

Creator

Quick Start Guide

Creator Quick Start Guide

A guide for using the Creator software to design the SmartView products

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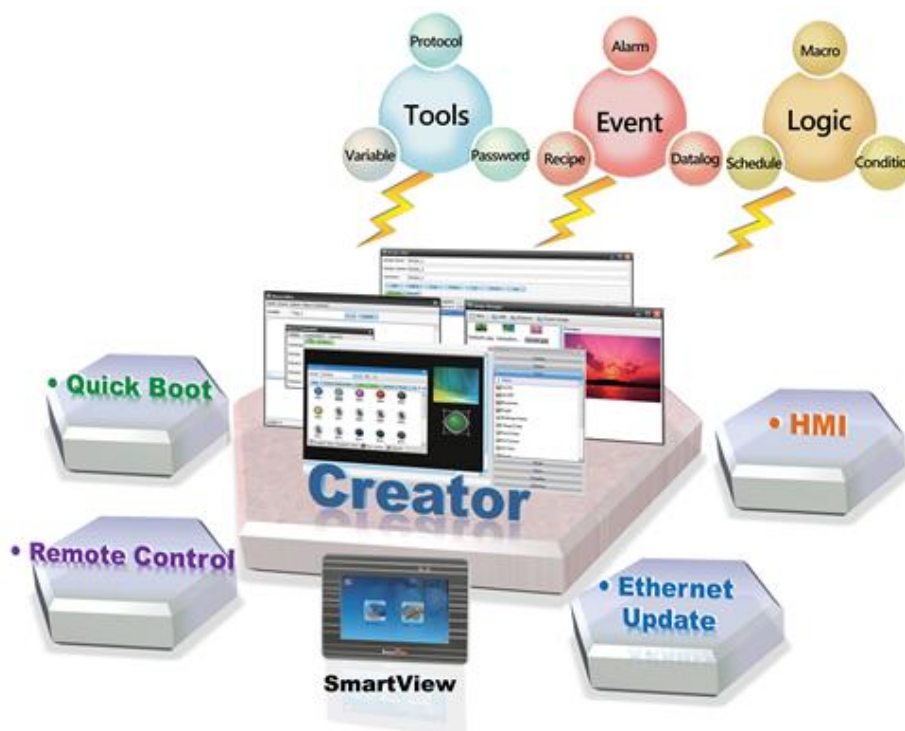
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Chapter 1 Introduction to Creator

Creator is a professional development toolkit especially designed for the **SmartView (or HA-401)** series of devices produced by ICP DAS. **Creator** can be used to integrate several commonly used PLC communication protocols, providing rich and flexible object editing tools that allow easy navigation and adjustment of window management, repeated import and export of data in order to shorten the development process, simple uploading or updating of SmartView (or HA-401) projects using the built-in TCP transport, and the construction of control systems, ranging from a small and simple local control/monitoring application to management systems for large buildings, factories, and engine rooms, etc.



1.1 Features

- Supports commonly used PLC Communication Protocols
- Easy to create HMI Projects without the need for complex coding
- Diverse range of HMI Objects and Functions, including:
 - Alarms, Schedules, Recipes, Data Logging, Macros, etc.
- Update Projects via Ethernet
- Supports MQTT
- Online/Offline Simulation
- Supports Multiple languages (Traditional Chinese/Simplified Chinese/English)

Chapter 2 Software Installation

The following provides details related to the installation of the Creator software, including the recommended operating system and hardware specifications.

2.1 Hardware and Software Specifications

Before installing the Creator software, ensure that both the hardware specifications and operating system are sufficient to allow the efficient performance of the software.

2.1.1 Recommended Operating Systems

- Microsoft Windows 7 or later
- Microsoft .Net Framework version 3.5 or later

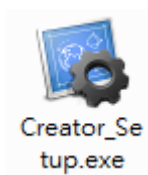
2.1.2 Recommended Hardware Specifications

- CPU: 1.8 GHz or better
- Memory: Minimum of 1Gb RAM
- Hard Disk: At least 40G of free space
- Display: Full-color display that supports a resolution of 800*600 or better

2.2 Installation Procedure

2.2.1 Installing from the Companion CD

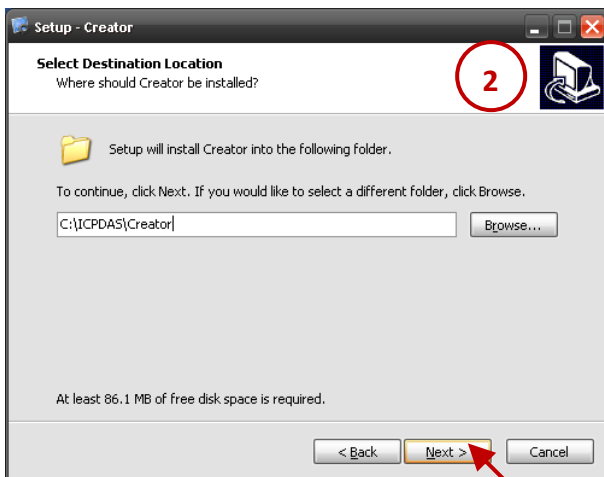
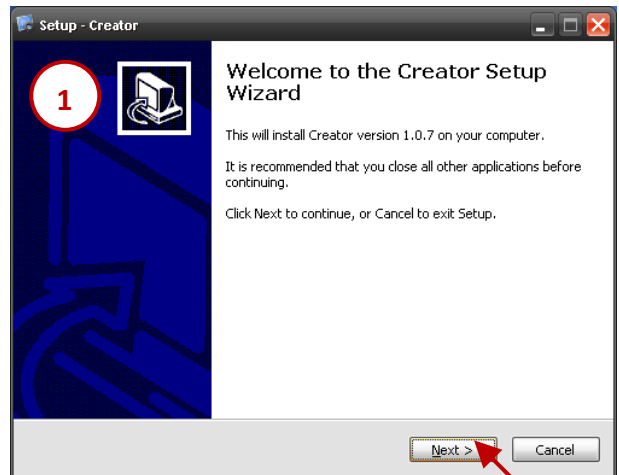
- Automatic:
After inserting the companion CD into the CD-ROM, Windows will automatically launch the installation file. Note that if the "Autorun" feature is not enabled in Windows, this function will not work and the manual method described below must be used.
- Manual:
Double-click the Creator_Setup.exe file that can be found in the root directory of the CD-ROM to launch the installation file.



2.2.2 Setup Wizard

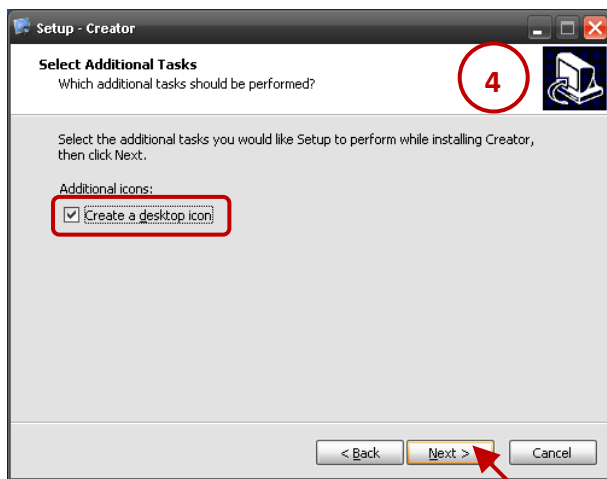
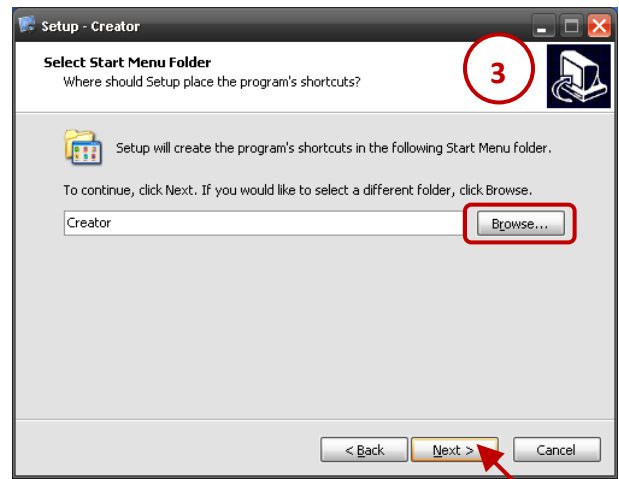
Install the software **Creator** by following the instructions given in the Setup Wizard.

1. Click the **Next** button to begin the installation process.



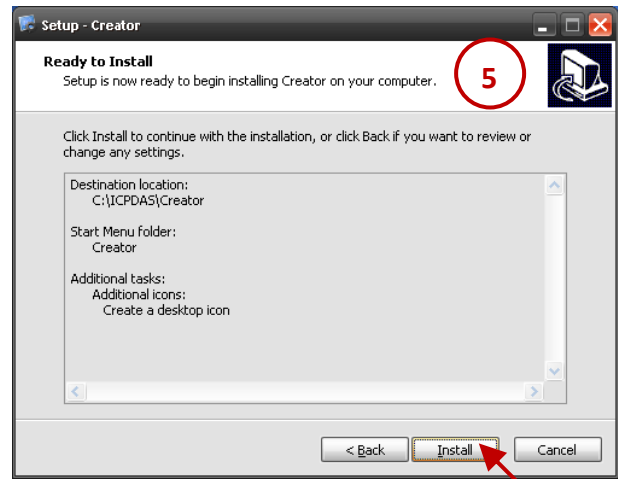
2. On the **Select Destination Location** screen, either click the **Next** button to install Creator into the default folder, or click the **Browse...** button to select an alternate folder, and then click the **Next** button to continue.

3. On the **Select Start Menu Folder** screen, either allow the shortcuts to be created in the default Start Menu folder, or click the **Browse...** button to select an alternate folder, and then click the **Next** button to continue.

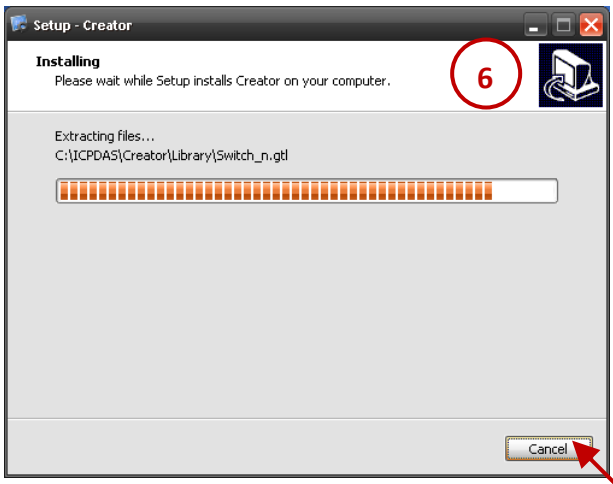


4. On the **Select Additional Tasks** screen, check the **Create a desktop icon** checkbox to create a shortcut on the desktop, and then click the **Next** button to continue.

- On the **Ready to Install** screen, verify that the settings are correct, and then click the **Install** button to begin the installation.



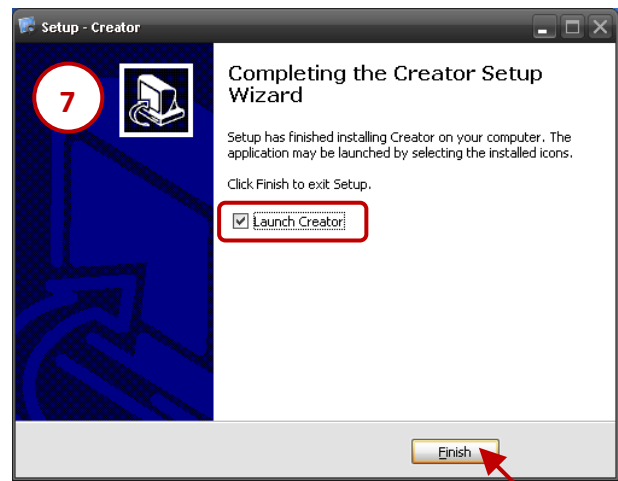
- The **Setup Wizard** will display a progress bar to indicate the status of the installation process. Click the **Cancel** button to stop the installation if necessary.



- Once the installation has been completed, click the **Finish** button to exit the Setup Wizard.

Note:

To automatically launch Creator once installation is complete, check the **Launch Creator** checkbox.

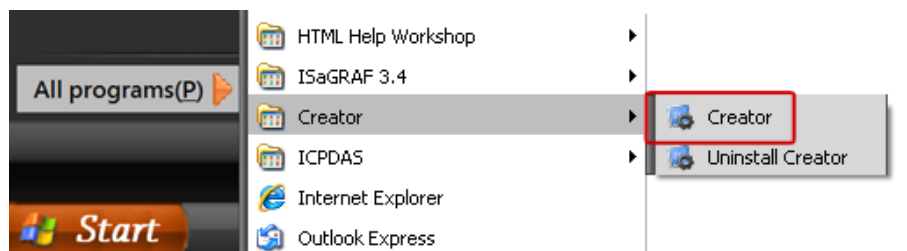


2.2.3 Execute the Creator software



To launch Creator, double-click the shortcut that was created on the desktop.

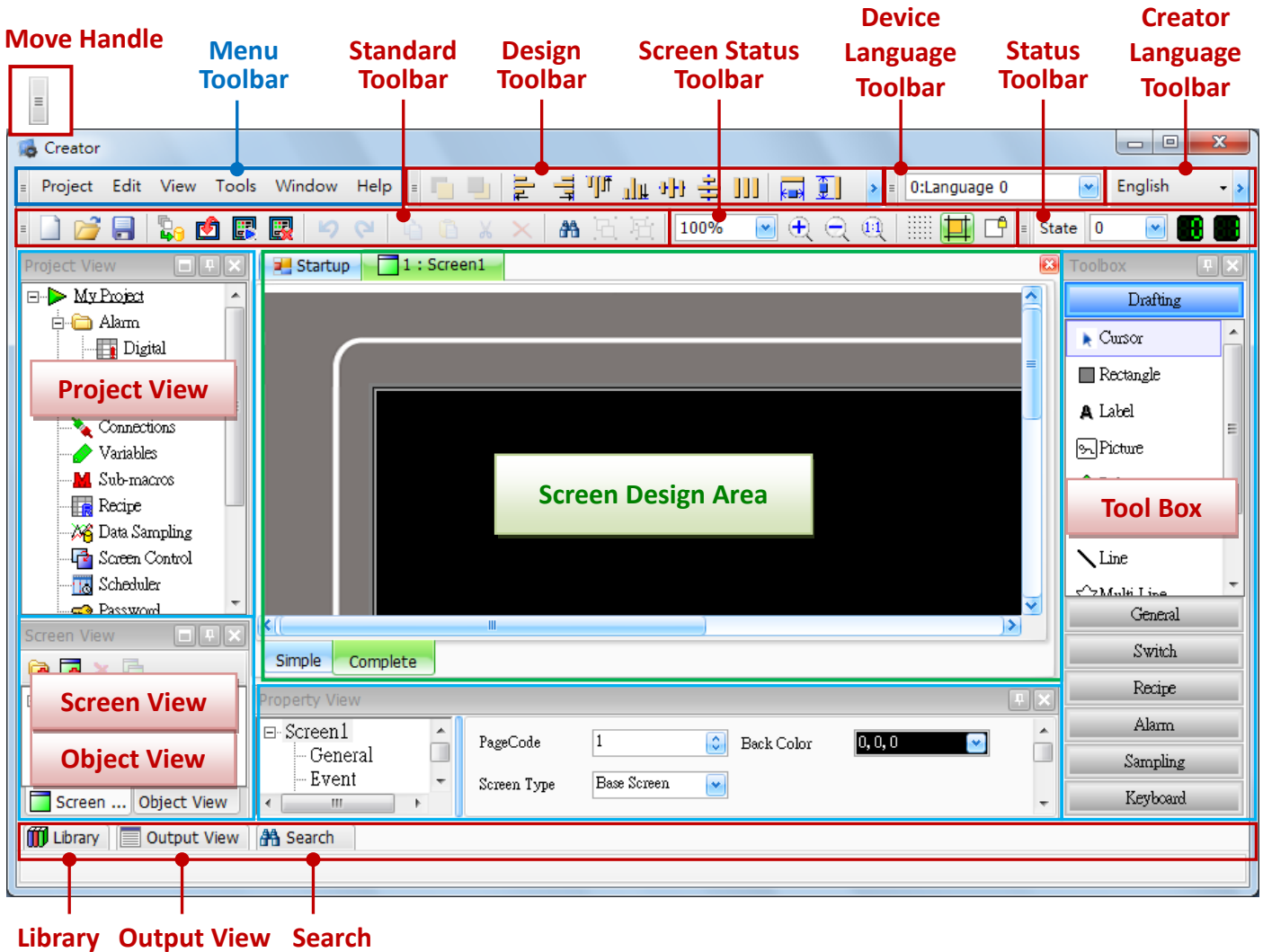
Alternatively click the **Start** button, and then point to **All programs**. Point to the **Creator** folder and then click **Creator**.



Chapter 3 Overview of the Software Interface

3.1 Program Window Interface

The diagram below provides an overview of the Creator interface, including the various menus and view areas, each of which is described in more detail below.



Menu Toolbar	The Menu Toolbar contains the six main functions of the Creator application. The tree structure can be expanded by clicking the menu.
Tools Toolbar	The Tools Toolbar contains icons for the most commonly used functions. Icons for other functions are also contained in the toolbars for the Design, Language, Status, Object, View and Toolbox functions. Hovering the mouse over the icon will display instructions for using the function.
Screen Design Area	The Screen Design Area is the main working area in the Creator application, and is used for designing, editing, and viewing the HMI screen and functions

Chapter 4 First Project: Hello World

“Hello World” is the most basic program that is used by every computer programming language to output the string “Hello World”, and is also traditionally used by beginners to practice when learning a new language.

Using Creator, the “Hello World” program can be easily generated without the need for any programming knowledge. Use the procedure described below to build a SmartView project in Creator and output the message “Hello World” on the SmartView HMI screen.

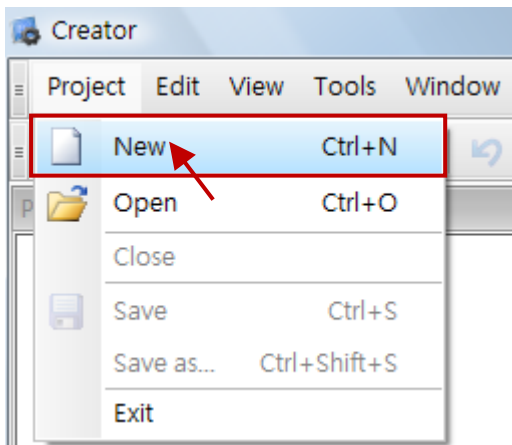
4.1 Creating a New Project

Follow the instructions described below to create a new project in the Creator software.

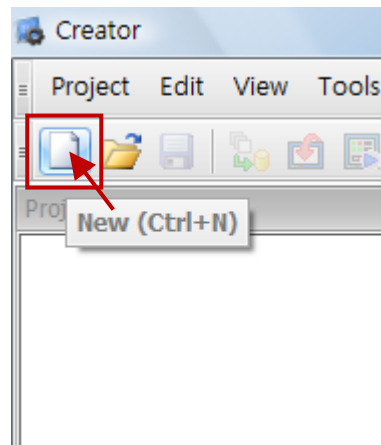
4.1.1 Create a New Project

A new project can be created using a variety of methods, each of which is described below.

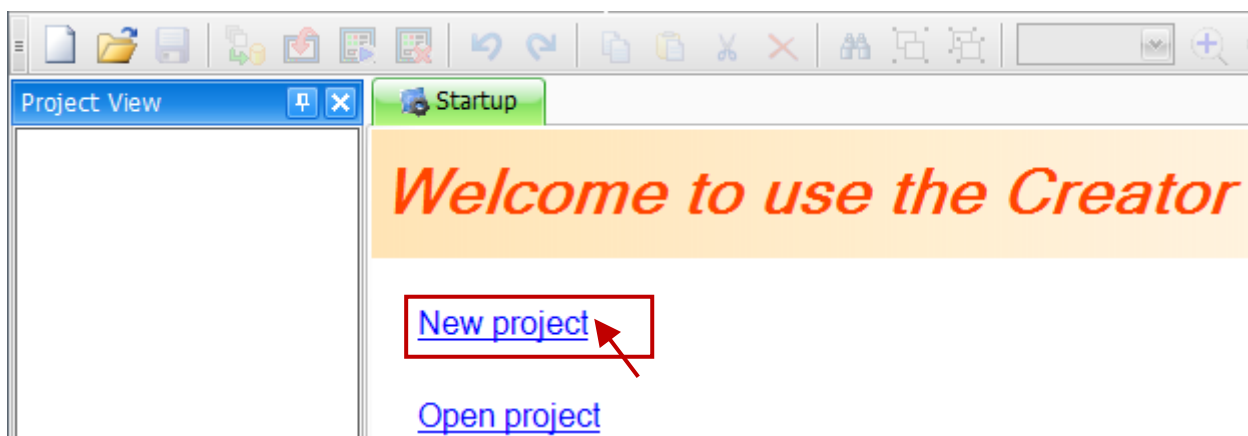
- A. From the menu Project menu, click the New item to begin creating a new project, or
- B. Click the New button in the Standard toolbar, or
- C. Click the New project item in the Startup screen.



or

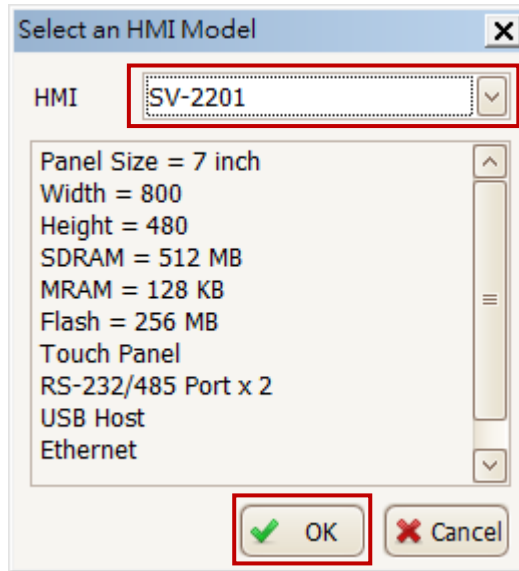


or



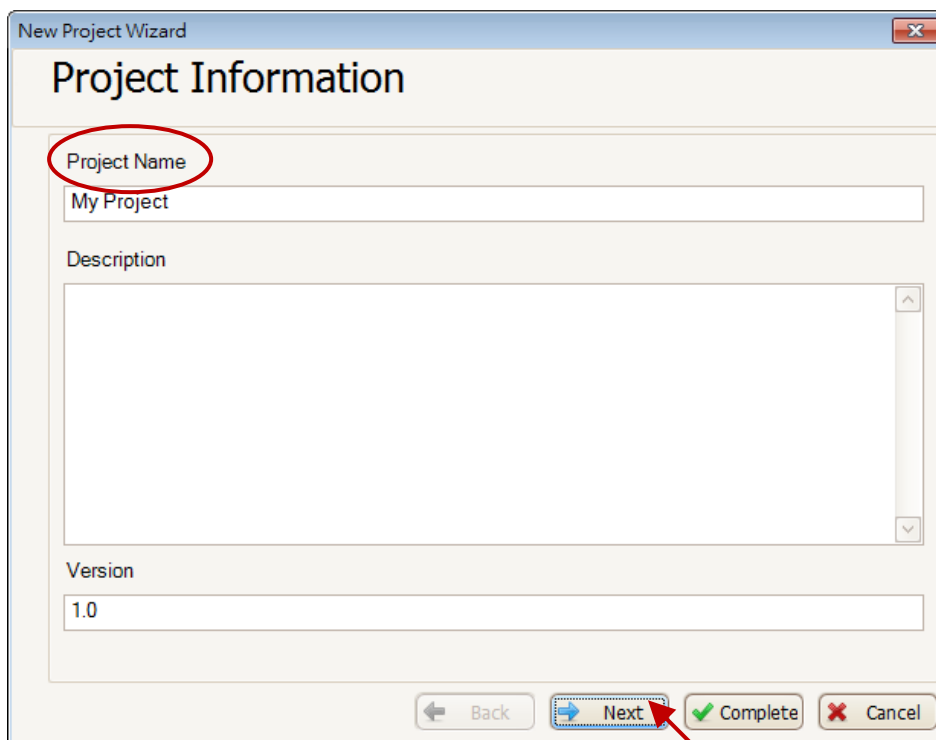
4.1.2 Select the SmartView Model

As described above, a dialog box will be displayed allowing the SmartView Series HMI Model to be selected. Choose an appropriate option from the **HMI** drop-down menu and then click the **OK** button. The **New Project Wizard** will then be displayed.



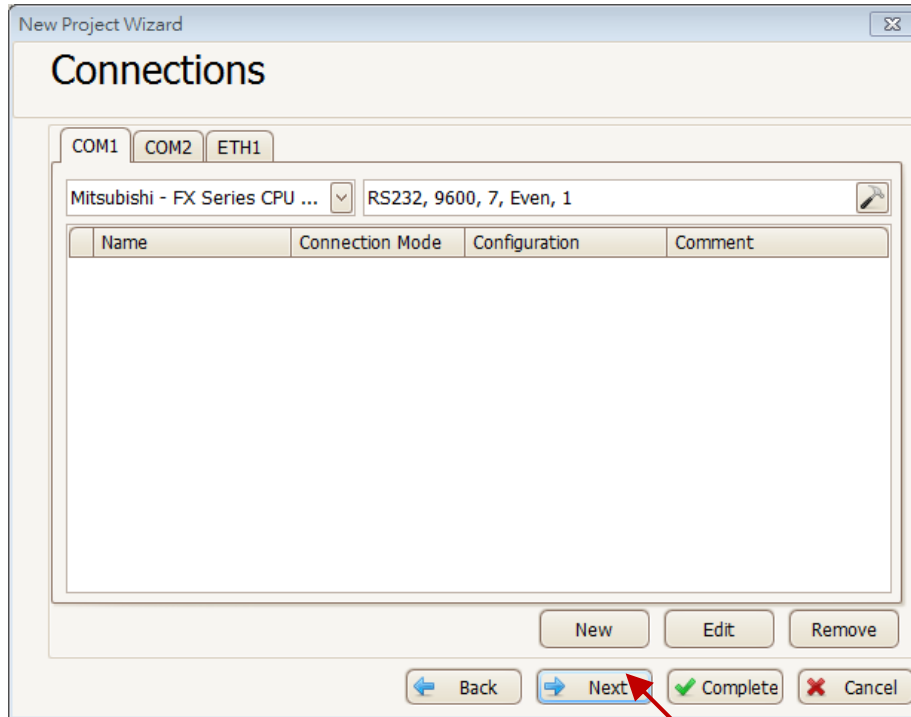
4.1.3 Enter the Project Information

In the **New Project Wizard**, enter a name for the project in the **Project Name** field, and then enter an appropriate description and version number, if necessary, in the respective fields. Click the **Next** button to continue.



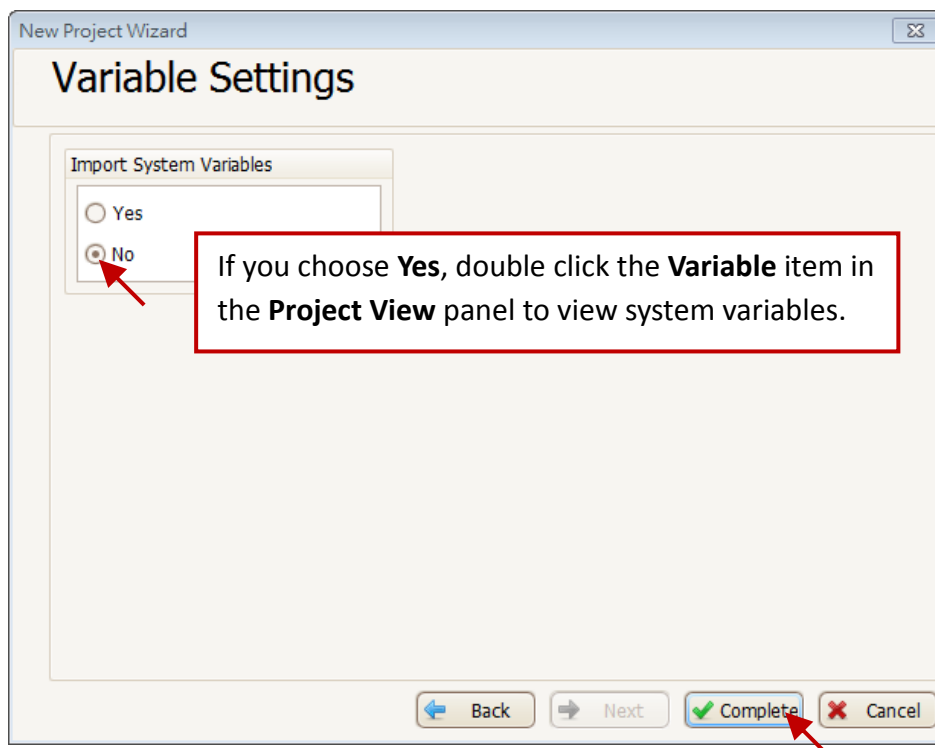
4.1.4 Create the Connection

In this case, there is no need to set up a connection for the “Hello World” project, click the “Next” button to skip this step. If necessary, the connection can be configured later.



4.1.5 Import the System Variables

In this case, there is no need to import any system variables, so click the “No” option button and then click the “Complete” button to finish creating the project.



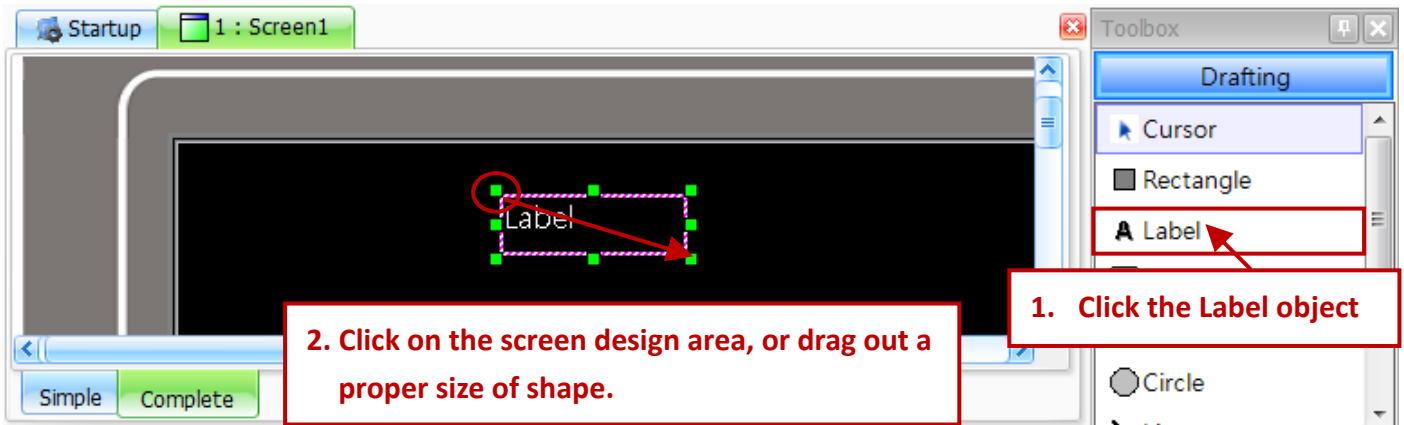
4.2 Using Objects

To display the “Hello World” text on the SmartView screen, use a “**Label**” object that can be found in the “**Drafting**” panel of the “**Toolbox**”.

4.2.1 Adding an Object

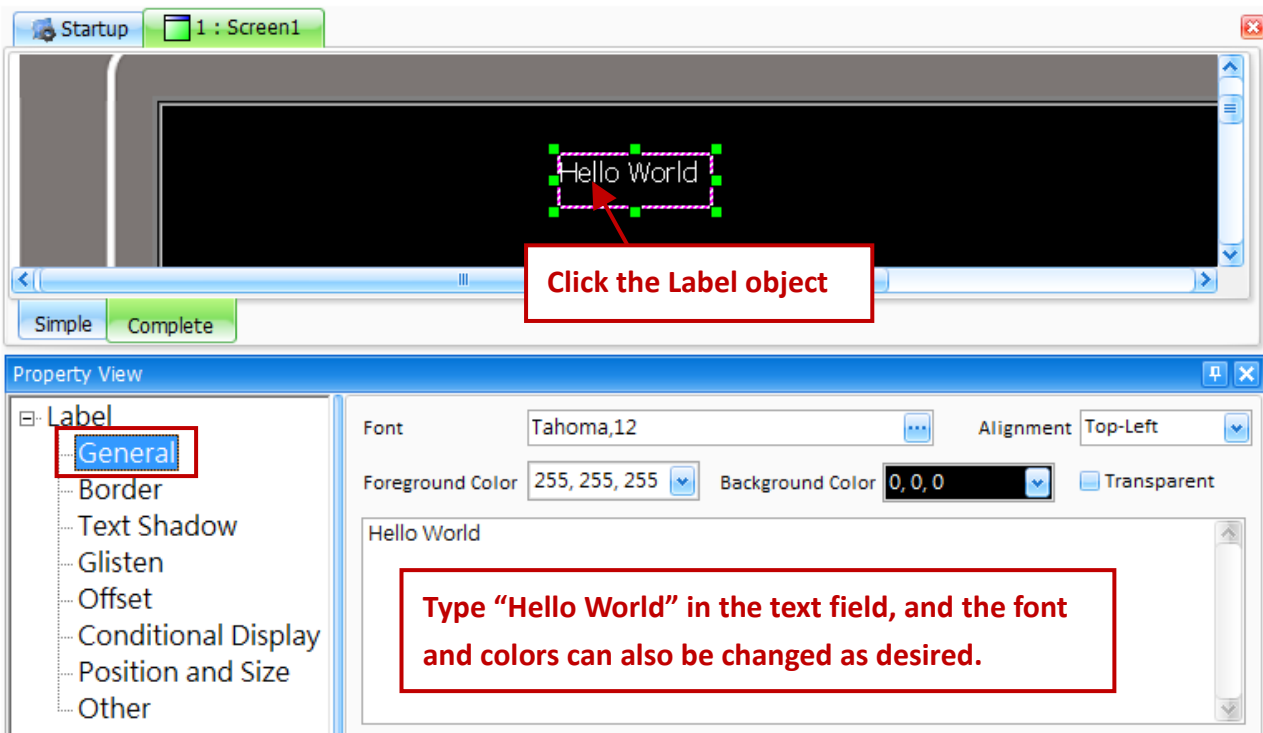
Step 1: Click the “**Label**” component in the “**Drafting**” panel of the “**Toolbox**”.

Step 2: Click on the screen design area of the SmartView HMI to place the label component.



4.2.2 Configuring the Properties for the Object

Specific properties can be set for each individual object. To change the text of the “**Label**” object, double-click the object to open the “**Property View**” dialog box. Click the “**General**” property for the “**Label**” object, and then type “**Hello World**” in the text field.

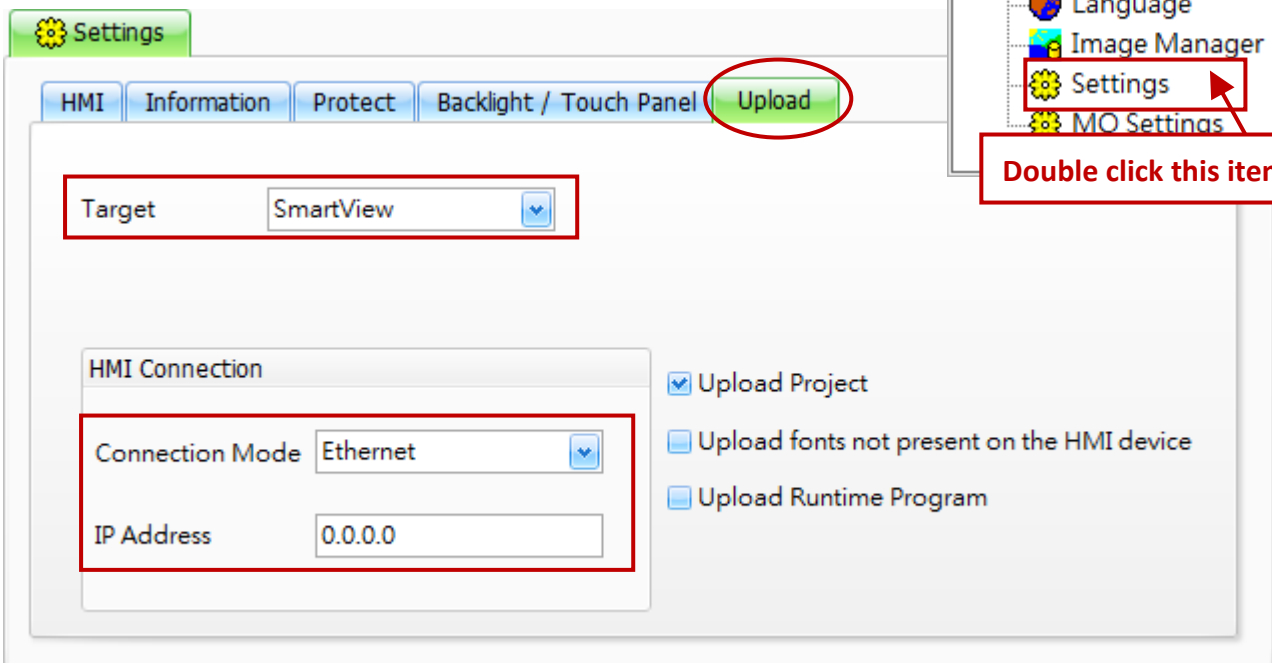
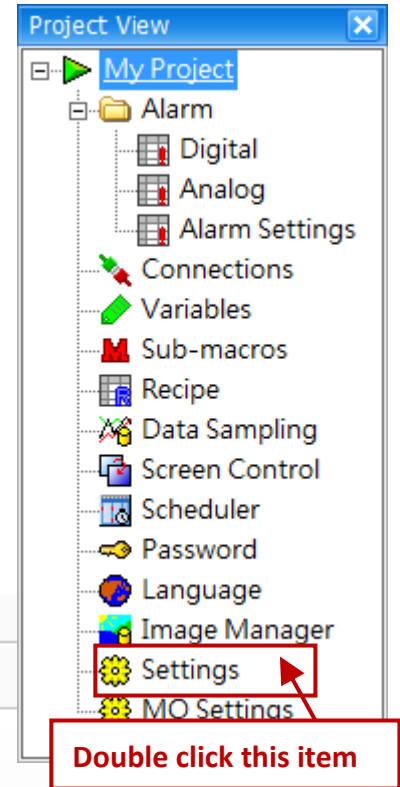


4.3 Uploading the Project

Before the project can be uploaded to the SmartView device, the target IP Address must first be configured.

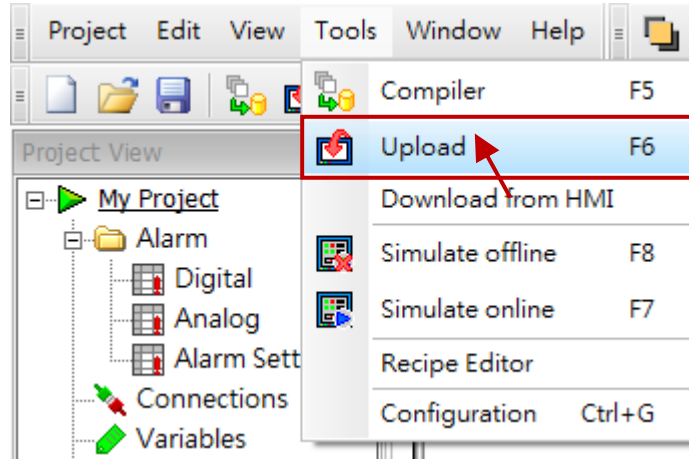
4.3.1 Configuring the Connection for the HMI Project

In the “Project View” panel, click the “Settings” item and then click the “Upload” tab in the “Settings” dialog box. Configure the settings for the target and the connection mode from the respective drop-down menus, and then enter the IP address in the “IP” text field.

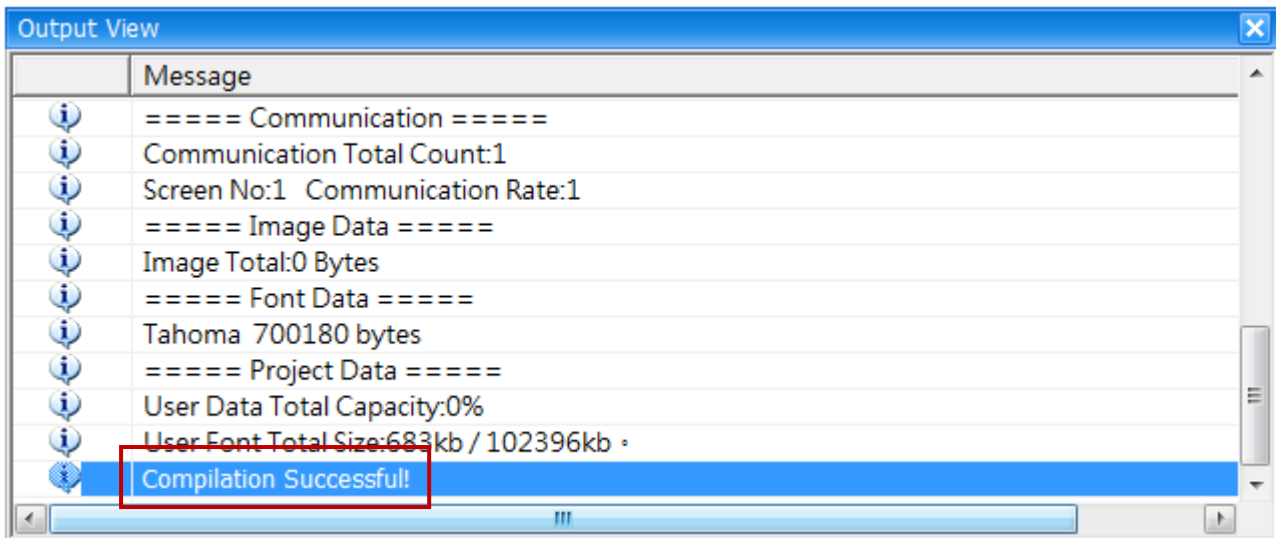


4.3.2 Compilation and Upload

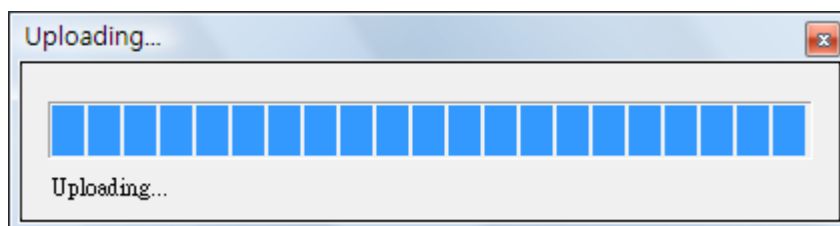
To download the project, click the “**Upload**” item from the “**Tools**” menu. The project will be compiled first, and then, if compiled successfully, it will be downloaded to the target device based on the download settings.



The result of the compilation process will be displayed in the “**Output View**” window.

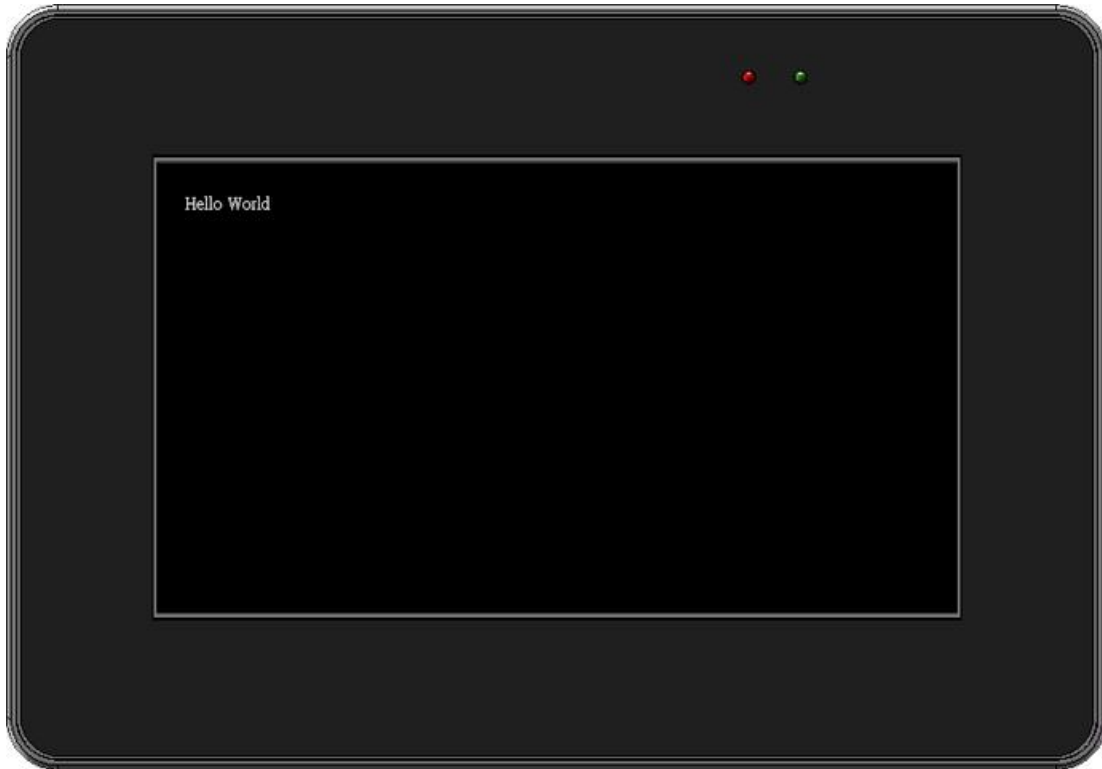


Once the compilation process is complete, the project will be uploaded.



4.4 The Result on the SmartView Device

If the project has been successfully compiled and uploaded, the result should be displayed on the SmartView device as illustrated below.



Chapter 5 Example: Modbus Device Monitor/Control

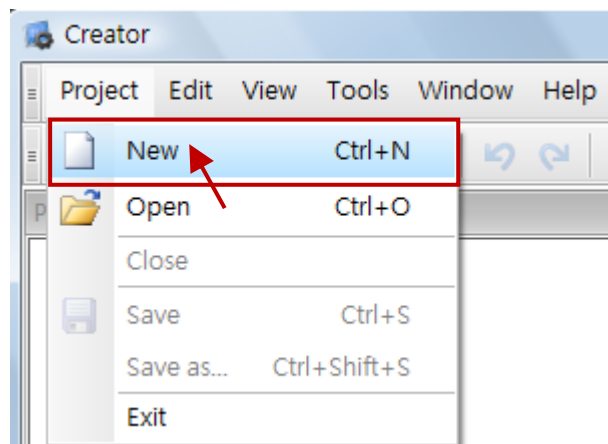
The following example uses a SmartView SV-2201 and an M-7045D Modbus device with 16 DO channels. This example provides an illustration of how to use more advanced Creator operations, such as listing connections, setting variables, as well as component selection and usage, allowing a project to be built more easily and rapidly.



5.1 Creating a New Project

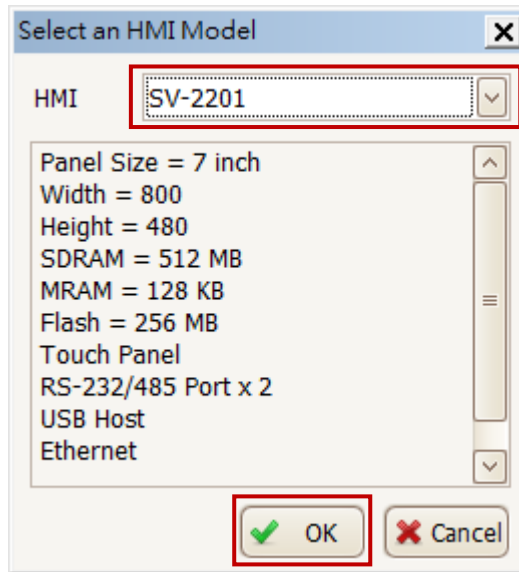
5.1.1 New a Project

Click “New” from the “Project” menu to create a new project.



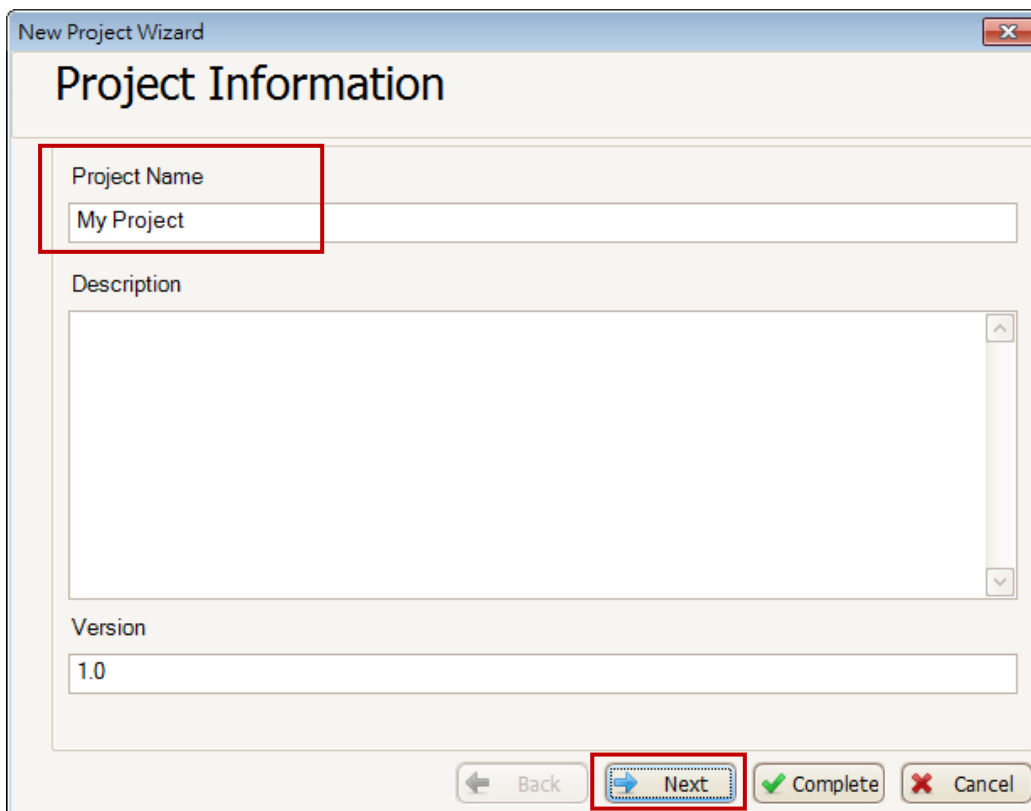
5.1.2 Select the SmartView Model

Select the SmartView Series HMI Model from the “HMI” drop-down menu, and then click the “OK” button to continue.



5.1.3 Enter the Project Information

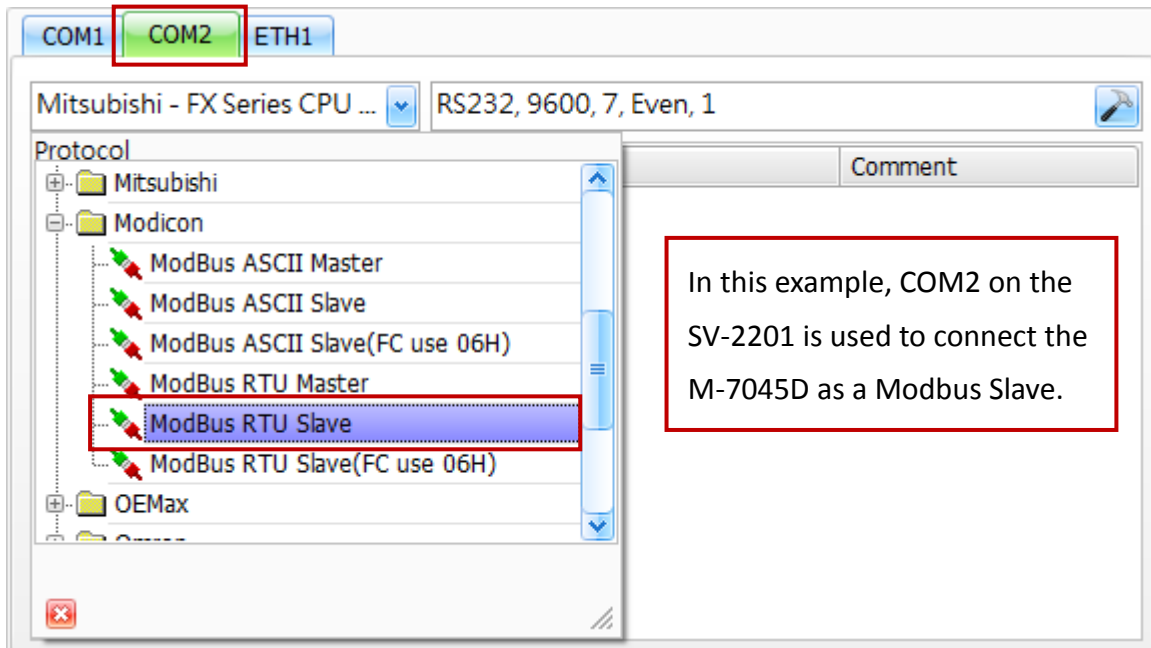
Enter a name for the project in the “Project Name” field, then enter a description for the project and the version number in the respective fields, and then click the “Next” button to continue.



5.1.4 Create the Connection

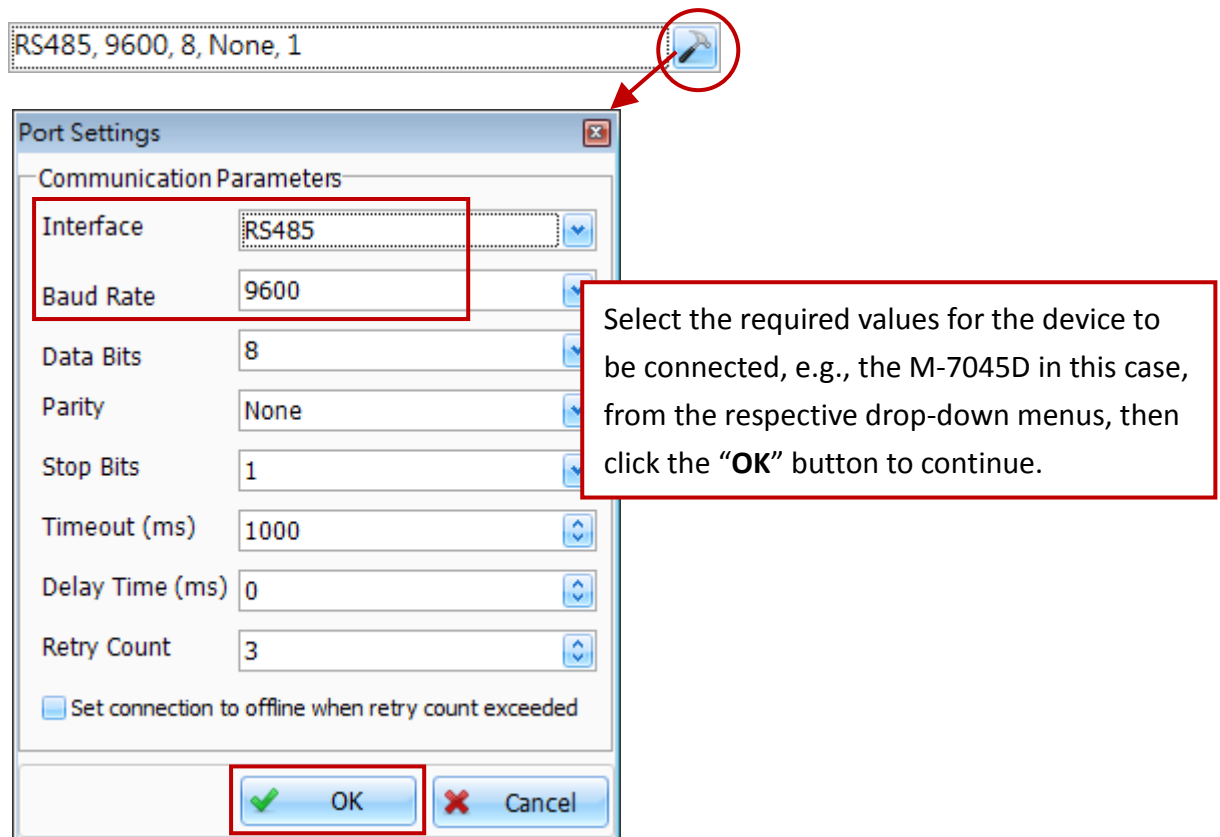
A. Select COM Port and Protocol

Select the COM port and the communication protocol to be used to connect to the Modbus M-7045D module.



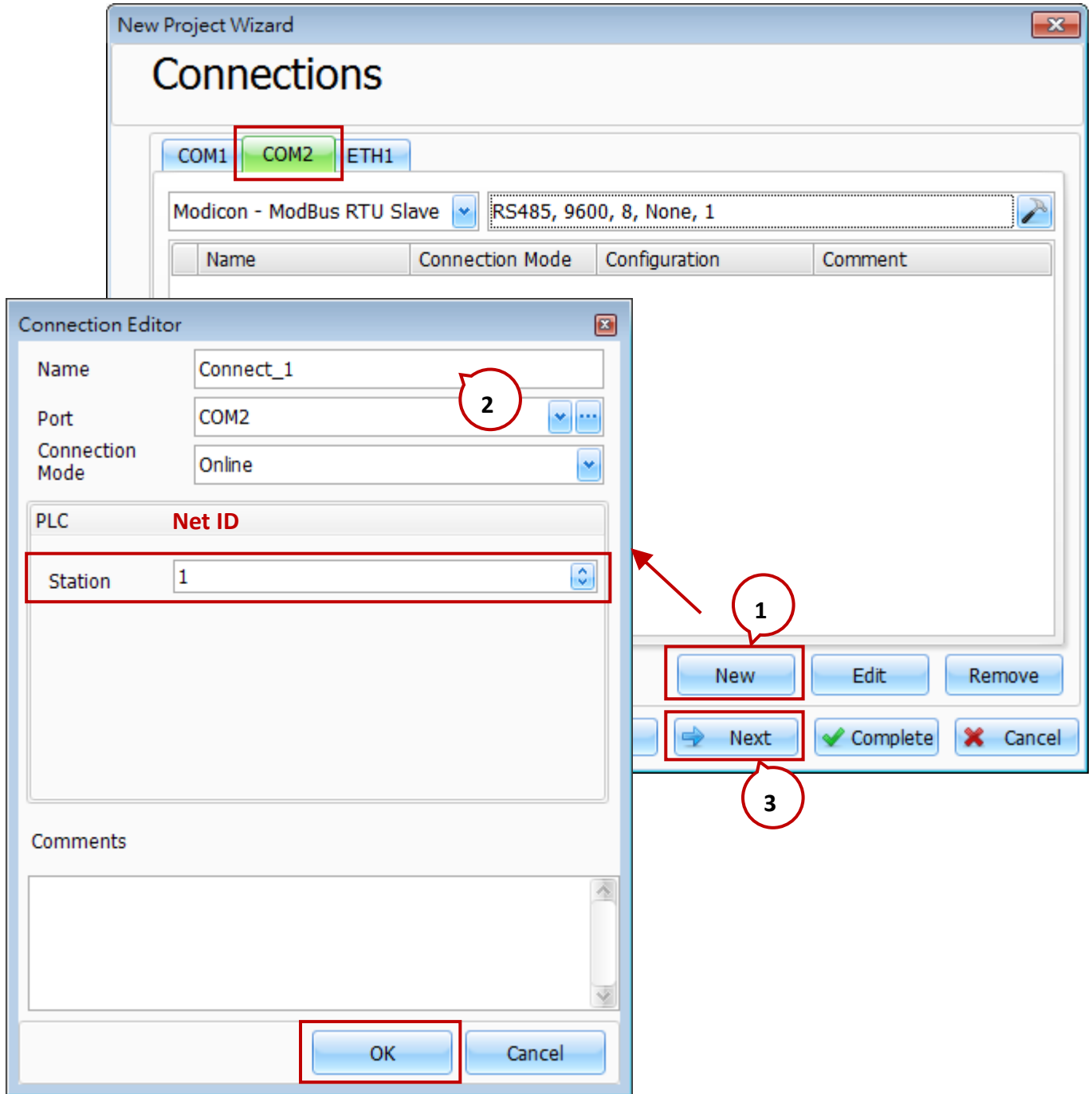
B. Port Configuration

To configure the port, click the “Port Configuration” button to open the “Port Setup” dialog box.



C. Create a New Connection

1. Click the “**New**” button to add a connection.
2. In the “**Connection Editor**” dialog box, enter a name for the new connection and configure the communication parameters, including the COM Port and the Station number (Net ID), and then click the “**OK**” button to continue.

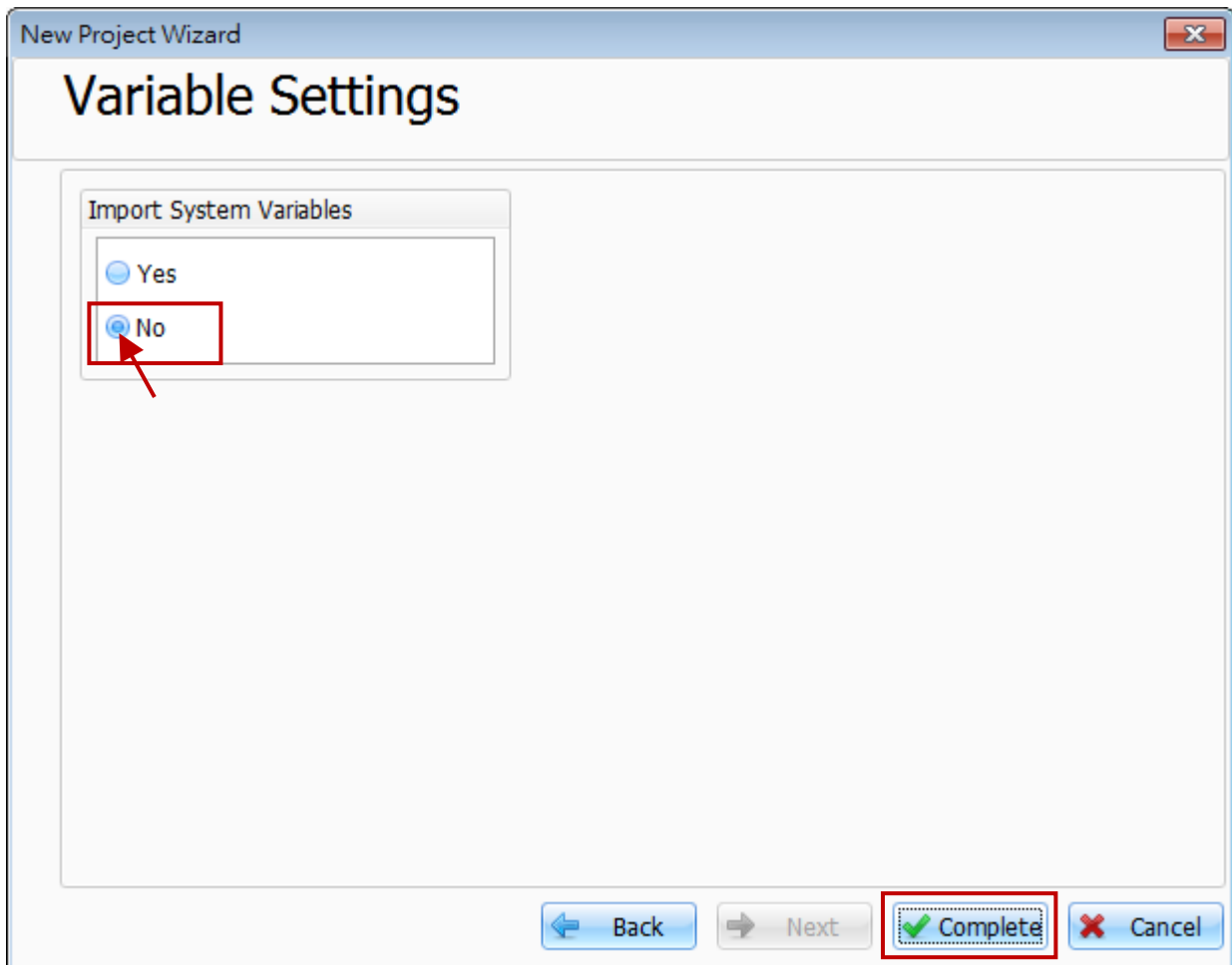


3. The new connection will be listed in the “**Connections**” dialog box. Click the “**Next**” button to continue.

Name	Connection Mode	Configuration	Comment
> Connect_1	Online	Station No : 1	

5.1.5 Import the System Variables

In this case, there is no need to import any system variables, so click the “**No**” option button and then click the “**Complete**” button to finish creating the project.



5.2 Configuring Variables

5.2.1 Modbus Address for the M-7045D Module

Enter the Modbus address for the M-7045D module, which can be found in the User Manual for the module, as illustrated below.

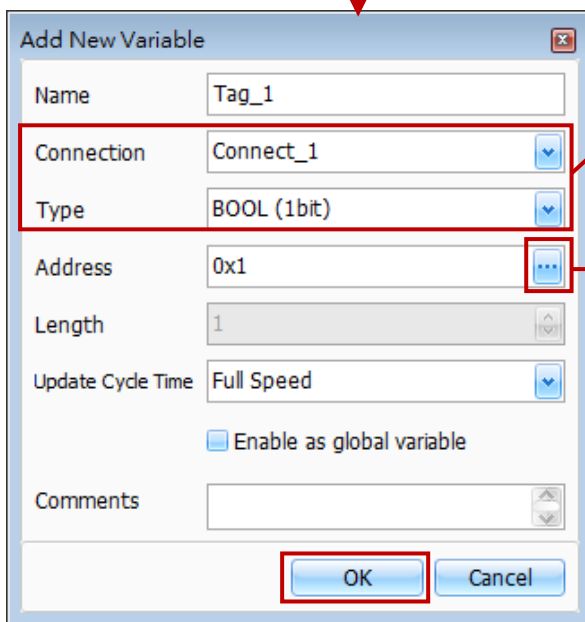
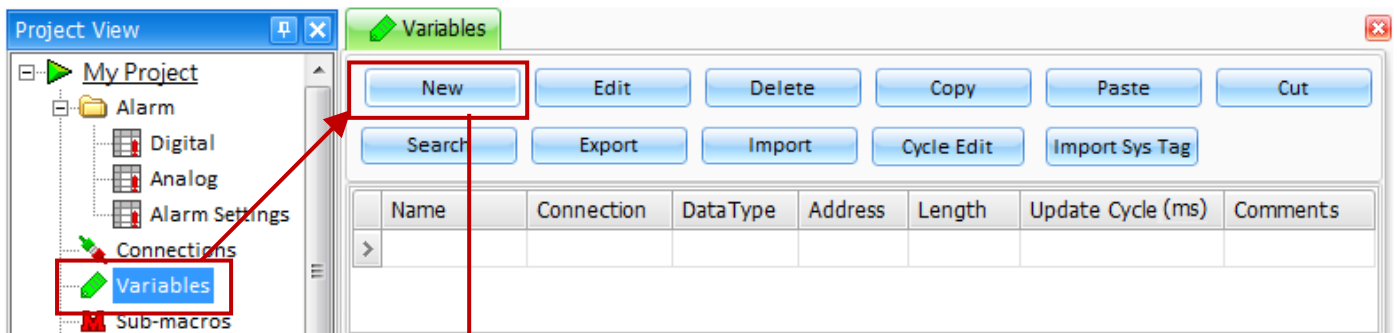
M-7045/M-7045D:

Valid Starting Channel	0x0000 ~ 0x000F for DO Output
------------------------	-------------------------------

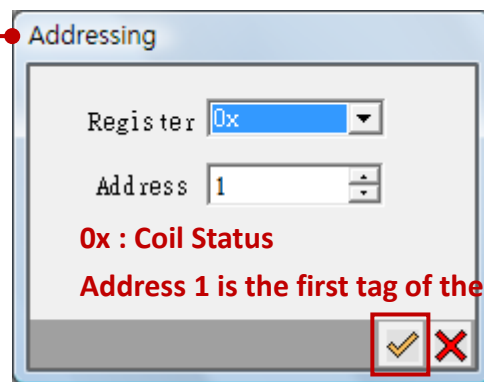
5.2.2 Add Variables

A. Project View - Variable

To add a new variable to the project, double-click the “Variables” item in the “Project View” panel, then click the “New” button to open the “Add a New Variable” dialog box.



Select the name of the connection that was created in the previous step, “Connect_1” in this case. Then, select “BOOL” from the “Type” drop-down menu for the M-7045D DO.



In the “Add a New Variable” dialog box, enter a name for the new Tag, then select the name of the connection that was created in the previous step, “Connect_1” in this case. From the “Type” drop-down menu, select “BOOL”, and then click the options button for the “Address” field to open the “Addressing” dialog box.

In the “**Addressing**” dialog box, select the required value from the “**Register**” drop-down menu, and then enter the required Address in the text box. Click the [✓] button to save the settings.

Click the “OK” button to save the new Tag.

B. Quickly Adding New Variables

Once the first variable has been created, an alternative method exists for creating additional variables. Double-click the next **blank row** in the “**Variable List**”, and Creator will automatically create the next variable. Once created, click the “**Edit**” button to change the settings where necessary.

The screenshot shows the 'Variables' dialog box with a 'Project View' on the left. The 'Variable List' table is as follows:

Name	Connection	Data Type	Address	Length	Update Cycle (ms)	Comments
Tag_1	Connect_1	BIT	0x1	1	Full Speed	
>						

A red callout box points to the blank row with the text: **Once the first variable has been created, double-click the next blank row in the “Variable List”, and Creator will automatically create the next variable.**

Below, the 'Variable List' table is shown after creating 16 tags:

Name	Connection	Data Type	Address	Length	Update Cycle (ms)	Comments
> Tag_1	Connect_1	BIT	0x1	1	Full Speed	
Tag_2	Connect_1	BIT	0x2	1	Full Speed	
Tag_3	Connect_1	BIT	0x3	1	Full Speed	
Tag_4	Connect_1	BIT	0x4	1	Full Speed	
Tag_5	Connect_1	BIT	0x5	1	Full Speed	
Tag_6	Connect_1	BIT	0x6	1	Full Speed	
Tag_7	Connect_1	BIT	0x7	1	Full Speed	
Tag_8	Connect_1	BIT	0x8	1	Full Speed	
Tag_9	Connect_1	BIT	0x9	1	Full Speed	
Tag_10	Connect_1	BIT	0x10	1	Full Speed	
Tag_11	Connect_1	BIT	0x11	1	Full Speed	
Tag_12	Connect_1	BIT	0x12	1	Full Speed	
Tag_13	Connect_1	BIT	0x13	1	Full Speed	
Tag_14	Connect_1	BIT	0x14	1	Full Speed	
Tag_15	Connect_1	BIT	0x15	1	Full Speed	
Tag_16	Connect_1	BIT	0x16	1	Full Speed	

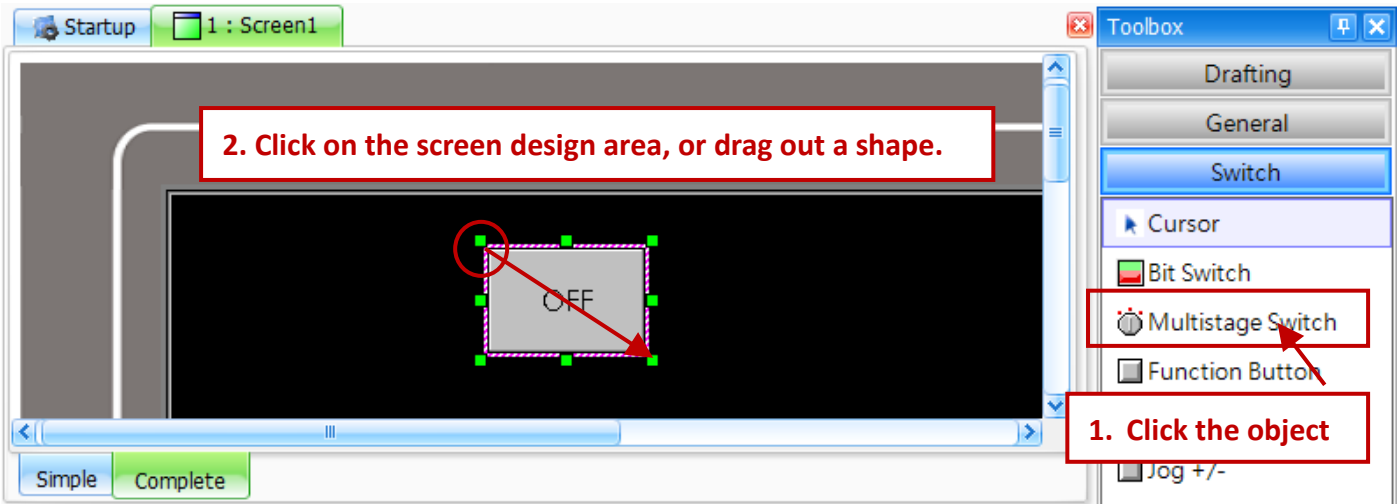
5.3 Using Objects

In order to control and display the ON/OFF states of the M-7045D DO points on the SmartView, use the “Bit Switch” object in the “Switch” Toolbox and set its action type as “Toggle”.

5.3.1 Adding an Object

Step 1: Click the “Bit Switch” object in the “Switch” panel of the Toolbox

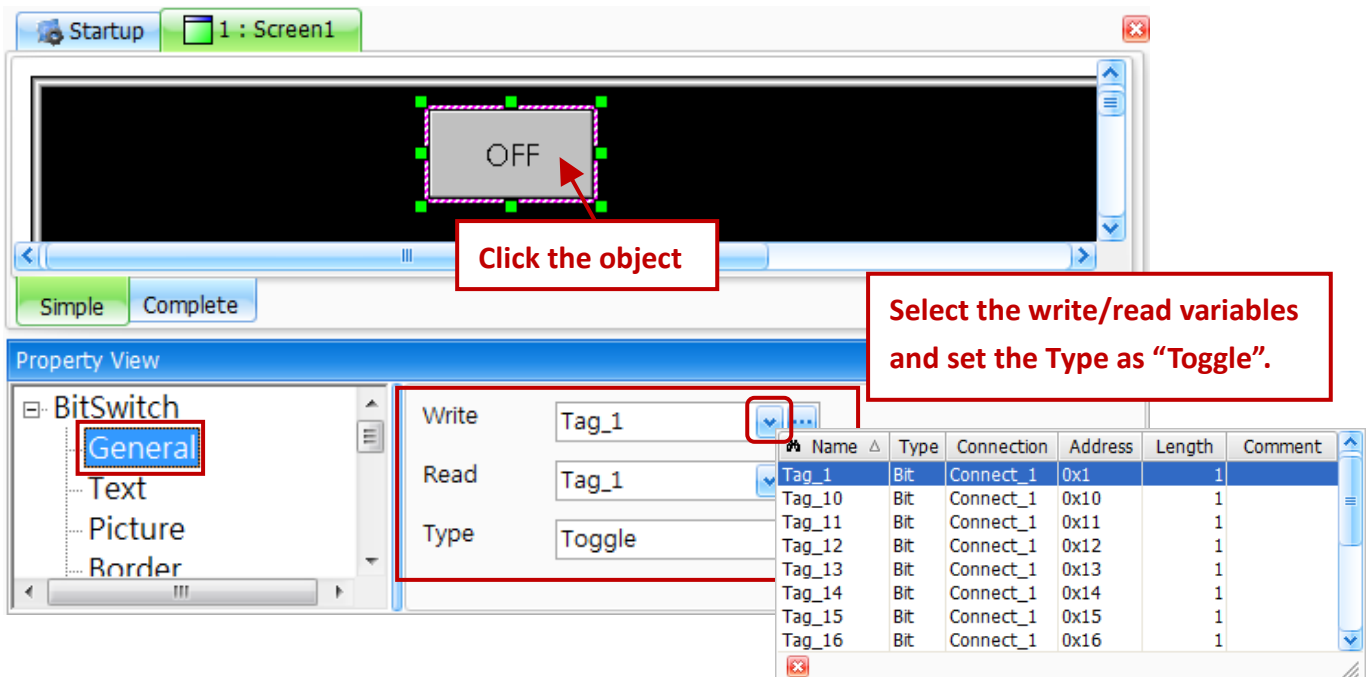
Step 2: Click on the screen design area of the SmartView HMI to place the Switch



5.3.2 Configuring the Properties for the Object

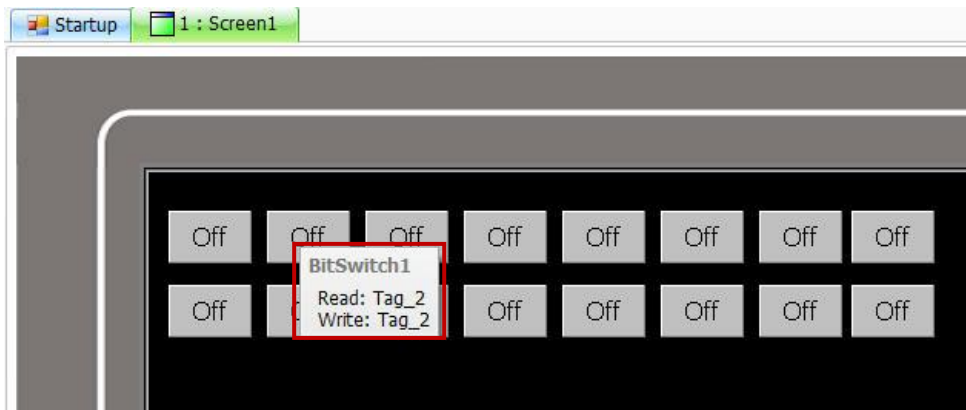
Click the object to open the Property View dialog box. Click the “General” property, and then select the required Read and Write variables and set the type as “Toggle”, as illustrated below.

Repeat the process described above to add 15 more Toggles for the 16 DO points.



5.3.3 Viewing Information about Object Properties

After configuring all 16 Bit switches, simply moving the mouse over the object, the property information of the object will be displayed.

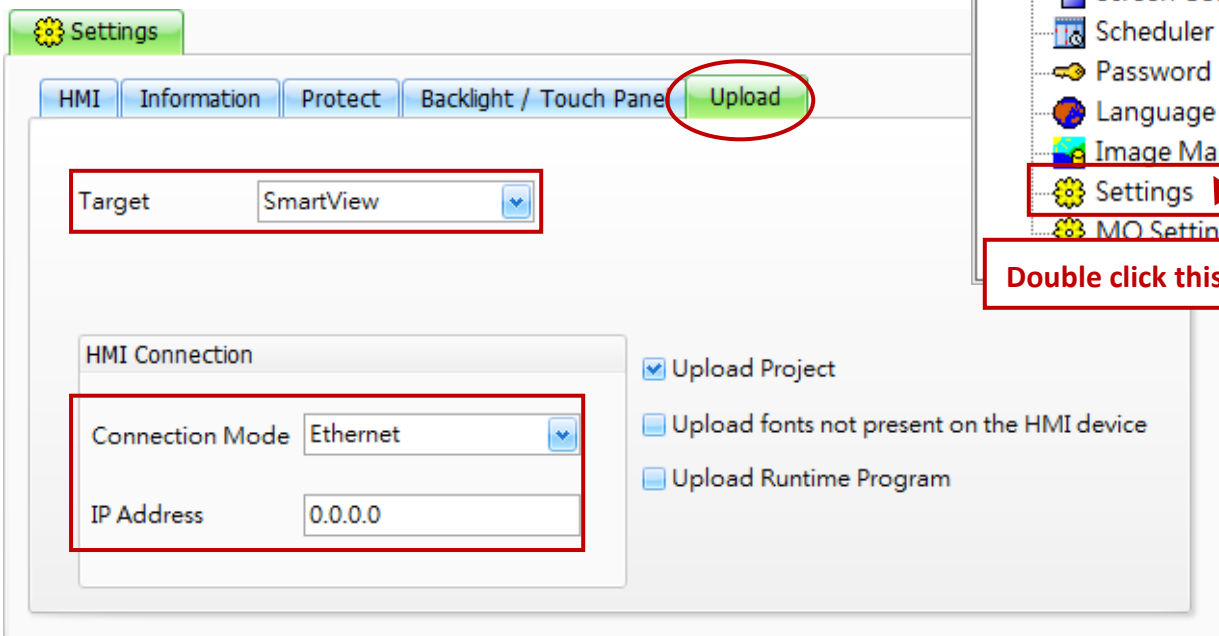
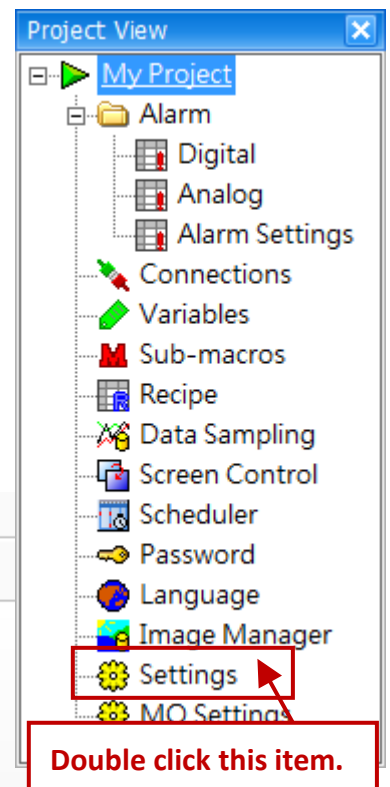


5.4 Uploading the Project

Before the project can be uploaded to the SmartView device, the target IP Address must first be configured.

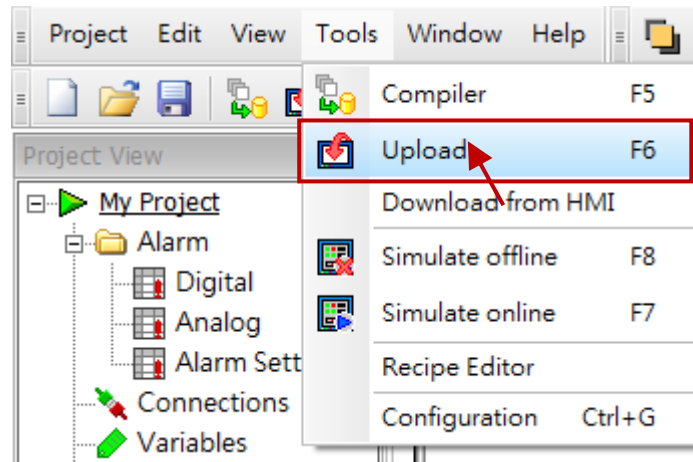
5.4.1 Configuring the Connection for the HMI Project

In the “**Project View**” panel, click the “**Settings**” item and then click the “**Upload**” tab in the “**Settings**” dialog box. Configure the settings for the target and the connection mode from the respective drop-down menus, and then enter the IP address in the “**IP**” text field.

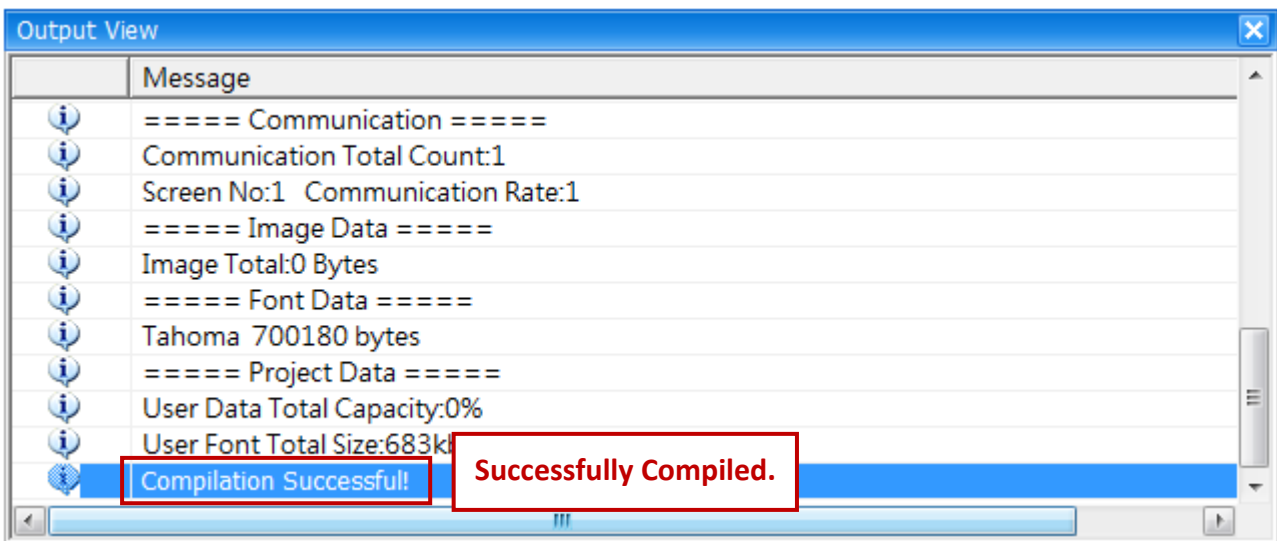


5.4.2 Compilation and Upload

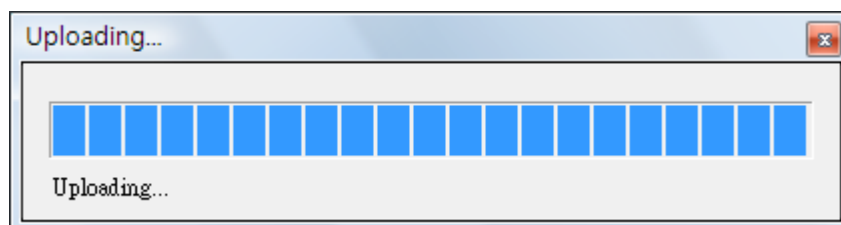
To upload the project, click the “Upload” item from the “Tools” menu. The project will be compiled first, and then, if compiled successfully, it will be uploaded to the target device based on the upload settings.



The result of the compilation process will be displayed in the “Output View” window.



Once the compilation process is complete, the project will be uploaded.



5.5 The Result on the SmartView Device

If the project has been successfully compiled and downloaded, the result should be displayed on the HMI device as illustrated below.



Appendix 1: SmartView Operations

The following provides an overview of the operations that can be performed on the SmartView device, including how to execute a project either automatically or manually, together with details of the functions available in the Control Panel of the SmartView device.



A. Executing a Project Automatically

By default, the SmartView will automatically load and run the project once it boots up.

Note: To prevent the project from automatically loading, tap anywhere on the screen as it is loading, as illustrated below.



B. Executing a Project Manually

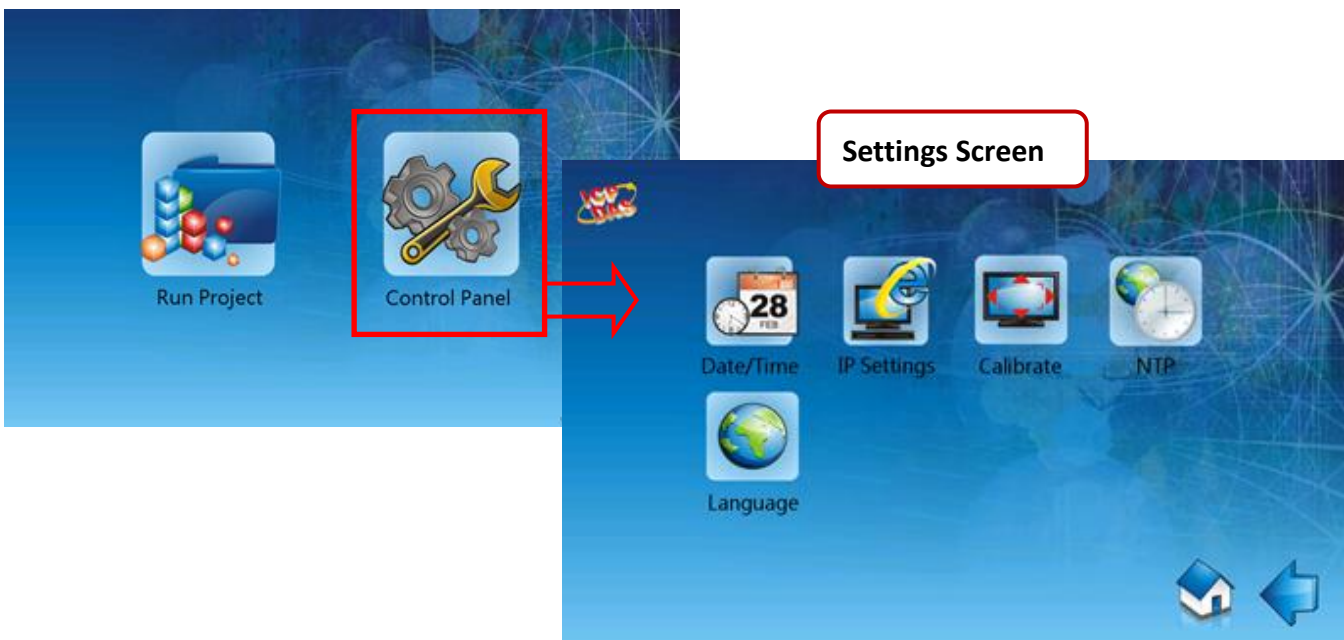
In some cases, you need to execute a project manually. For example, either after uploading a project to the SmartView, or after configuring most of functions in the Control Panel, the SmartView will not automatically run the project. Thus, you can tap the **Run Project** icon to manually execute a project.








C. Control Panel

The **Control Panel** is used to configure a variety of functions, each of which are described in more detail below, and include options such as changing the system date and time, configuring the IP settings and calibrating the sensitivity and accuracy of the touch screen, etc.

To access the Control Panel, tap the Control Panel icon and the settings screen will be displayed.



The following is an overview of the options available in the **Control Panel**.

 Date/Time	Used to adjust the system date and time settings
 IP Settings	Used to configure the IP address, etc. for the SV-x201 device
 Calibrate	Used to calibrate the sensitivity and accuracy of the touch screen
 NTP	Used to specify the NTP server and the time zone for the SV-x201 device
 Language	Used to specify the language settings for the SV-x201 device

C.1 Date/Time Settings



The **Date/Time Settings** function is used to adjust the system date and time for the SV-x201 device.

To adjust the Date and Time Settings for the SV-x201 device, tap the **Date/Time Settings** icon in the **Control Panel** to open the Date/Time Settings screen.



After tapping the value you want to adjust, the Numeric Keyboard will be displayed as below. Input the value for the year (or month / day / hour / minutes / seconds) field, and then tap the **Enter** button to complete the setting, as illustrated in the figure below. Finally, click the **OK** button to apply the settings.



The following is an overview of the options available in the Date/Time Settings screen for the **Date/Time Settings** function in the **Control Panel**

Date	Used to adjust the system date
Time	Used to adjust the system time
OK	Used to apply the settings and exit the screen
Cancel	Used to exit the screen without saving the configuration settings

C.2 IP Settings



The **IP Settings** function is used to configure the IP address, Network Mask, Gateway address and DNS Server address for the SV-x201 device.

To configure the IP address, tap the **IP Settings** icon in the **Control Panel** to open the IP Settings screen. Enter the relevant details in the respective fields and then tap the **OK** button to apply the settings.



The following is an overview of the options available in the IP Settings screen for the **IP Settings** function in the **Control Panel**.

IP Address	Used to specify the IP address for the SV-x201 device
Network Mask	Used to specify the Network Mask for the SV-x201 device
Gateway	Used to specify the Gateway address for the SV-x201 device
DNS Server	Used to specify the address of the DNS Server for SV-x201 device
Obtain an IP address via DHCP	Used to specify whether or not the IP address for the project should be obtained via a DHCP server
OK	Used to apply the configuration settings and exit the screen
Cancel	Used to exit the screen without saving the configuration settings

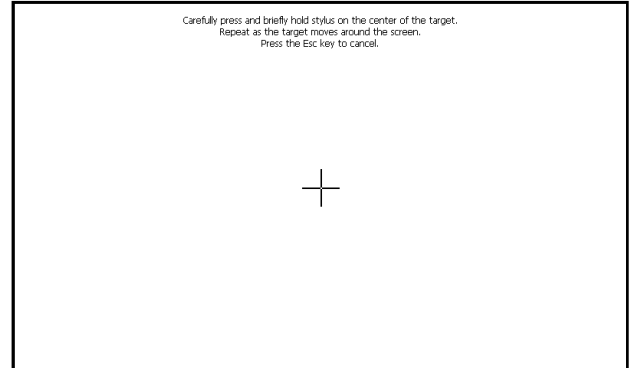
C.3 Screen Calibration



The Screen Calibration function is used to calibrate the sensitivity of the touch screen and can be used to adjust the accuracy of the response to user input.

To calibrate the sensitivity and accuracy of the touch screen, tap the **Calibrate** icon in the **Control Panel** to open the Screen Calibration screen.

On the Calibration screen, tap and briefly hold the target (cross) in the center of the screen. Repeat this process as the target moves around the screen.



After completing the process, it will automatically return to the **Control Panel**.

C.4 NTP Server



The NTP (Network Time Protocol) Server can be used to automatically synchronize the system time of the SV-x201 device with a remote server.

To configure the NTP server, tap the **NTP** icon in the **Control panel** to open the NTP screen.

Choose one of the NTP server and the time zone, and check the Enable NTP checkbox and then tap the **OK** button to apply the settings.



The following is an overview of the options available in the NTP screen for the **NTP** function in the **Control Panel**.

NTP Server	Used to specify the NTP Server for updating the system time
Time Zone	Used to specify the Time Zone
Enable NTP	Used to enable the NTP function
OK	Used to apply the settings and exit the screen
Cancel	Used to exit the screen without saving the configuration settings

C.5 Language Settings



The **Language** function is used to configure the language used for the SV-x201 device and can be selected from English, Traditional Chinese, or Simplified Chinese.

To adjust the interface language, tap the **Language** icon in the **Control panel** to open the Language screen. Choose the desired language in the drop-down list, tap the **Select** button to select it, and then tap the **OK** button to apply the settings.



D. Exit the Project

To exit the project and return to the Home screen, follow the procedure described below:

Tap and hold the top left-hand corner of the screen (A).

Slide your finger to the bottom left-hand corner of the screen (B).

1. Release your finger to exit the project.

