匯 出	 Ctrl + left button of mouse to select multiple file ➤ As below figure display delete selected video files. ➤ Before export video files, please select which device to save. It can be set as USB or SD. ➤ When a video file is being exported, the software will ask the user to select which device to save the file. Please note that the root directory must be selected as the storage location. Namely, do not save the video file in any file folder. ➤ After the video file is exported, one can see that the software is executing the export.
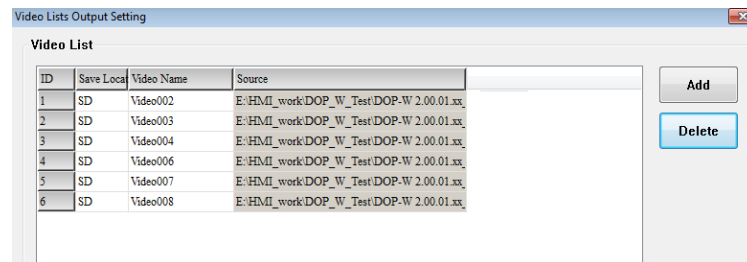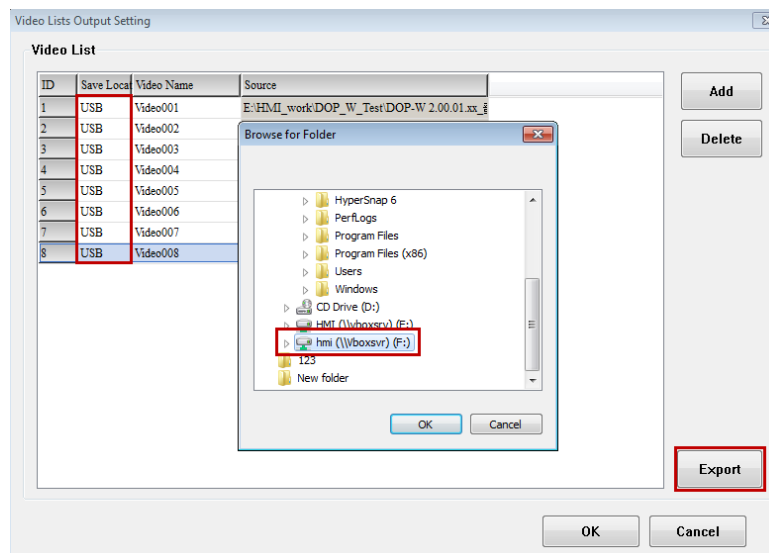
Video Lists Output Setting
《Table 2-1》 Video Lists Output Setting
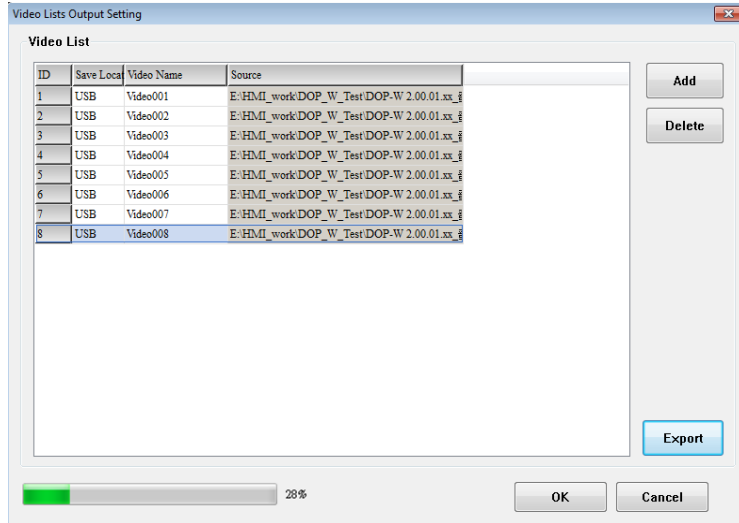
> Upon completion of export, the software will notify the user with a message that the video file has been exported.
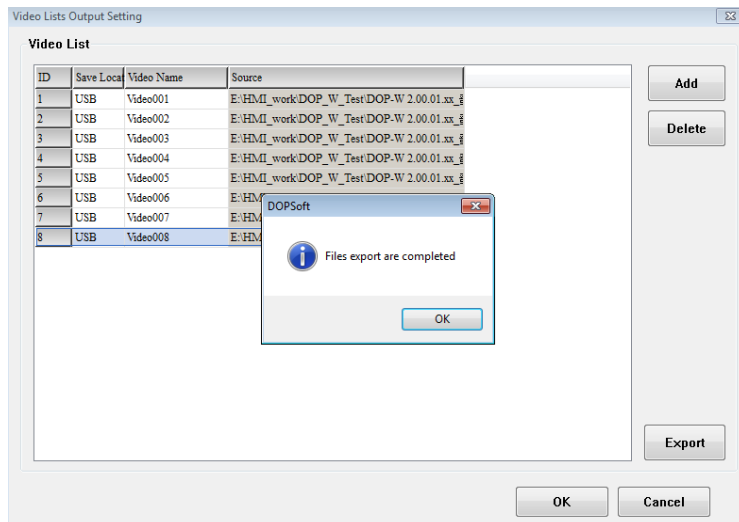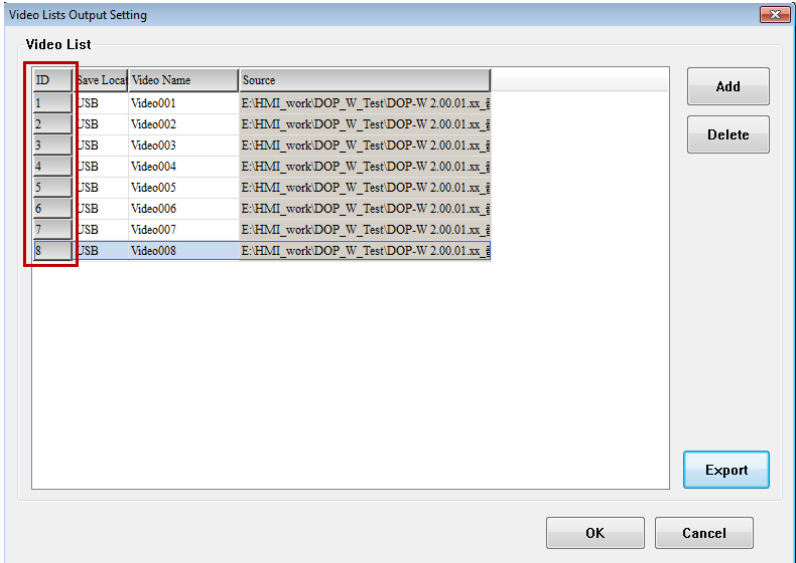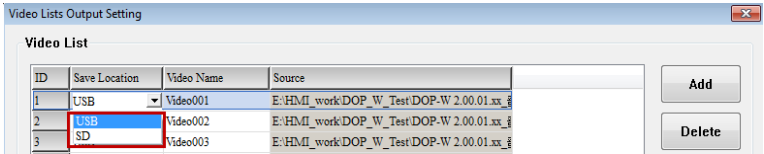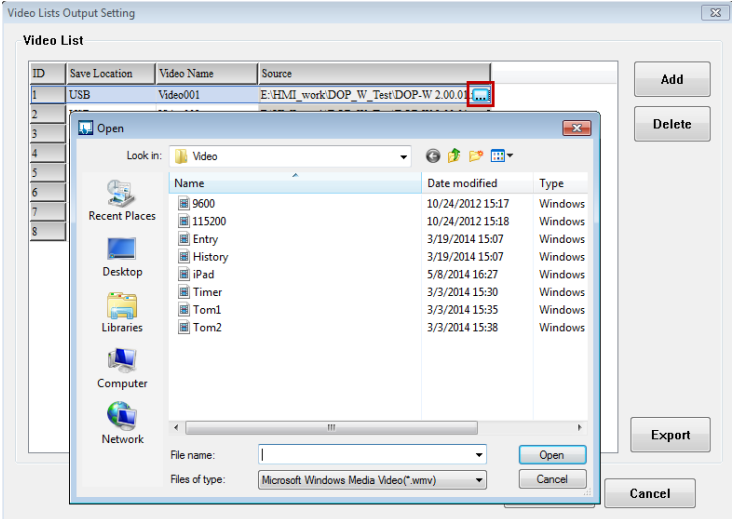
◆ Description of Field Name	
ID	> ID is a major reference value in playing video files. When the user uses Address Read in the Play List, the software will decide which video file to play according to the preset memory addresses.

Video Lists Output Setting

《Table 2-1》Video Lists Output Setting

Save Location	➢ Available Save Locations are USB and SD. The user can change the Save Location as preferred with the default as SD.
Video Name	➢ The filename of the video file added to the list will be displayed as Video, with the first video file starting at 001 and the following files go by Video001, Video 002 and Video 003.
Source	➢ Source refers to the path and address of the video file after being added. After adding the video file, the user can change the source file, namely, replace other video files.

Control Address

《Table 2-2》Control Address

Select Element →multimedia and create video.
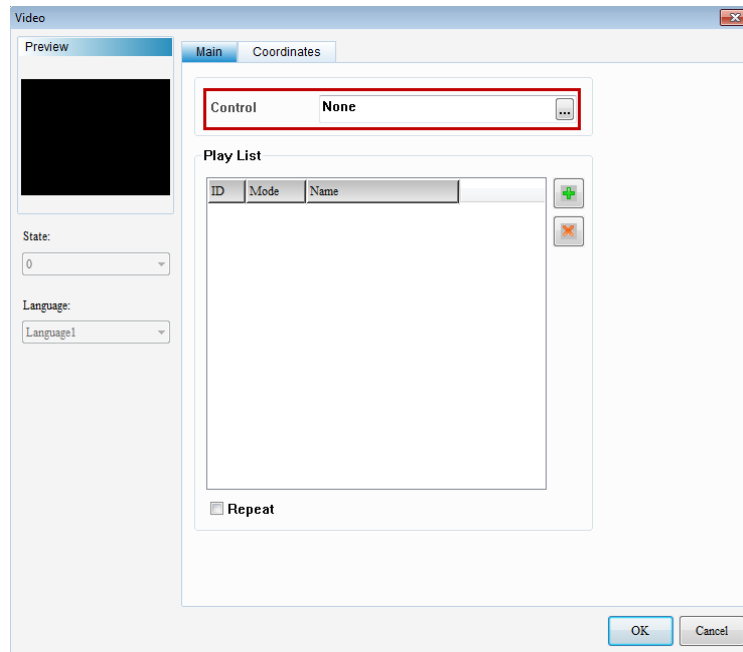
➤ Control address only can be set as Word format to control video play and stop action.

➤ It can be set as controller address and internal address.

Note：

✓ If control addres set as $200, but user could create maintained button to set address as $200.0. The operate behavior is press $200.0 means video play, relase the $200.0 means video stop.

Control address	Play	Stop
Controller address (Link1@D100) (EtherLink1@D200)	D100 = 1 D200 = 1	D100 = 0 D200 = 0
Internal address ($200)	$200 = 1	$200 = 0

Play List
《Table 2-3》 Play List
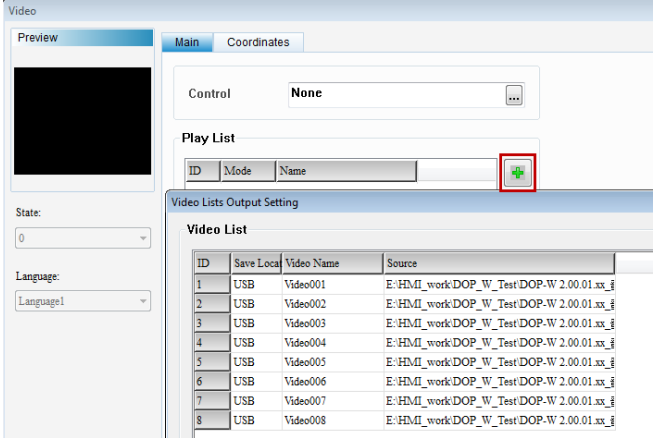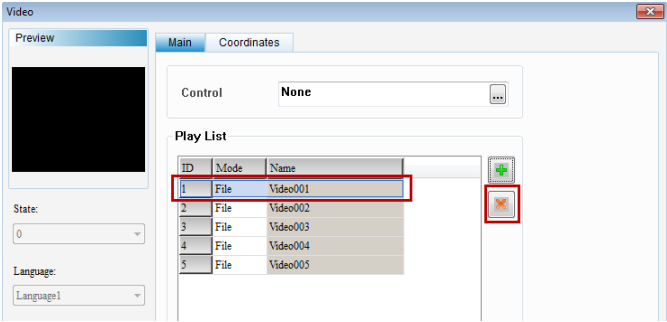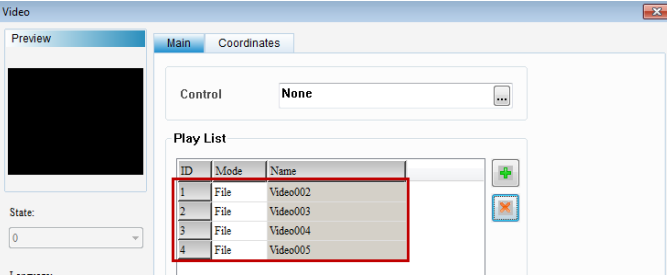
Select Element →multimedia and create video.
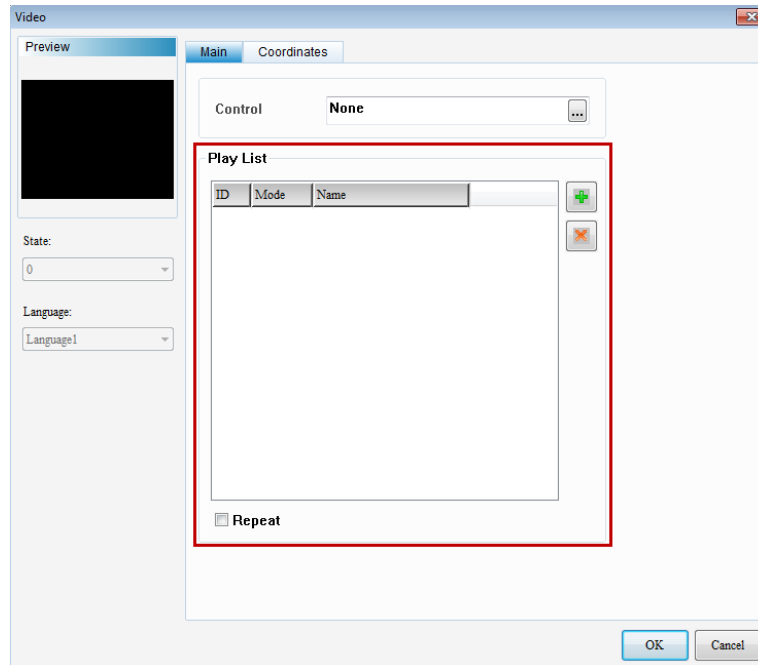
> ➢ Play List includes Add play item and Remove play item.
> ➢ How the Play List is read depends on the video files added to be played.
> ➢ The read methods include File and Address.

Play List

《Table 2-3》 Play List

Add 	➢ When Add play item is selected, the software will ask the user to select the video files to be added to Play List. ➢ After add video item to play list, the default Mode is File. Users could change the Mode to Address or keep the original setting as File.
Remove 	➢ Users could delete unnecessary video file as needed after add in play list. **Before** — ➢ Select Video001 and press remove icon。 **After** — ➢ After remove Video001 will display as below figure.
Mode	➢ Mode includes File and Address. ➢ File: The user directly selects the video files to be played in the list and add them to Play List. When the Word or Bit in

	Play List
	《Table 2-3》Play List
	Control List is triggered, the selected sound files will be played.
	➢ Address: A certain register address will be designated. When the trigger condition matches, the number entered into the register will be read and the corresponding number in [Video Lists Output Setting]→ [Video List] to play the associated sound file.
	➢ Address corresponding number, please refer to the example shown below.
	➢ When the written address is 0, the corresponding number 1 to play the video list; a value of 1, the corresponding list of video playing number 2, and so on.
Name	➢ Name is defined by the fixed filename video with number starting at 001. The filenames of the subsequent files follow
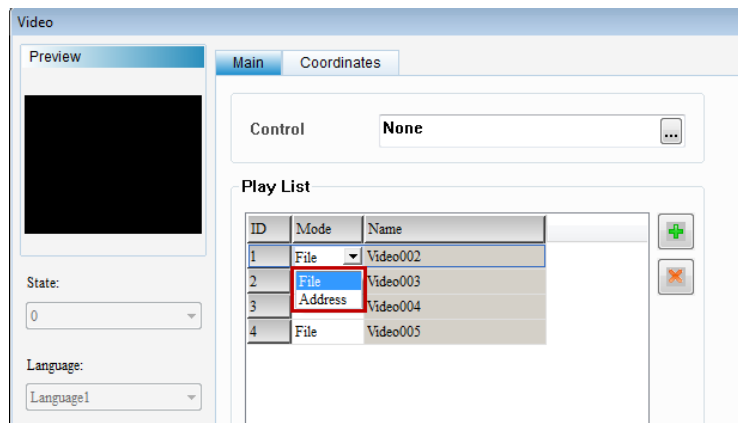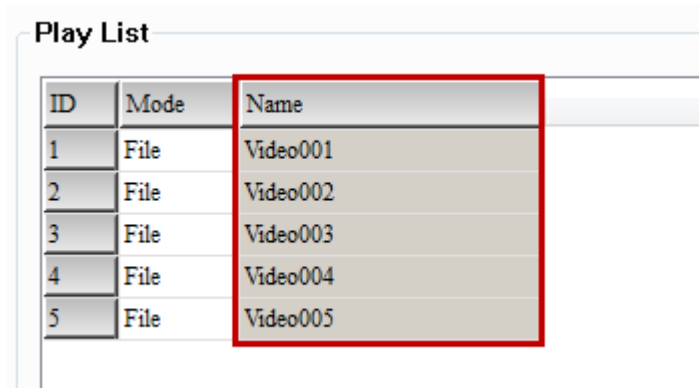
Play List	
Play List	
《Table 2-3》Play List	
	by Video002, and Video003, etc. **Play List** | ID	Mode	Name
---	---	---
1	File	Video001
2	File	Video002
3	File	Video003
4	File	Video004
5	File	Video005	
Repeat	➢ If you check the repeat play, whether the mode is File or Address, will be on the playlist of video play once, and then playing from the first list of repeat play until the user stops the action is triggered to stop playing.
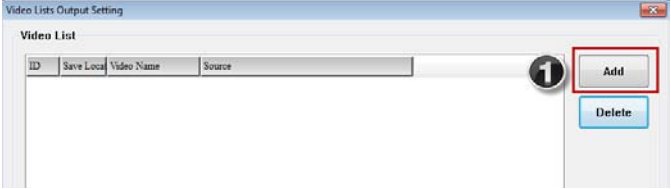
◆ The setup example of Video will be described below.
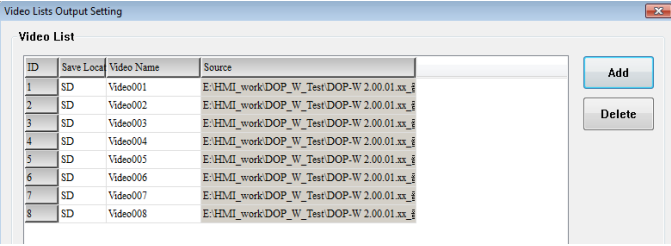
Example of Video
《Table 2-4》 Example of Video
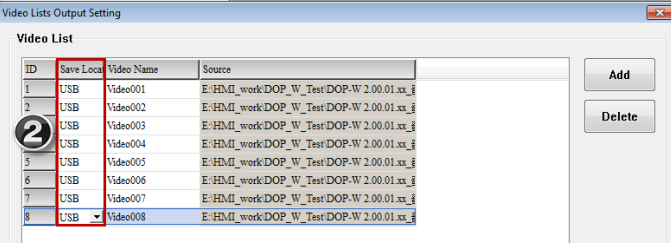
Video Lists Output Setting	❶ Please select Options →Video Lists Output Setting and press add button to select video. After add video, it will display as below figure. ❷ Please set Save Location as USB. ❸ Please press Export button. After execute Export, it will ask users to select storage device.
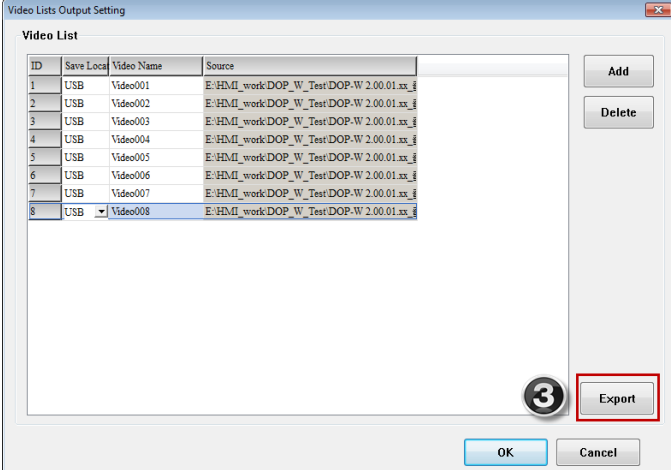
	Example of Video
	《Table 2-4》 Example of Video
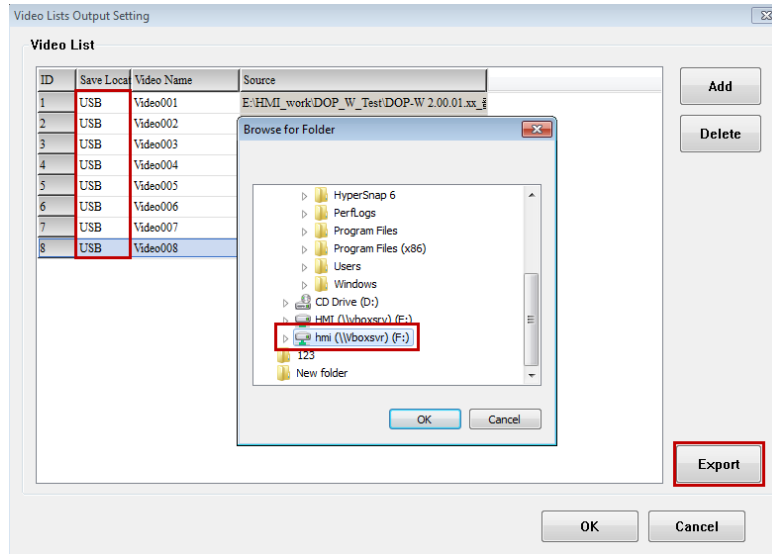
	 After press OK, it will export the video to USB device.

Video	❶ Please select Element → multimedia and establish a video.
	❷ Double Click the video and set parameter as below.
	    A. Set control address as $201.
	
	    B. Press [+] icon to add video file to play list.
	
	    C. The play list of added video file.
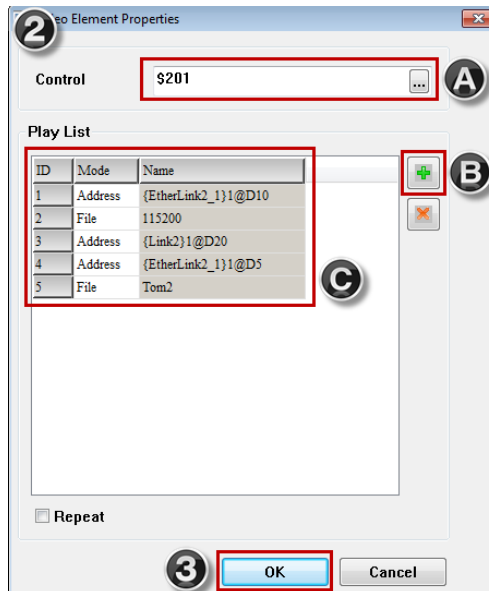	
	❸ After complete the setting, please press OK to finish the Video parameter.
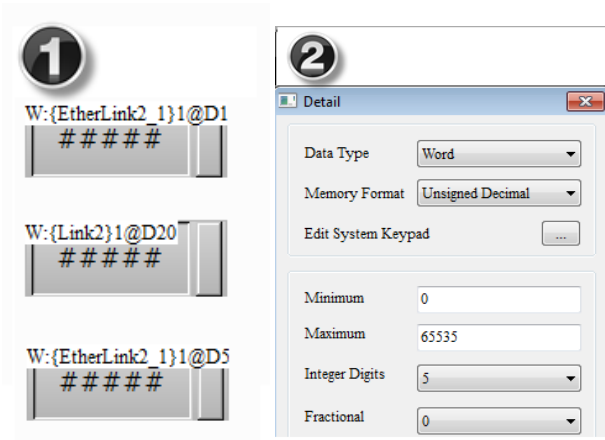
Example of Video	
《Table 2-4》 Example of Video	
Create Maintained Button (Video Play)	➢ Create Maintained button and set address as $201.0. **Maintained** Preview / Main / Text / Picture / Details / Ma... **Video Play** Memory Write Address: $201.0 Read Address: None
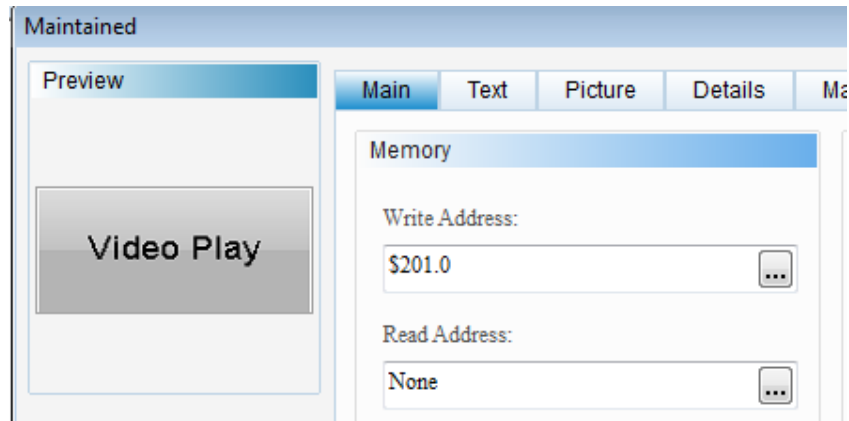
	Example of Video
	《Table 2-4》Example of Video
Create Numeric Entry elements	❶ Create three numeric entry elements and set as below address like {EtherLink2_1}1@D10, {Link2}1@D20 and {EtherLink2_1}1@D5. ❷ Set Data Type to Word, Memory Format to Unsigned Decimal, the Minimum value is set as 0, the Maximum value is set as 65535.
Compile and Download screen data to HMI	➢ After finished above setting, please execute compile at first, and then download all screen data to HMI. ➢ Please insert the USB device to HMI before start to play video.
Operating HMI	❶ Please set value as {EtherLink2_1}1@D10 = 2, {Link2}1@D20 = 6 and {EtherLink2_1}1@D5 = 1.

EtherLink2_1}1@D10 = 2	Play History video file
{Link2}1@D20 = 6	Play Tom2 video file
{EtherLink2_1}1@D5 = 1	Play 115200 video file

❷ Press the $201.0, HMI will play the video.
❸ Press the $201.0 again, HMI will stop to play the video.

## 3、VNC

VNC（Virtual Network Computing） is a PC software used to help the customers view and check the same screen shown on W series of HMI at the production site, and control the manufacturing process via Ethernet. No matter where you are, remote controlling is not an arduous task at all.

## 3.1　Connection introduce for HMI

☞ **Create HMI Project File**

Start DOPSoft software program for w series and click **File > New** or click **New** icon to create a new project. Then, click **Element > Input > Numeric Entry** to create two numeric entry elements ($3 and $6) on the screen. In this case, W105B type DOP W series HMI is used.
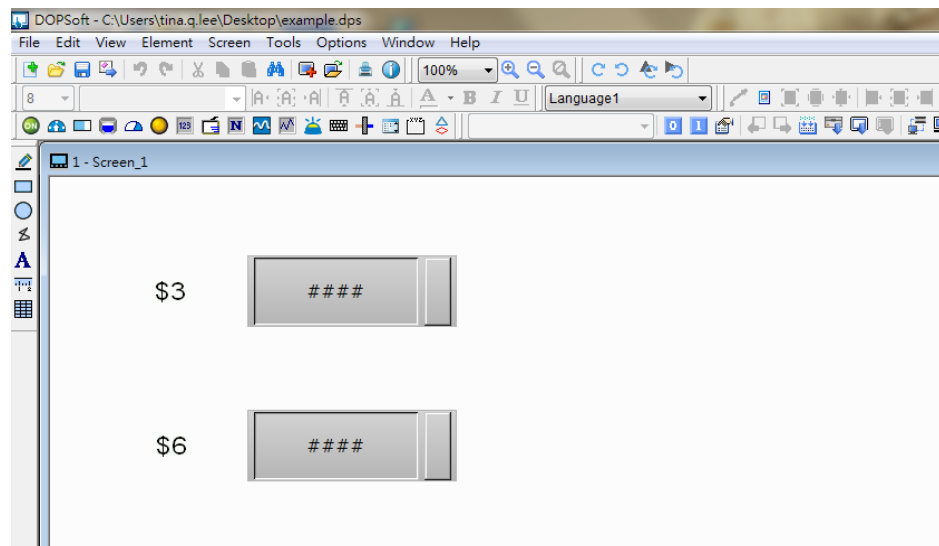
Use Screen Cycle Macro and enter the following commands in macro command window.
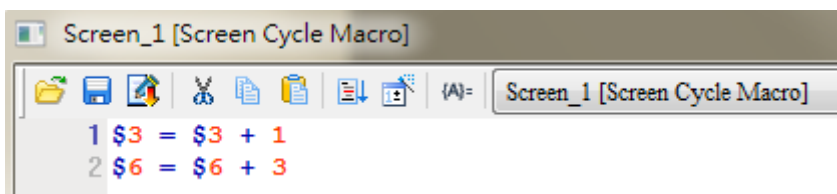
Click **Options > Configuration > Network App > LocalHost,** check the Application (Net App VNC) function **Enable.** Then, press **OK** button to finish the settings.
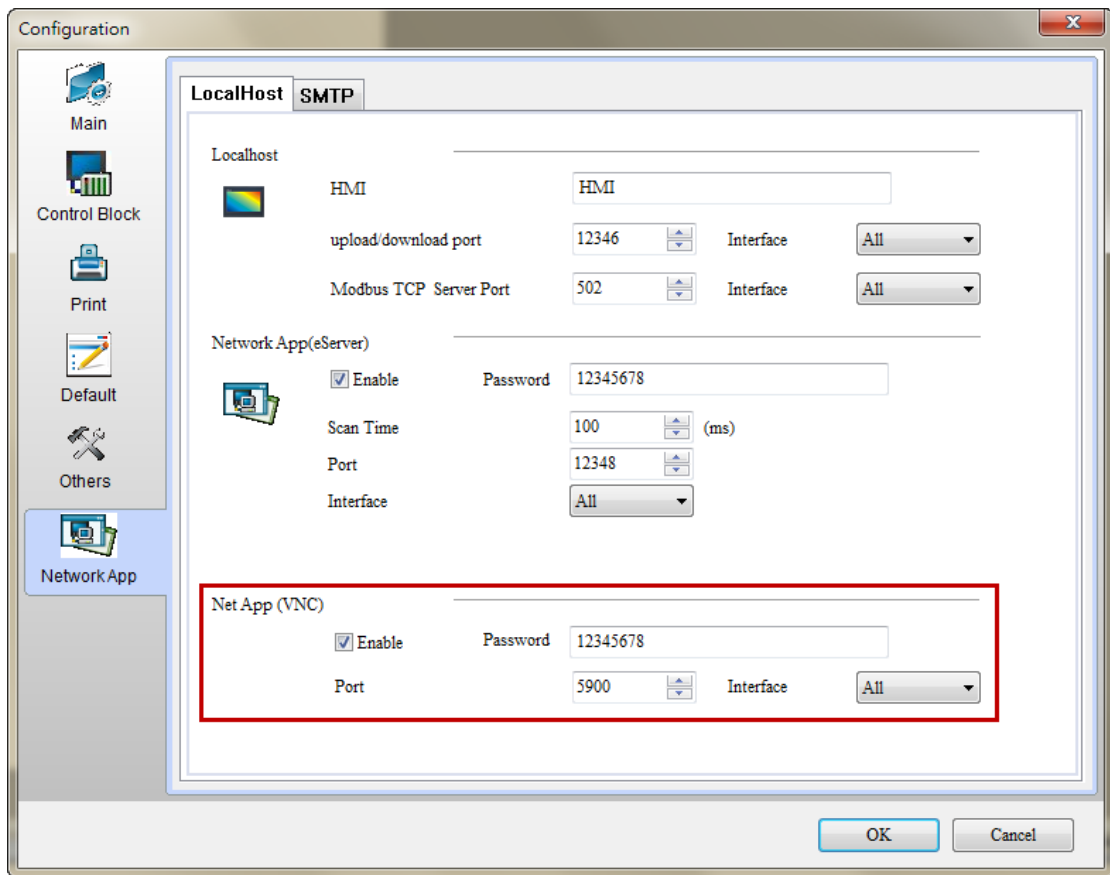
After finishing above setting, please compile and download all screen data to HMI.

3.2 VNC Setting

There are three ways to use VNC Viewer to connect with HMI.

- **Computer Software**
- **Web Browser**
- **Android App**

3.2.1 Computer Software

☞ **Software installation**

Please following the below URL link to download VNC software which adapt the operating system.

http://www.realvnc.com/download/vnc/latest/

After double clicking VNC-5.2.0-Windows file downloaded from the website exe file, the following dialog box will appear. Click on Run button to install VNC.

Please click on **Next**.
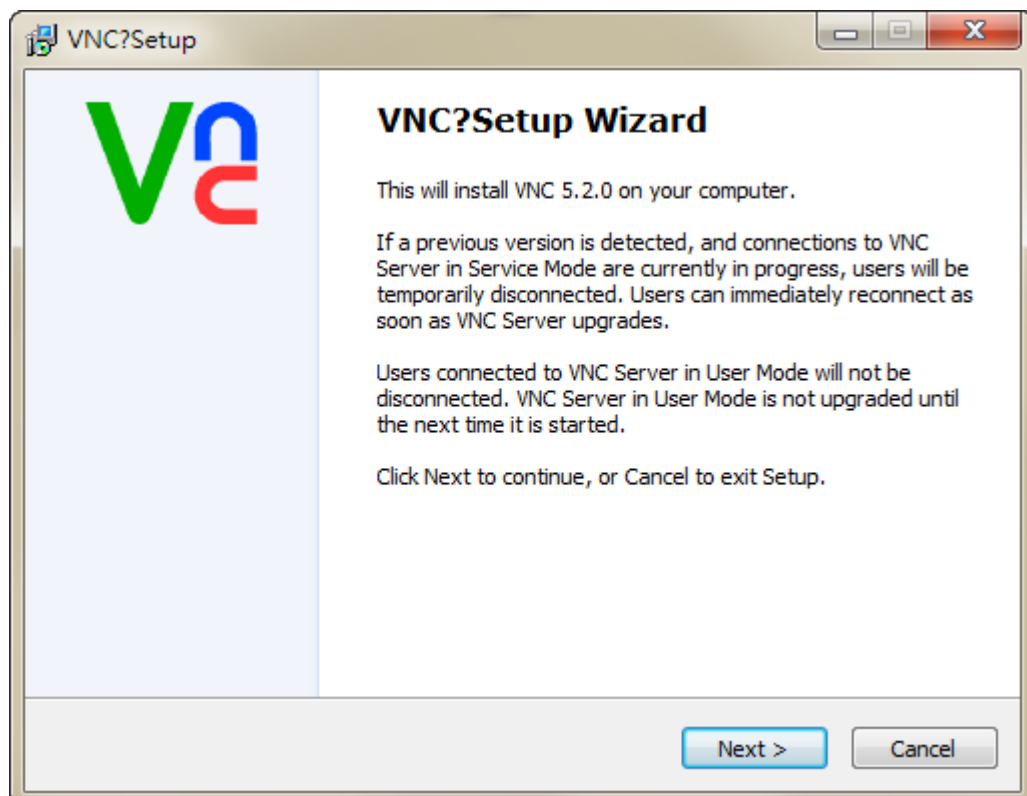
Please choose **I accept the agreement,** and then click on **Next**.
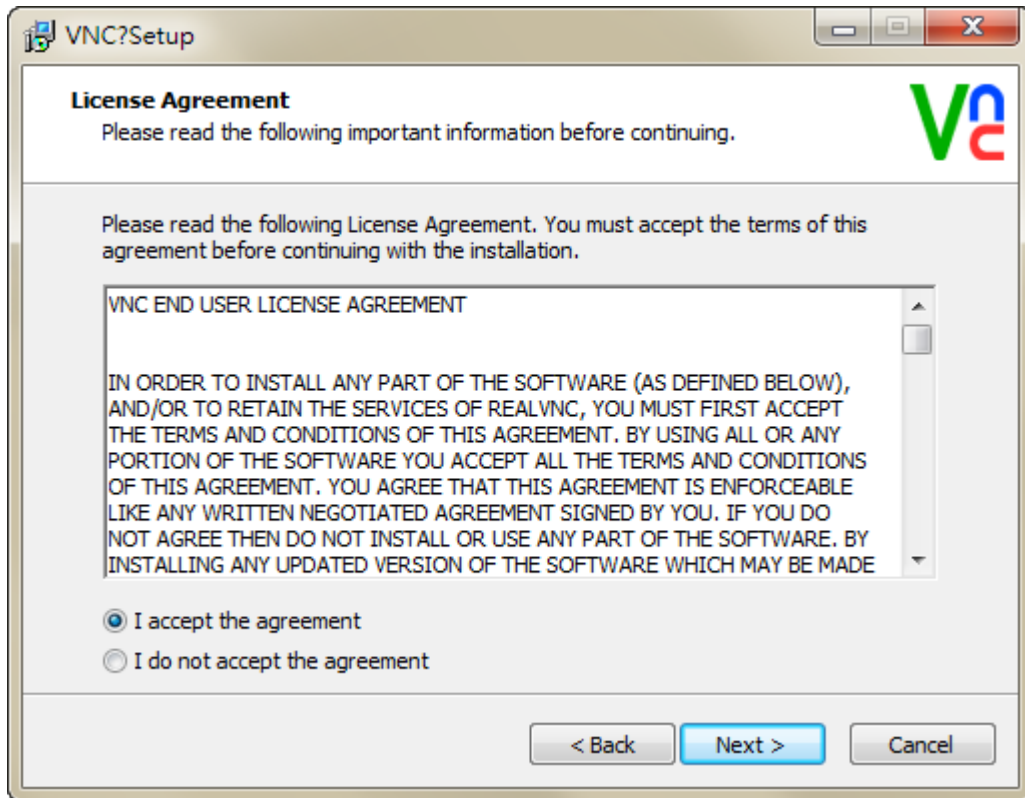
Please check all components, and then click on **Next**.
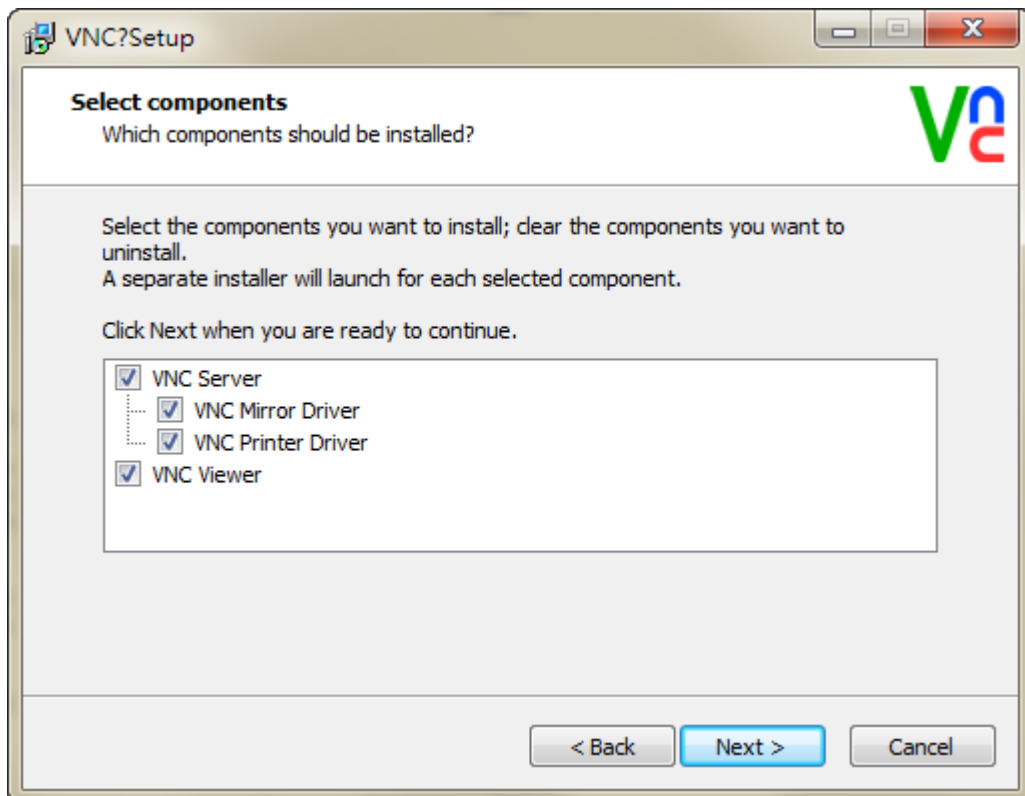
Select the default directory C:\Program Files\RealVNC\VNC Server, and click on **Next** button for the next step. To select a directory other than the default directory, click Browse.
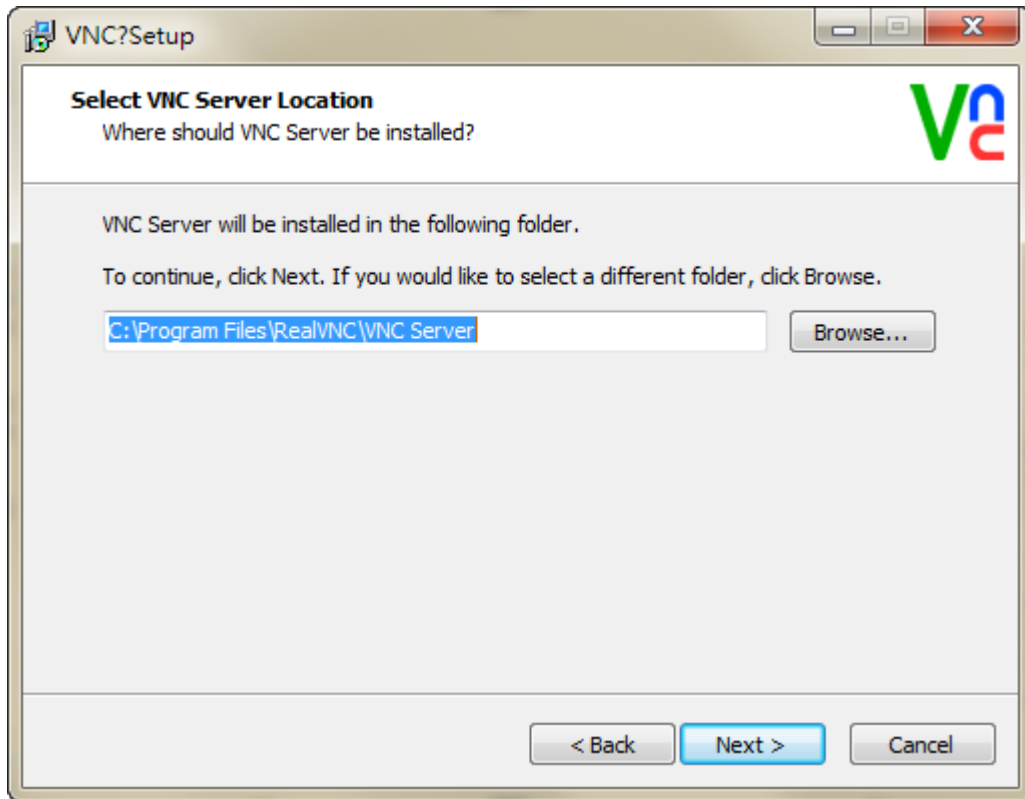

Select the default directory C:\Program Files\RealVNC\VNC Viewer, and click on Next button for the next step. To select a directory other than the default directory, click Browse.
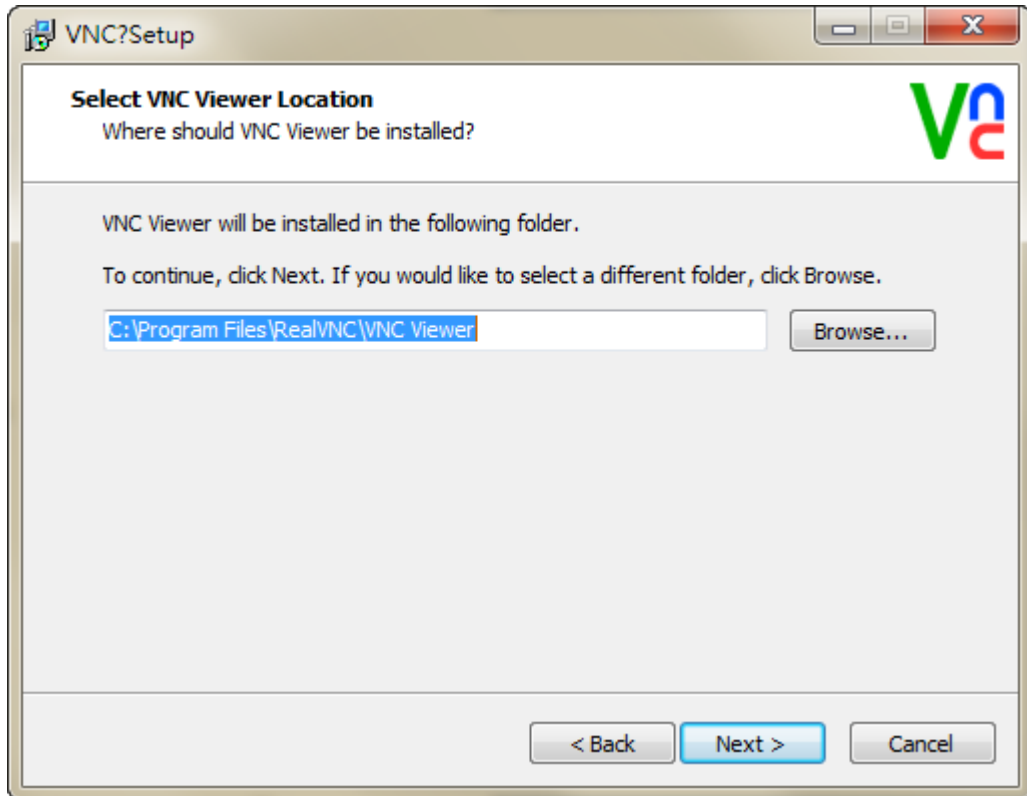
User could check create a VNC Viewer desktop icon option or not and then click on **Next**.
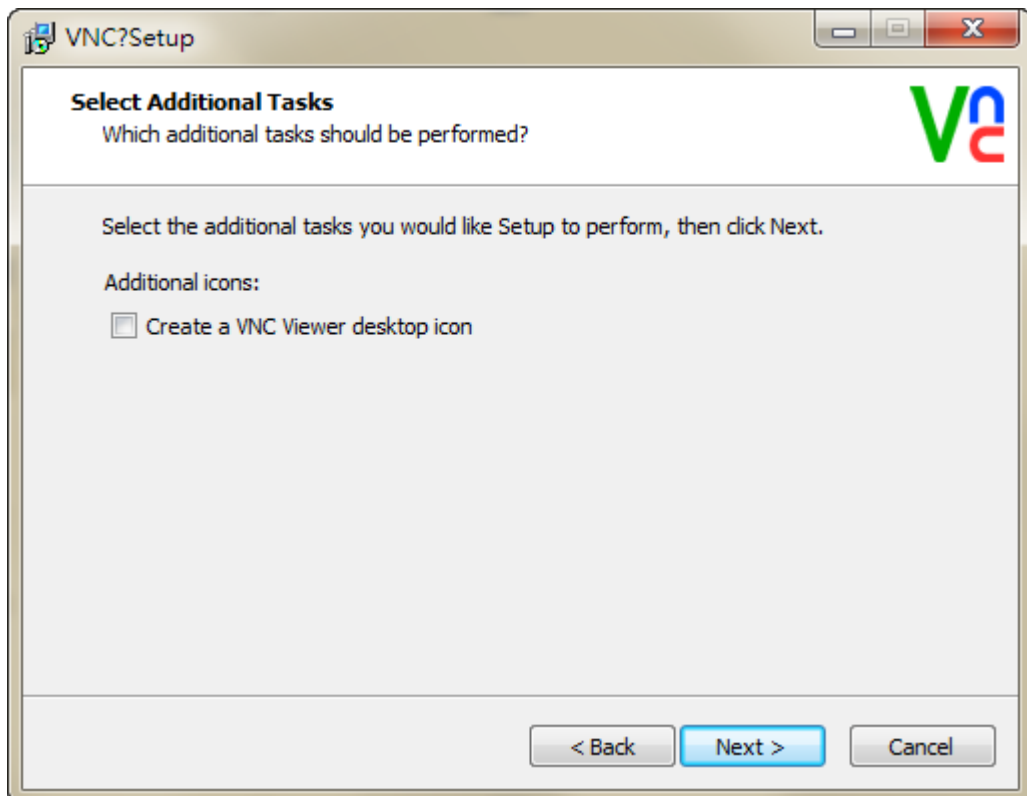
Please check the **Add an exception to the firewall for VNC Server**, and then click on **Next**.
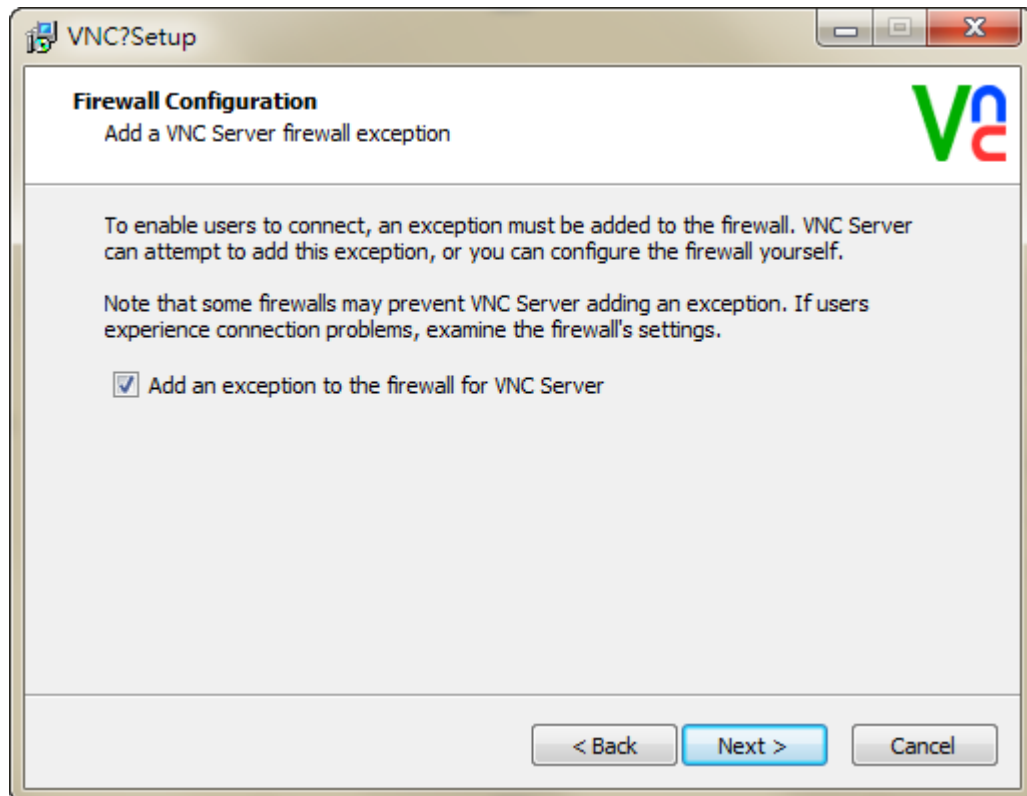
Please click on **Install** button to install VNC.
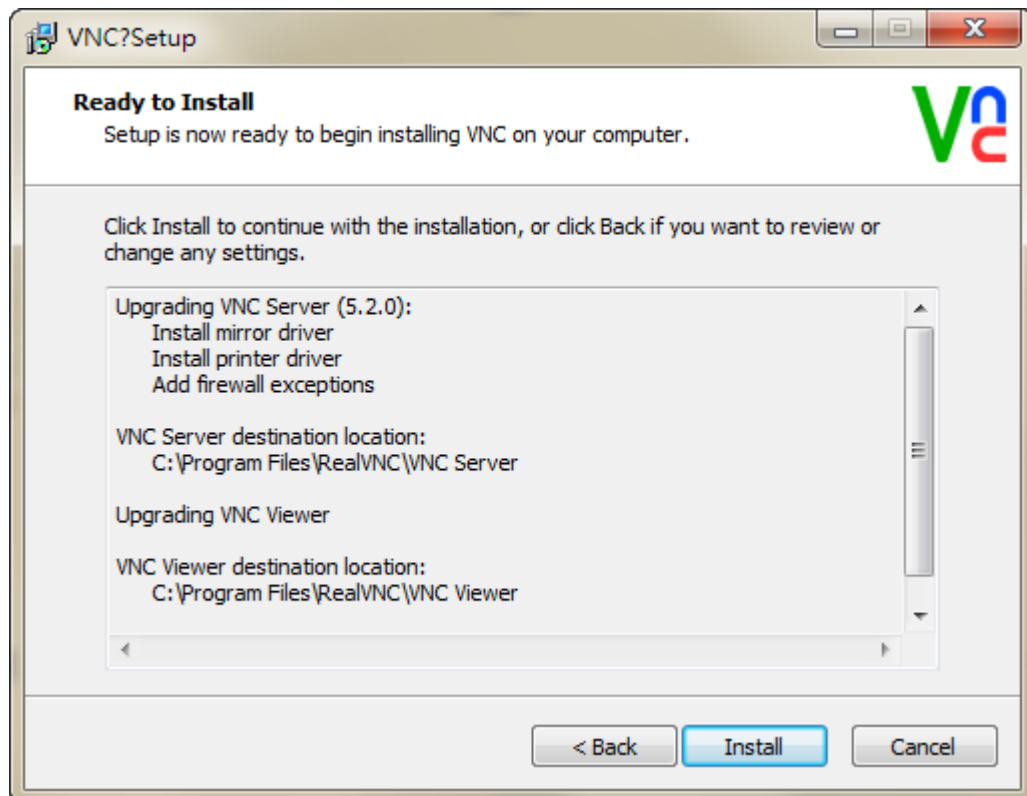
Click on **Finish** button to complete VNC setup.
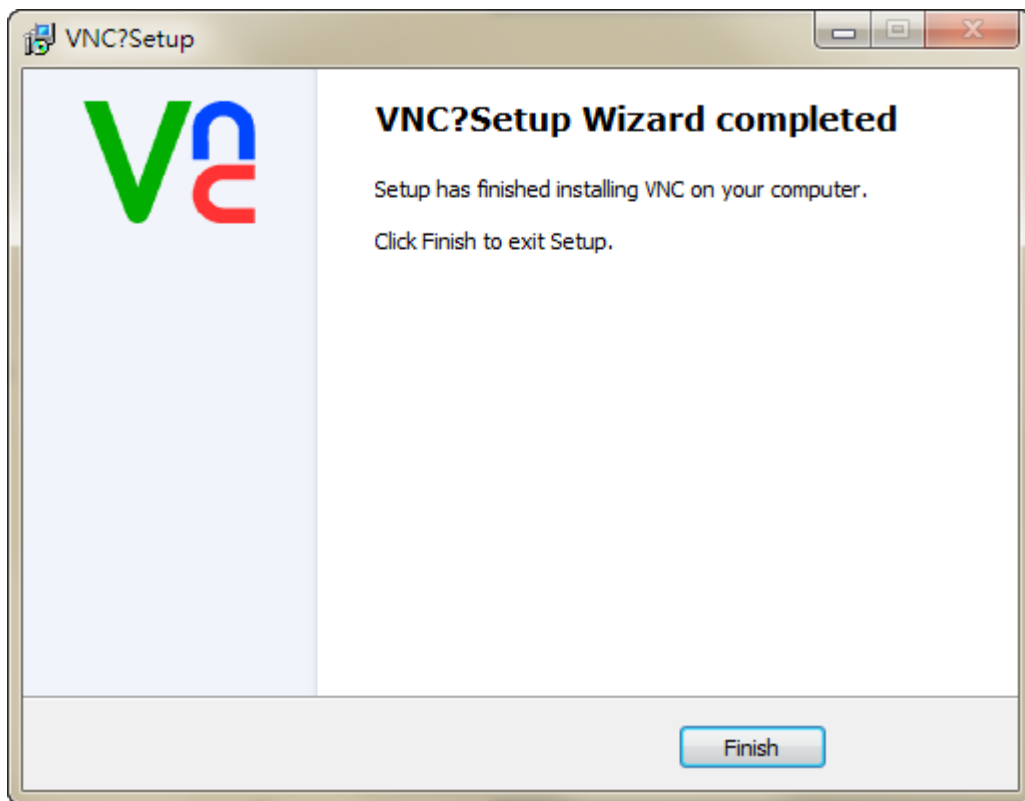
- ☞ **Start VNC Viewer**

Start VNC Viewer and following as below setting, click on Connect.

- ✎ VNC Server：Please input VNC Server IP Address and connection port. The IP Address is HMI IP Address and the connection port is click **Options > Configuration > Network App > LocalHost of DOPSoft,** set port of the Application (Net App VNC) function. The connection example for HMI IP Address is **192.168.123.26:5900**. If DOPSoft software changed the port to 5902, the VNC Viewer must be input 5902 to connect.

- ✎ Encryption：Please select **Let VNC Server choose.**
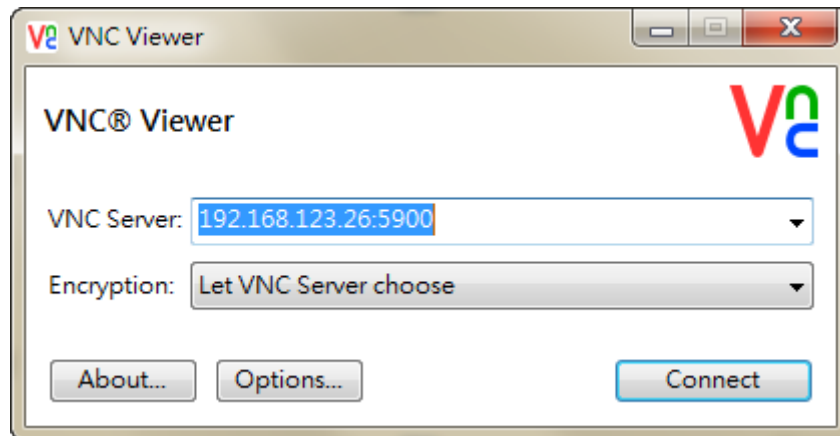
If connection is successfully, it will appear the following window to remind user this connection is unencrypted. User could ignore this warning and click on **Continue**.
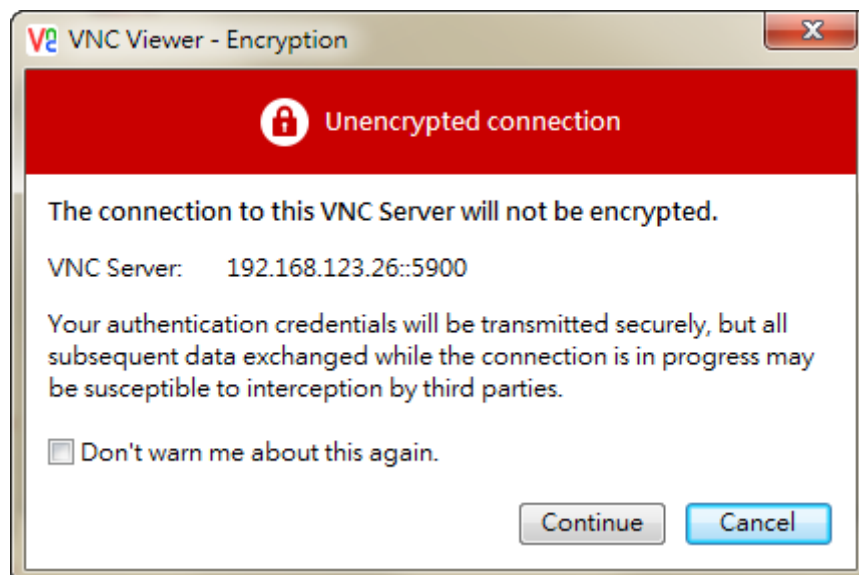
But if connection is failed, it will appear the following window. It means the IP address does not exist or the VNC network application is not enabling.
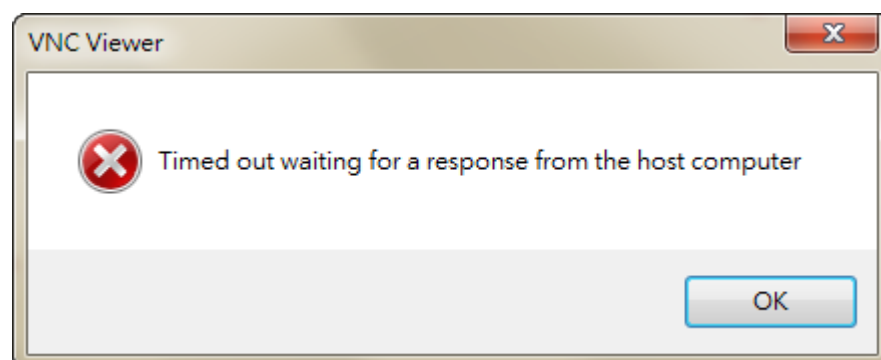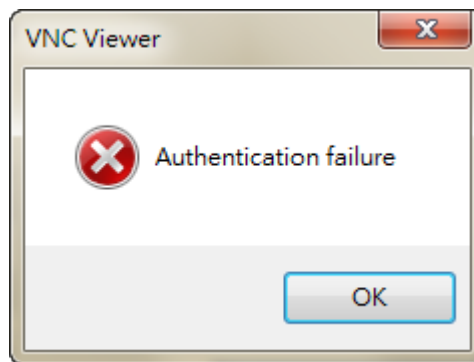

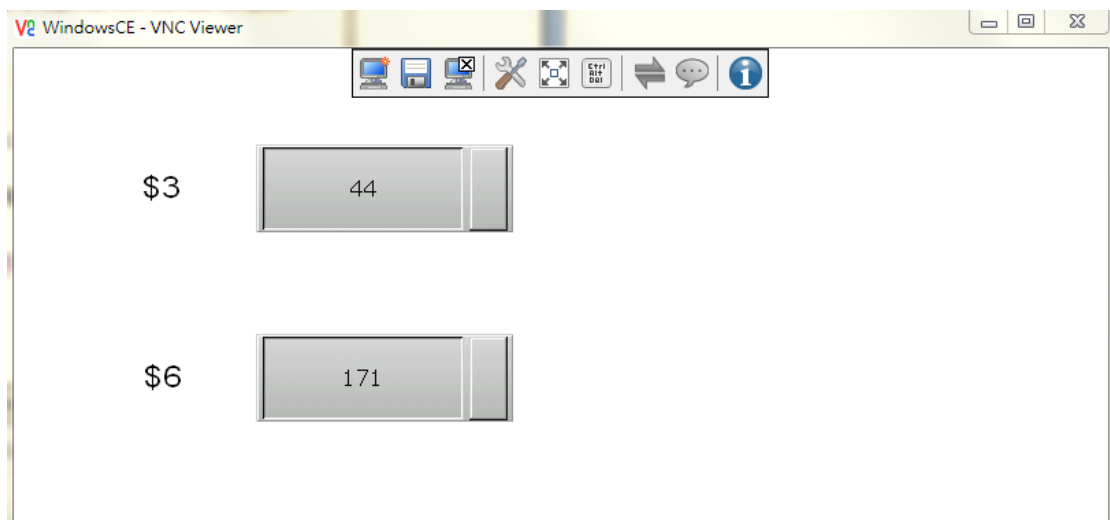After connection successfully, VNC will ask user to input the

connection password for HMI and VNC. The password is [DOPSoft Network App password setting of VNC](#), default is 12345678.
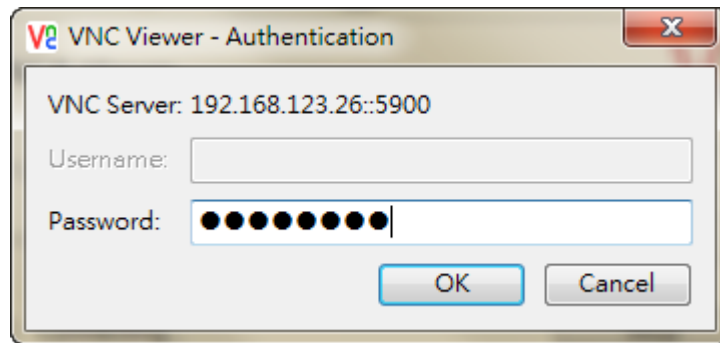
If type incorrect password, it will appear the following message.

After authentication pass, the connection is established.

3.2.2 Web Browser

VNC Viewer also provide web browser, it is have an easy connection way with typing HMI IP address and port number.

Note：

✓ The default connection port number for web browser is 5800. Please do not set the connection number port to 5800 in VNC network setting in DOPSoft. If user set to 5800, after download to HMI, it will appear following as below message to inform user to change port number.

✓ It needs to install JAVA to open the browser.

Step1. Open the web browser, for example is using Google Chrome.

☞   Google Chrome browser connection example:

Please type the IP address and port number:

http://192.168.123.48:5800/.

☞   IE browser connection example:

Please type the IP address and port number:

http://192.168.123.26:5800/.

☞   Firefox browser connection example:

If use Firefox browser to connect, please turn off the proxy at first.

Then type the IP address and port number:

http://192.168.123.26:5800/.

If type incorrect IP address, it will not display any content.
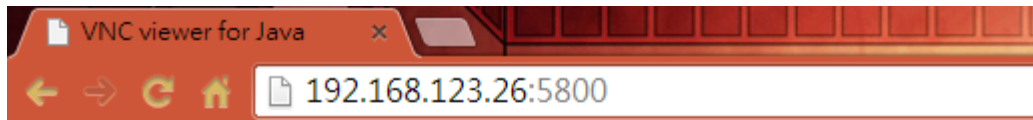
After typing the correct IP address, it will appear following as below window, please click on OK.
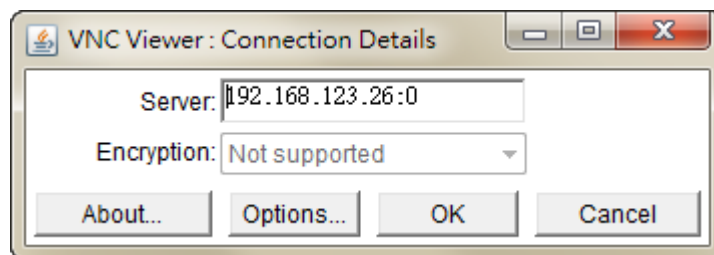
Step2. Please input the password to connect with HMI, the default password is 12345678 which set from DOPSoft VNC.
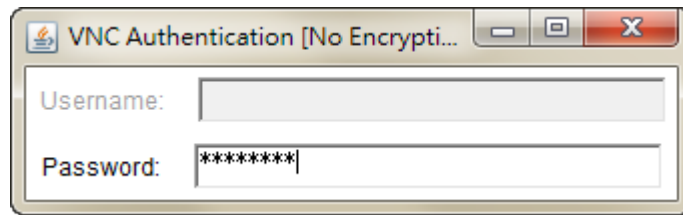
If type incorrect password, it will display as below error message.
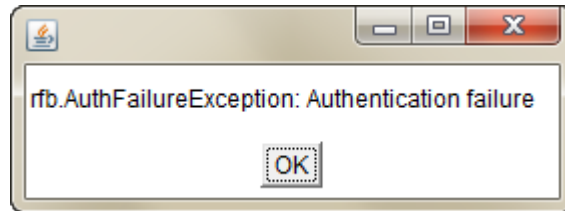
Step3. After authenticate successfully, the connection is established.

c. **Android App**

Please get the VNC Viewer App from Google play store at first. After download, please execute the app to finish the following steps.
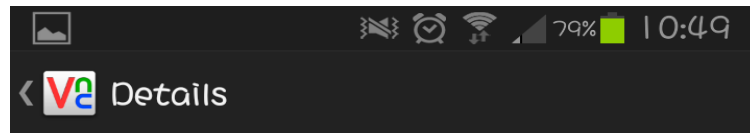
Step1. Please click on the bottom left corner 【 + 】 to add new

connection.
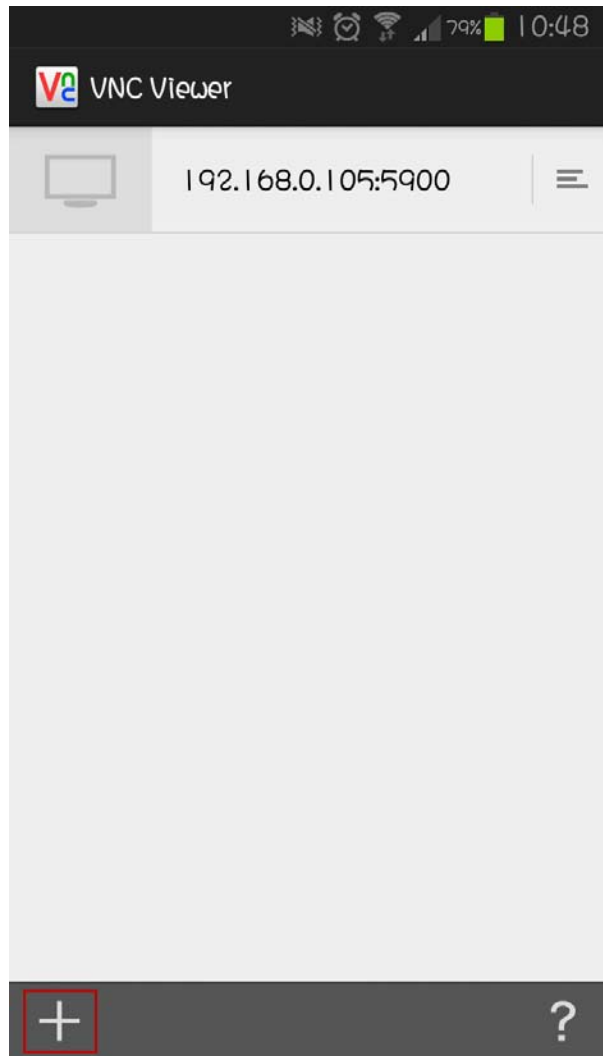
Step2. Input the connection IP address and connection name.

(1) Please input HMI IP address and port number.

(2) User could custom the connection name.

(3) Please do not check the save password option.

(4) After finishing above setting, please click on the below icon.

Step3. Complete the setting, it will display as below figure.
Please click on **Connect**.
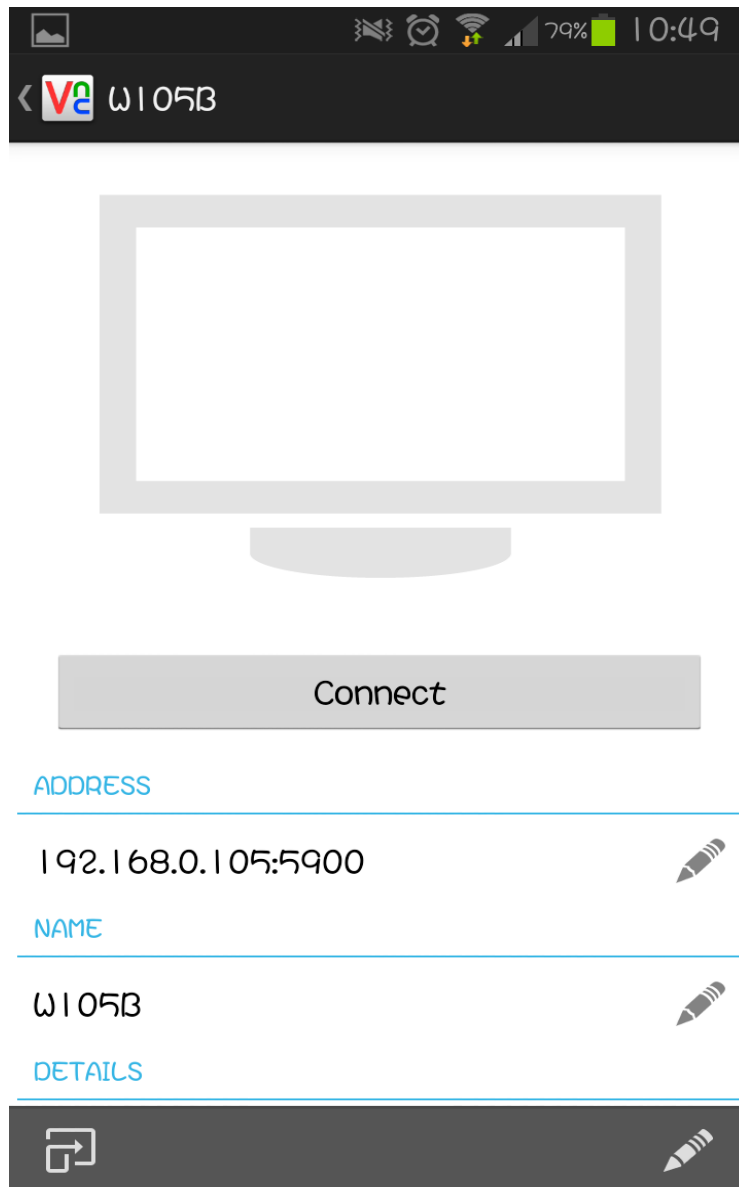
If input the incorrect IP address, it will appear the following message.
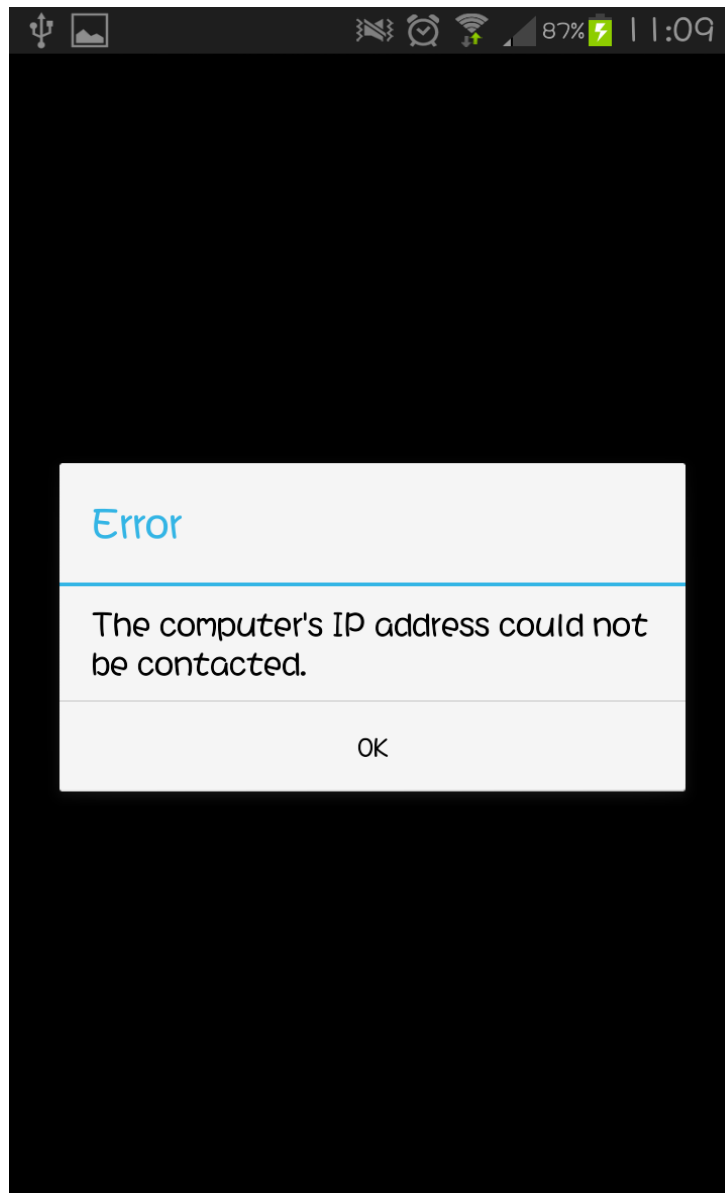
Step4. It will ask user to input the password to connect with HMI, the default password is 12345678 which set from DOPSoft VNC.
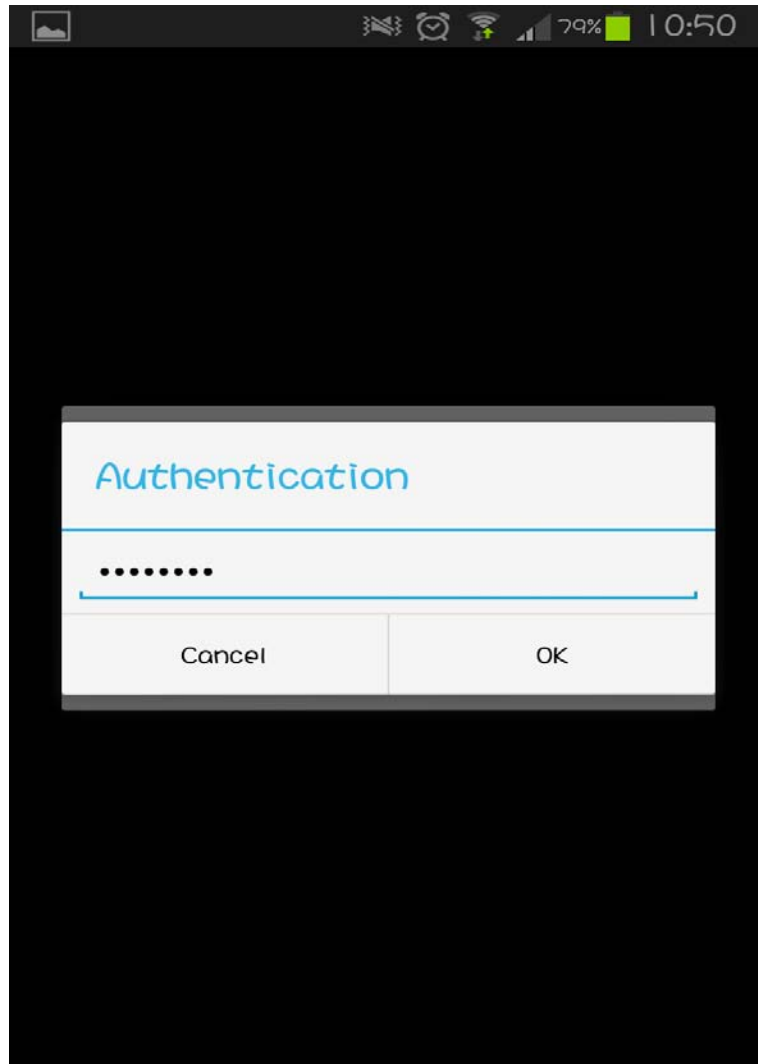
If input the incorrect connection password, it will appear the following message.
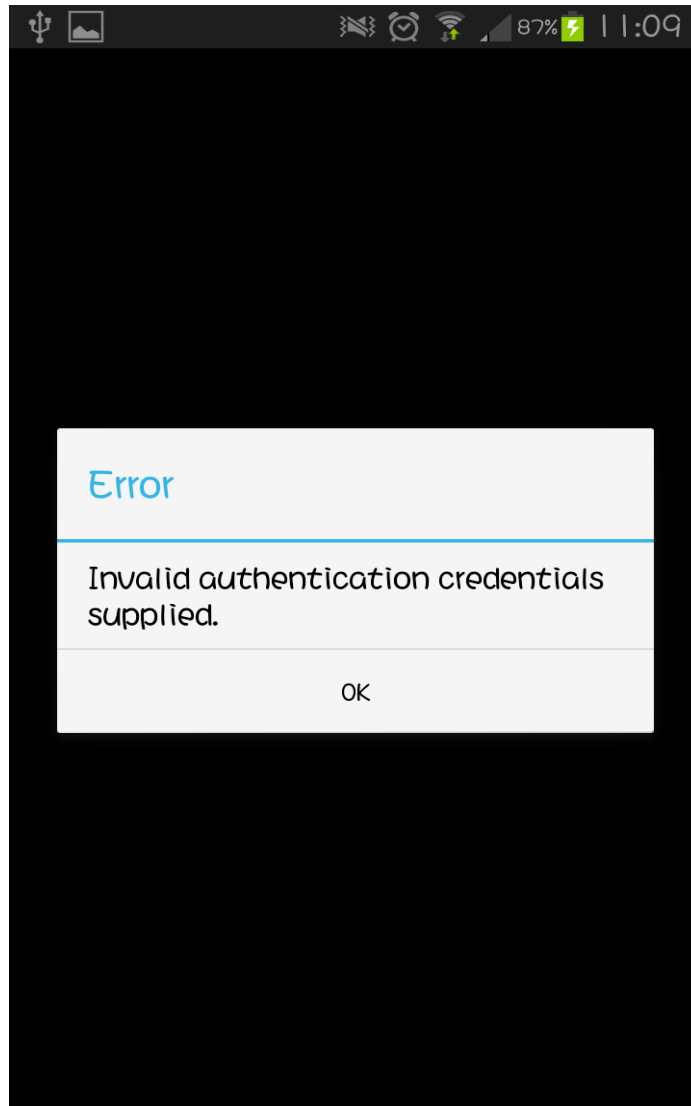
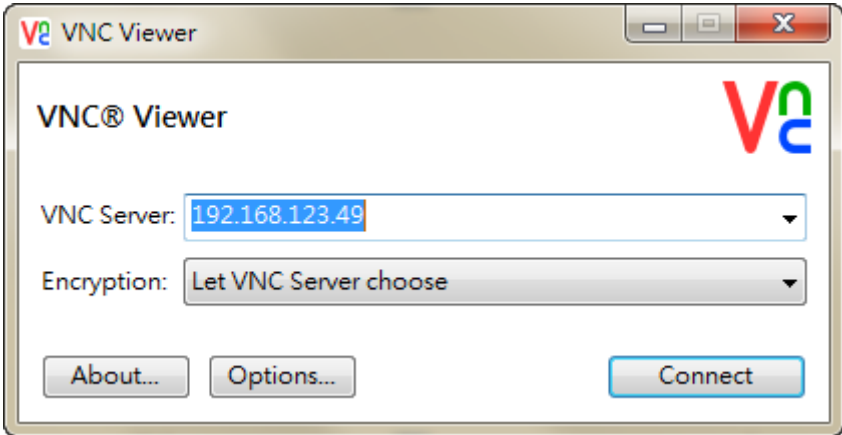Step5. After authenticate successfully, the connection is established.
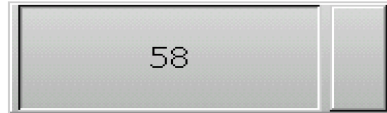
3.3 VNC Viewer Detail Setting

After the VNC Viewer connected with HMI, move the mouse to the upper window, it will appear the tool bar.
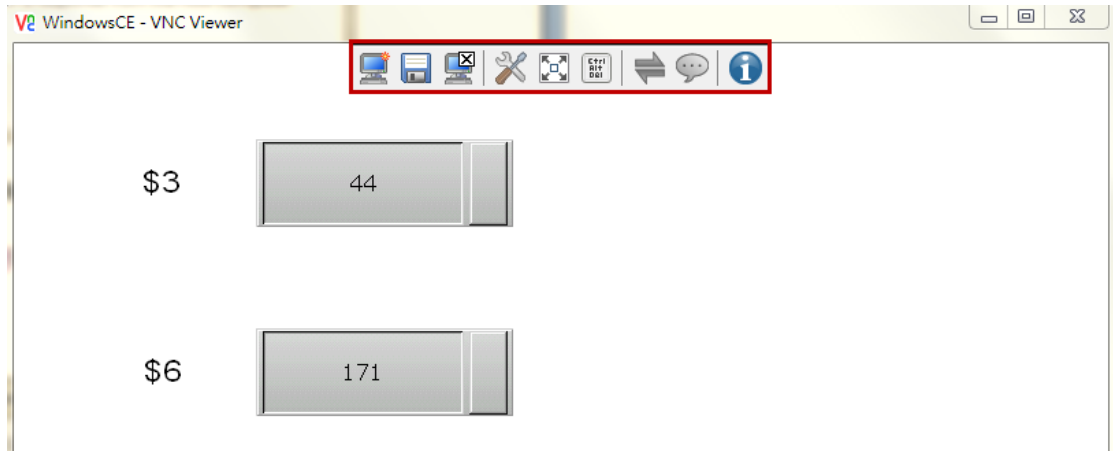
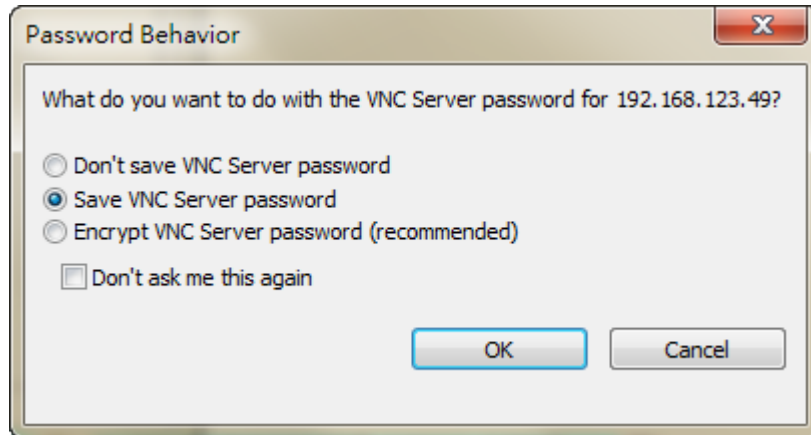The following table will introduce related function.

	New connection	Use new connection could operate multiple HMI.

1. Click on 🖥, it will appear as below window to type another HMI IP Address for operating.

2. After new connection establishing, the VNC Viewer is connecting with two HMIs.
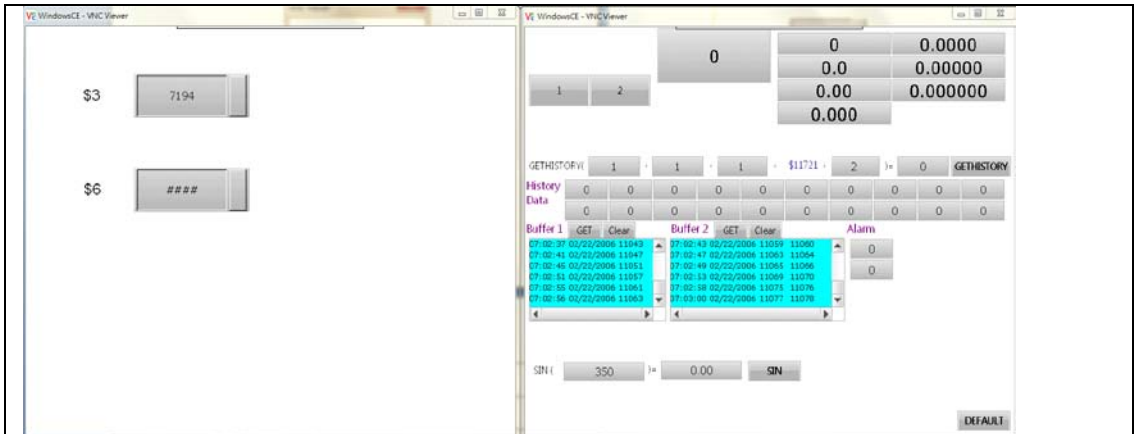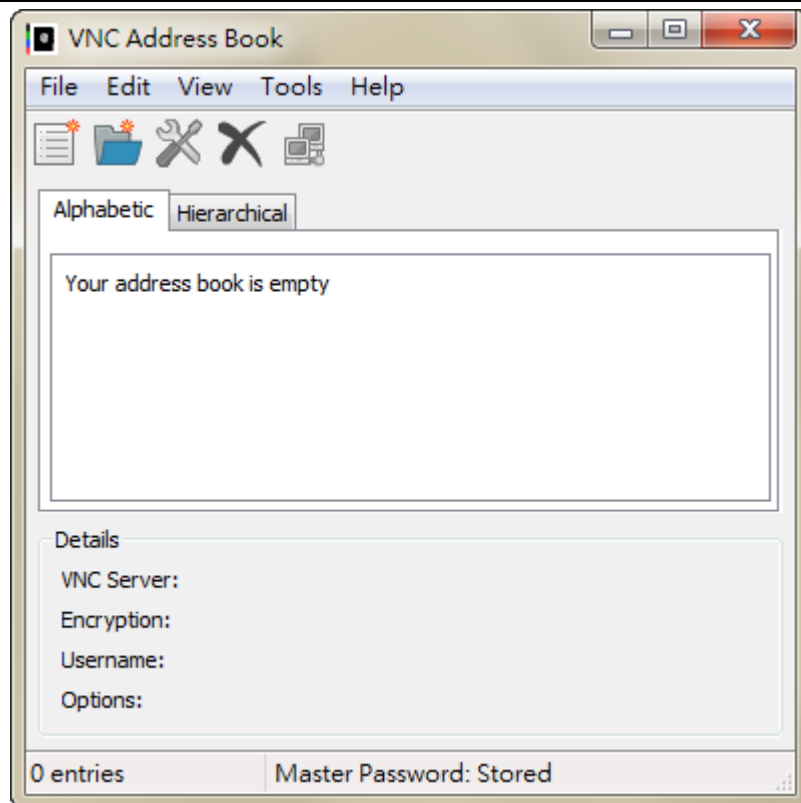
|		
	Save Connection	The save connection function could save the configuration for next time connection. User executes connection without type IP address and password.

1. Click on , it will appear as below two windows.

Password Behavior

What do you want to do with the VNC Server password for 192.168.123.49?

○ Don't save VNC Server password
◉ Save VNC Server password
○ Encrypt VNC Server password (recommended)

☐ Don't ask me this again

OK   Cancel

Please choose **Save VNC Server Password** in **Password Behavior** window, and then click on **OK** to save connection.

After saving, the configuration is saved as to **VNC Address Book**.
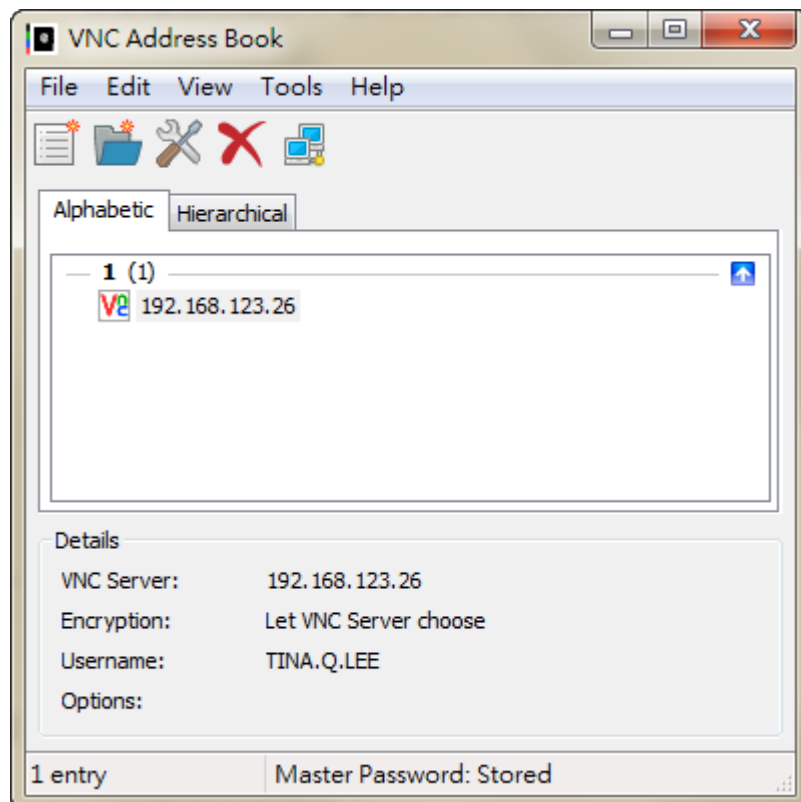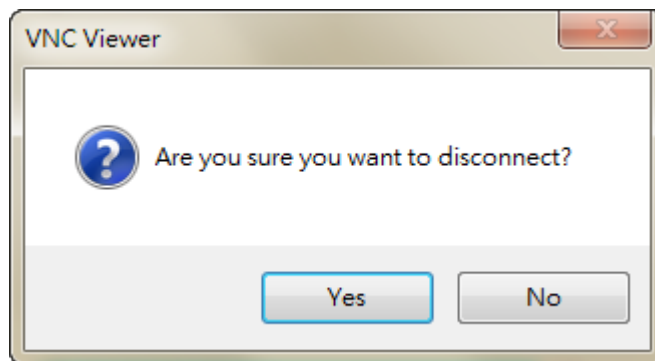
User also saves multiple connections as below figure.
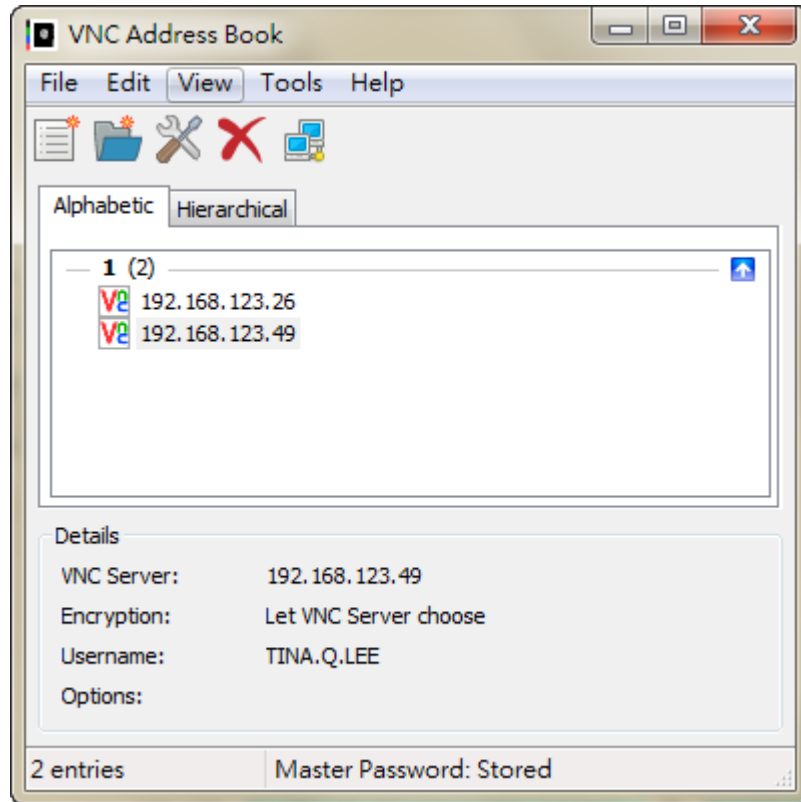
Only start VNC Address Book and select the connected IP address when next connection.

	Close Connection	Close connection will close VNC Viewer with HMI connection

Click on , it will ask users the following question.

Click on **Yes**, it will close the connection.

Click on **No**, the connection is still connecting.

	Options	Detailed setting for VNC Display, Inputs, Troubleshooting, and Expert. All of these configurations is VNC original setting, and use default parameters to connect with HMI. Therefore, this part

		does not describe more explanation.
[full screen icon]	Full Screen Mode	The function is display full screen.
[info icon]	Connection Information	Get more connection information for VNC Viewer.
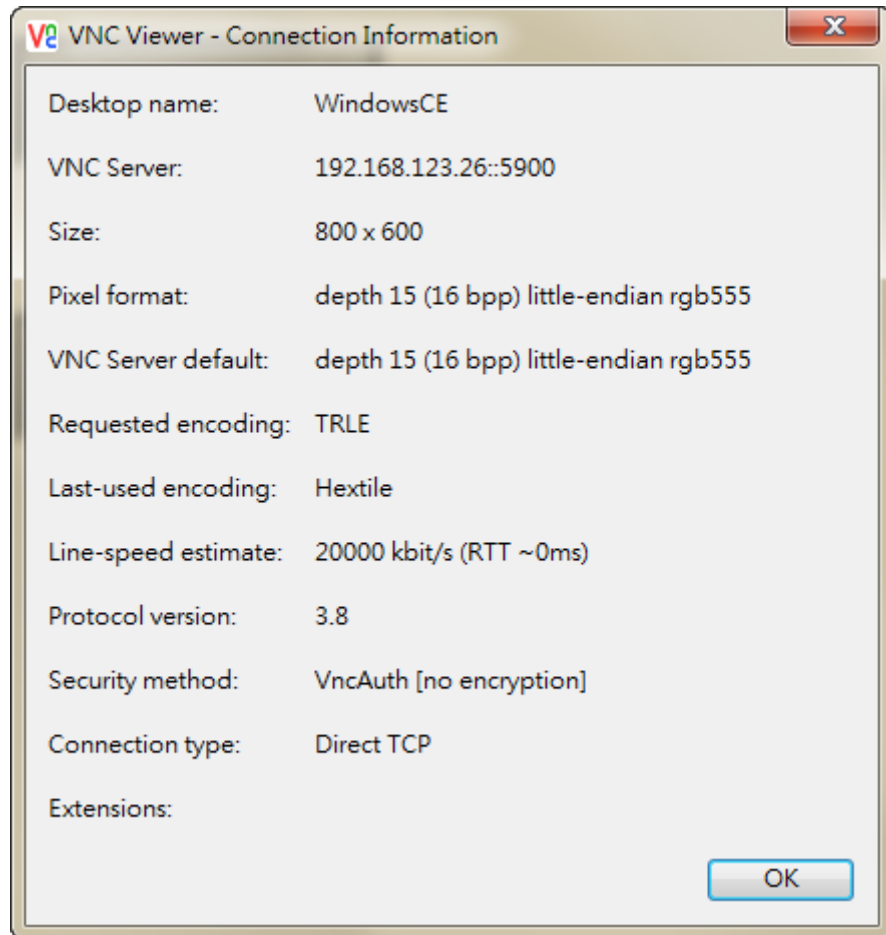
4、e-Printer

ePrinter offer users in HMI without connecting entity end printers can print directly through the Internet, space-saving and printing hardware devices convenience. Please refer to as below structure of ePrinter.

ePrinter through the PC as the agency role, in the PC side open PrnServer, then set the IP address of the PC in HMI. Report button element triggered by the HMI, you can through the Internet to deliver any print file to a PC connected any printer.
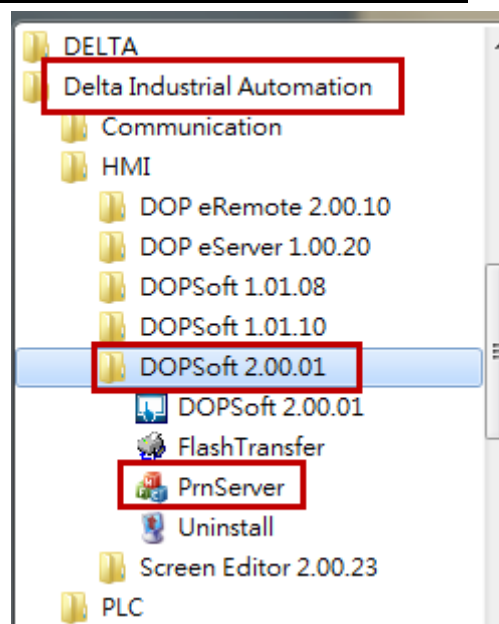

e-Printer function could described as two parts. Fisrt is introduce for PrnServer; Second is how to set HMI connect with ePrinter to print.
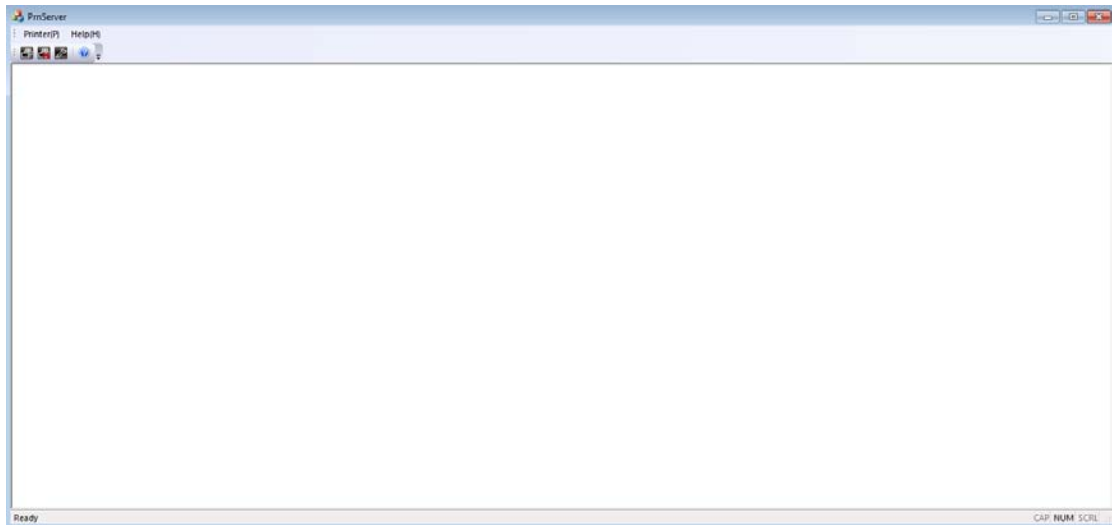
4.1 PrnServer

PrnServer is an execution file, users could start the PrnServer and deliver file to print through Ethernet.
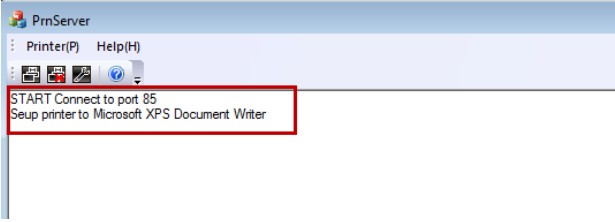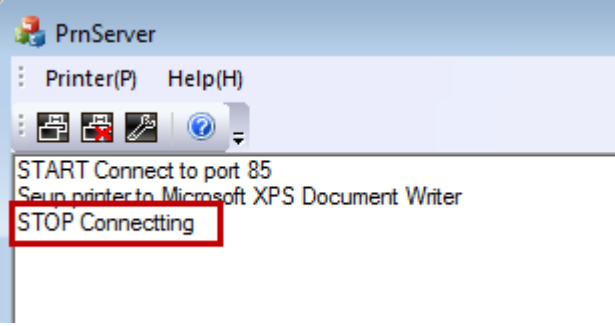
PrnServer execution file location as below path <u>C:\Program Files (x86)\Delta Industrial Automation\DOPSoft 2.00.01\PrnServer.exe</u>.

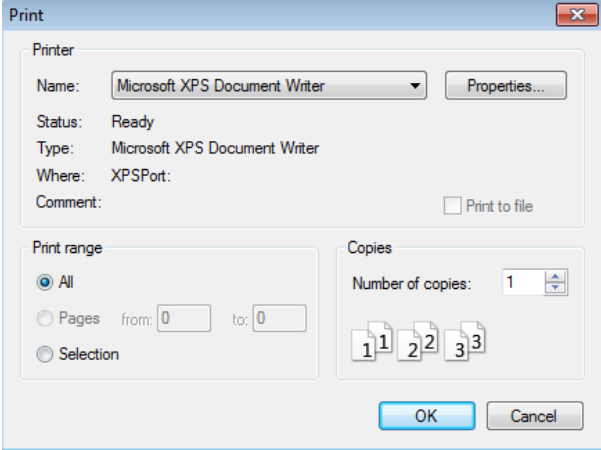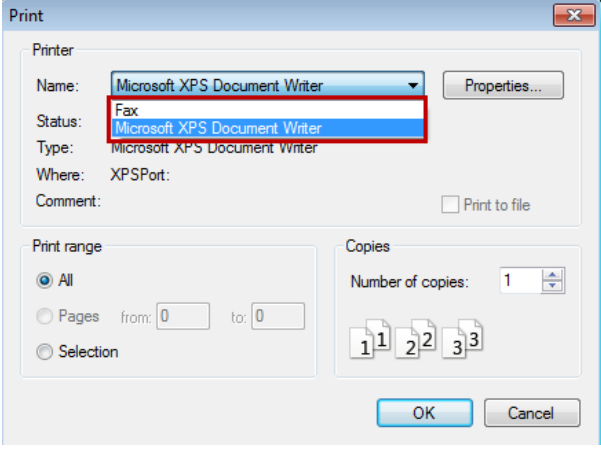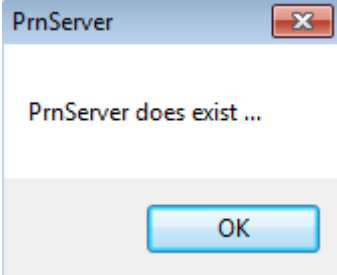After start the PrnServer, it will show as below.

As below table will describe for PrnServer.

Printer	Start	➢ Before execute print action, please press Start to connect to printer server. ➢ The default printer port is 85 and it will connect to the default printer of PC automatically.
	Stop	➢ Press Stop to disconnect the connection, it will display as below following message.
	Setting	➢ Display printer detailed setting.

|		
		  ➢ Users could change the wanted printer to connect.
	Exit	➢ Press Exit will close the PrnServer. ➢ When users do not seed to use PrnServer to print, please press Exit to disconnect the connection. If press to close, it will not stop the connection. When start the PrnServer again, it will display as below following message to inform users.
Help	About	➢ Display current version of PrnServer.

4.2 HMI connection setting

This part is designed to allow users to understand how to set ePrinter function in the HMI screen, and trigger action to complete the print through HMI.

☞ Create Project
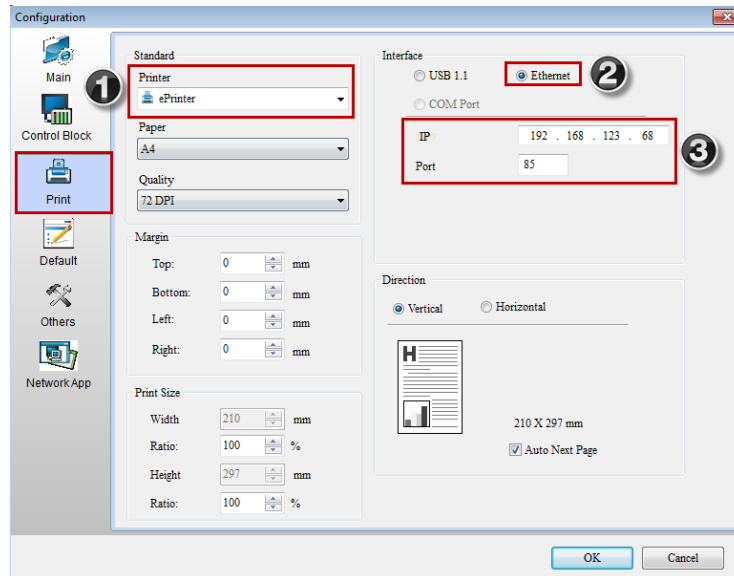
Please select W105B, and set print as ePrinter.
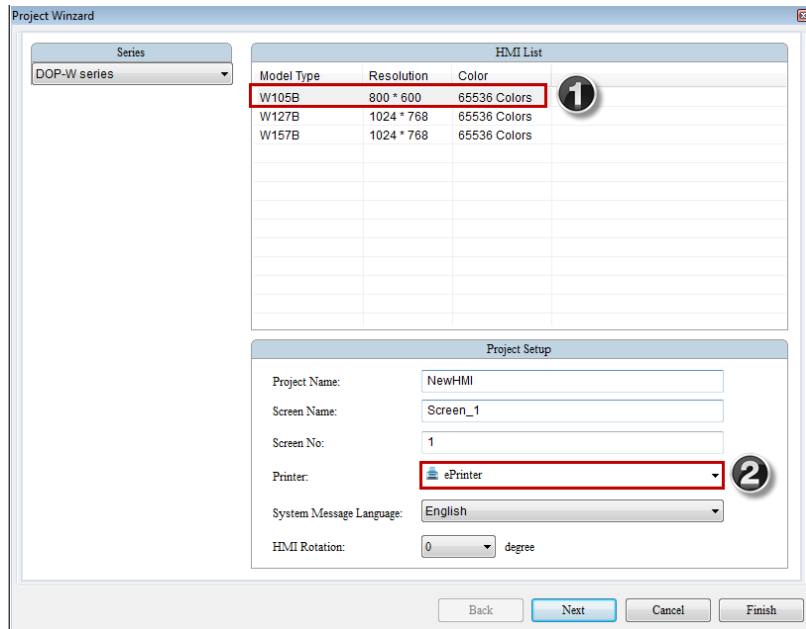
Click Next to finish communication and Ethernet setting.
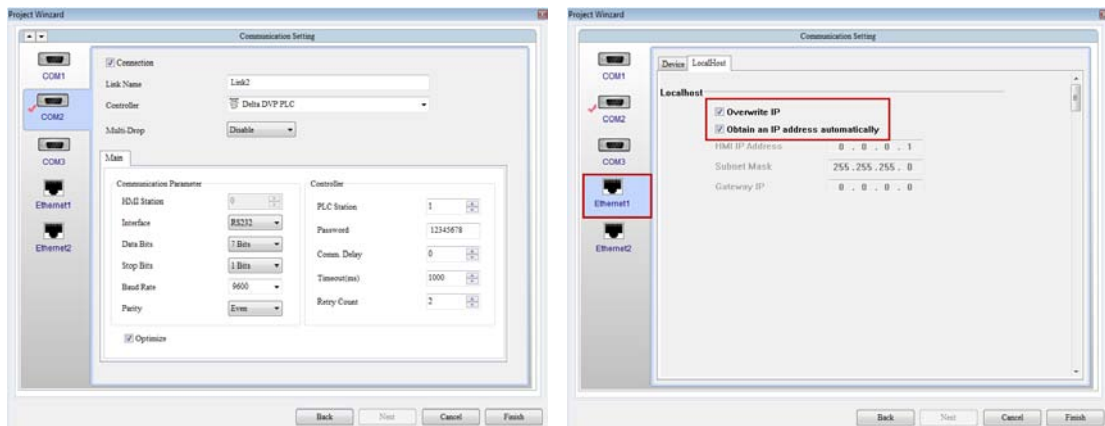
☞ Printer setting

Select Options → Configurations➔Print and choose Ethernet at Interface, fill IP address and printer port.

✓ IP Address：It is filled IP address of the PC which starts PrnServer. User could type ipconfig command in Command Mode to check the IP address in PC. For example is 192.168.123.68.

Note：

🖉 The IP address of ePrinter needs to locate the same domain with HMI screen IP address.
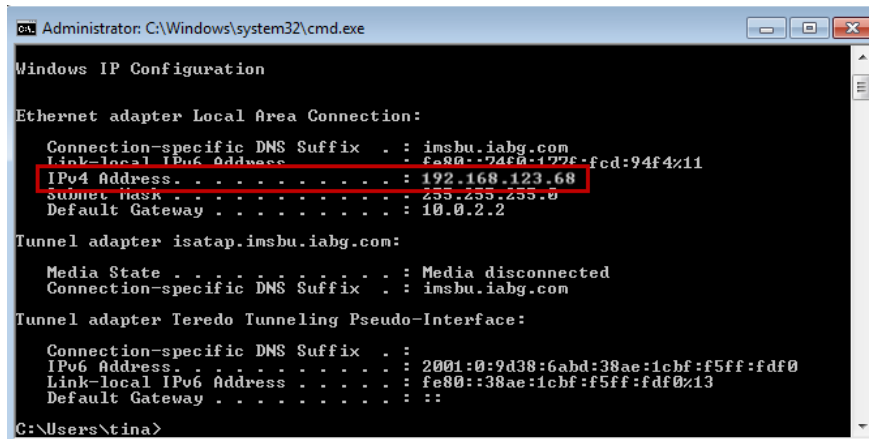
✓ Port：The default printer port is 85. When open PrnServer connection, the connected printer port is also 85 like as below figure.
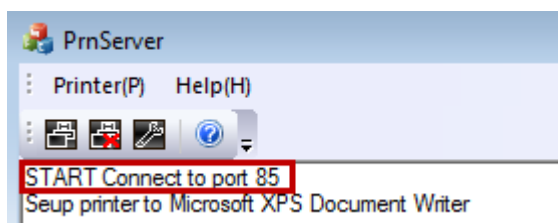
☞   Create Report List element

Create Rectangle, Circle and Report List button elements in DOPSoft screen, and then set report device to Printer in Report List button.
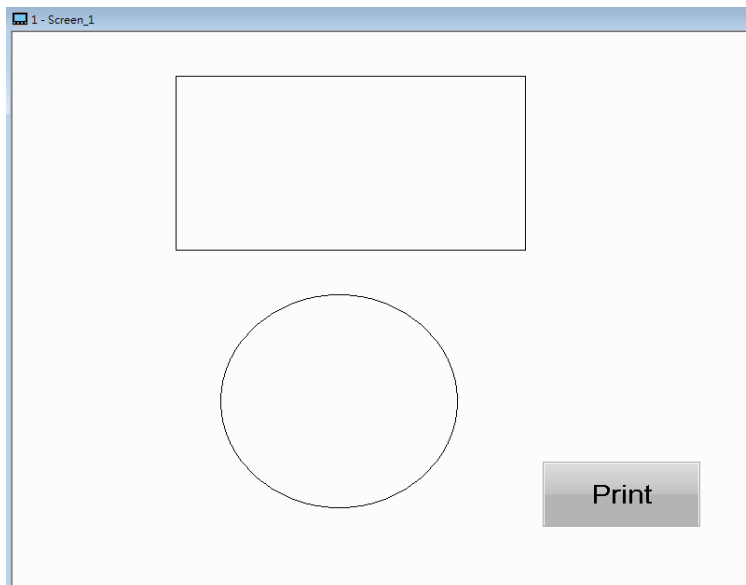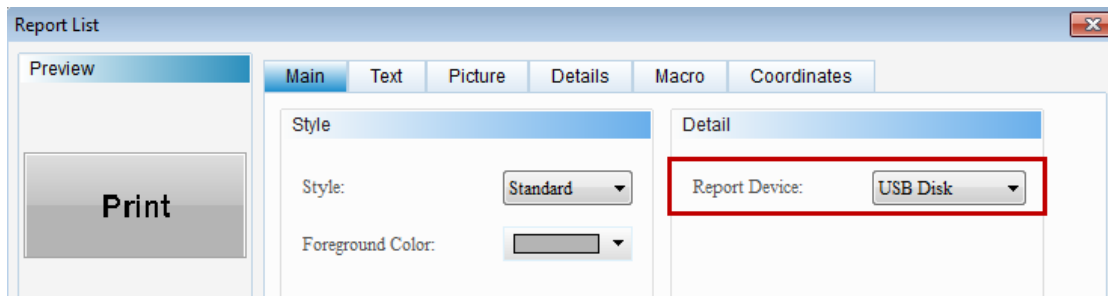
☞   Execute compile and download all screen data to HMI.
☞   After press print button, please start the PrnServer and click start to connection.