

1 Install the VisionView Application on a Siemens Panel

1.1 Introduction

This application note describes the necessary steps to integrate the Cognex VisionView® application onto a Windows® CE-based SIMATIC HMI panel.

The VisionView application allows for real-time view and recognition of automotive parts during the assembly process using Cognex sensors to provide the real-time images to the SIMATIC HMI panel. The VisionView application can be configured for the runtime environment of the machine HMI panel used to visualize and control the machine.

The VisionView application can be deployed on the following Siemens devices:

- MP 277 8" Touch (640 x 480)
- MP 277 10" Touch (640 x 480)
- Mobile Panel 277 8" (640 x 480)
- MP 377 12" Touch (800 x 600)
- MP 377 15" Touch (1024 x 768)
- MP 377 19" Touch (1280 x 1024)

NOTES

- It is necessary to use the Ethernet port on the SIMATIC HMI panel to connect to the Cognex sensor.
- At least 32,000 KB of program memory must be available on the Siemens panel prior to launching the VisionView application. To adjust the program memory on the Siemens panel, click *System Memory > Memory Tab* and adjust the amount of allocated memory in use.
- The VisionView application can be deployed on Siemens panels running Windows CE 5.0.
- Siemens CE-based HMI panels do not include Asian fonts. In order to display some languages, it may be required to install the necessary resources, including fonts, on the panel.

1.2 VisionView Support

Cognex online support is available to assist you in using the VisionView application software. For online support, documentation, and downloads, visit:

<http://www.cognex.com/Support/VisionView>.

1.3 Install the Software to the PC

NOTE Install WinCC flexible 2008 before installing the VisionView CE-SL software to the PC. If the VisionView CE-SL software is installed before WinCC flexible 2008, when attempting to test the sample application, an exception error may occur in WinCC flexible.

1. Install SIMATIC ProSave version 7.4.4.0 or higher to the PC.

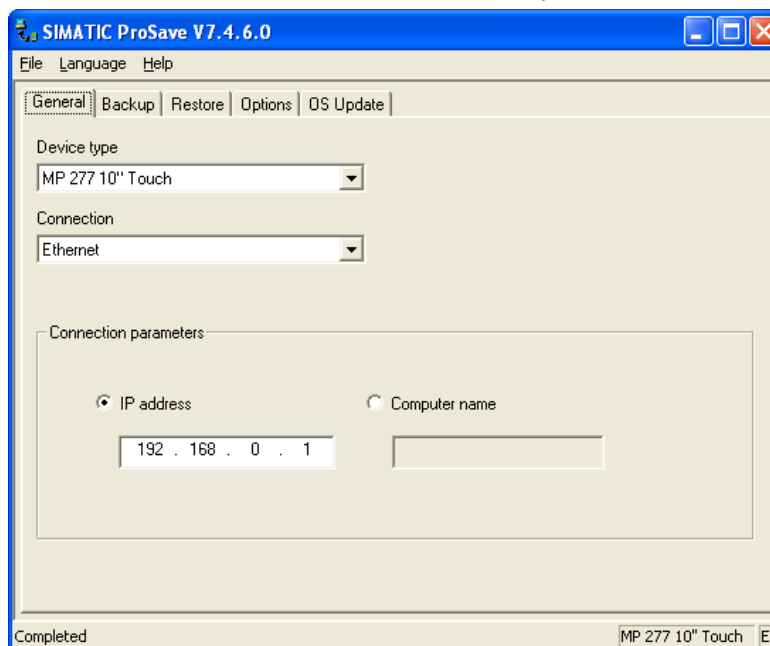
TIP The SIMATIC ProSave software is available as a free [download](#) from the Siemens website.

2. Install WinCC flexible 2008 SP1 or SP2 to the PC. To learn more about WinCC flexible 2008, visit the Siemens [website](#).
3. Install the VisionView CE-SL software to the PC. This will automatically install the following to the PC:
 - Files required for WinCC flexible 2008.
 - Script files provided by Cognex for ProSave software, that are used to install VisionView and its required components to the Siemens panel.
 - **SiemensMP277.zip** and **SiemensMP377.zip** files that include required files for sample applications for use in WinCC flexible 2008 to demonstrate the CognexHMI Function.

1.4 Configure SIMATIC ProSave

SIMATIC ProSave is used to transfer software between the PC and the HMI panel.

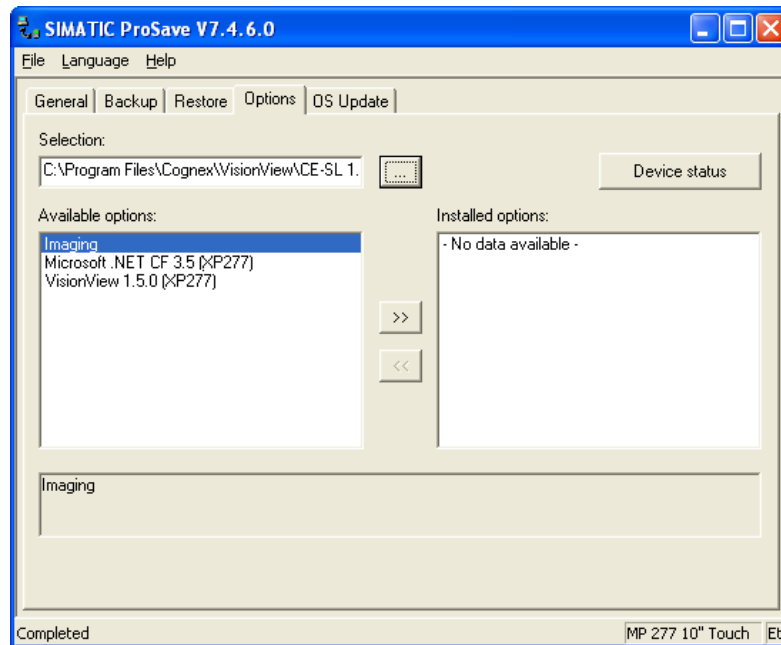
1. Power-cycle the Siemens panel.
2. From the PC, launch the SIMATIC ProSave software (typically found by clicking *Start menu > SIMATIC > ProSave > ProSave*).



3. From the General tab, select the appropriate Device type.

4. Select **Ethernet** as the Connection.
5. Select the **IP address** radio button and type in the IP address of the HMI panel on which the VisionView application will be installed.
6. Select the **Options** tab. **Imaging**, **Microsoft.NET CF 3.5 (XP277)** and **VisionView 1.6.0 (XP277)** should be displayed in the Available options list.

NOTE The Selection field auto-populates the VisionView installation directory path. The default installation directory is: C:\Program Files\Cognex\VisionView\CE-SL x.x.x\Siemens. If the Selection path doesn't contain the VisionView installation directory path, click the browse button, manually browse to the VisionView installation directory and click **OK**.



7. From the Available options list, select **Microsoft .NET CF 3.5 (XP277)** and click the double arrow (>>) to transfer the script file to the panel.
8. From the Available options list, select **Imaging** and click the double arrow (>>) to transfer the script file to the Siemens panel.
9. From the Available options list, select **VisionView 1.6.0 (XP277)** and click the double arrow (>>) to transfer the script file to the panel.

NOTES

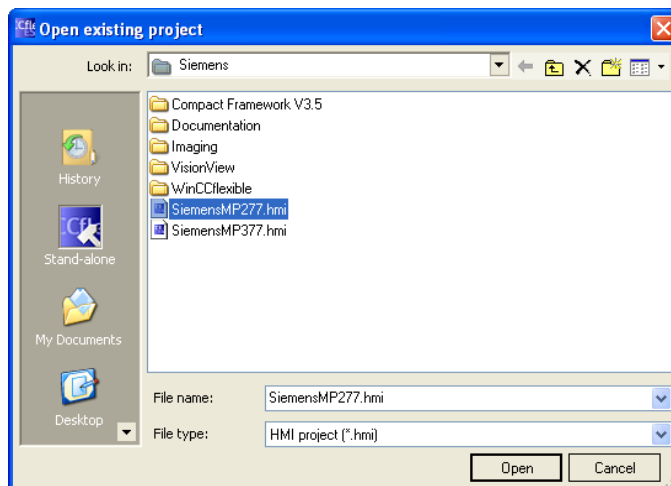
- If an error occurs when transferring files to the Siemens panel, power-cycle the panel and place it into Transfer mode.
- If an error occurs when transferring files to the Siemens panel, power-cycle the panel and place it into Transfer mode.
- The VisionView 1.6.0 (XP277) file is installed to the following location: \Program File\VisionView.

10. Close the SIMATIC ProSave software.

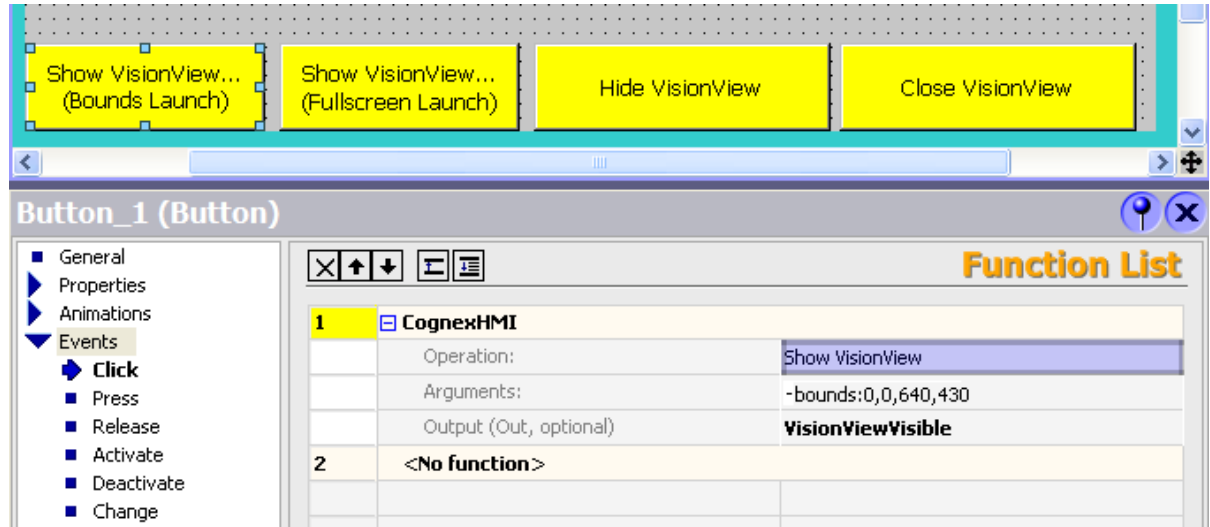
1.5 Configure WinCC flexible 2008

1. From the PC, launch the WinCC flexible 2008 software.
2. From the Project menu, select **Retrieve** to unzip the **SiemensMP277.zip** or **SiemensMP377.zip** file. The SiemensMP277.hmi and SiemensMP277.ldf files are unzipped from the SiemensMP277.zip folder. The SiemensMP377.hmi and SiemensMP377.ldf files are unzipped from the SiemensMP377.zip folder.
3. From the Project menu, select **Open**. From the Open existing project dialog, select the **SiemensMP277.hmi** or **SiemensMP377.hmi** sample application and click the **Open** button.

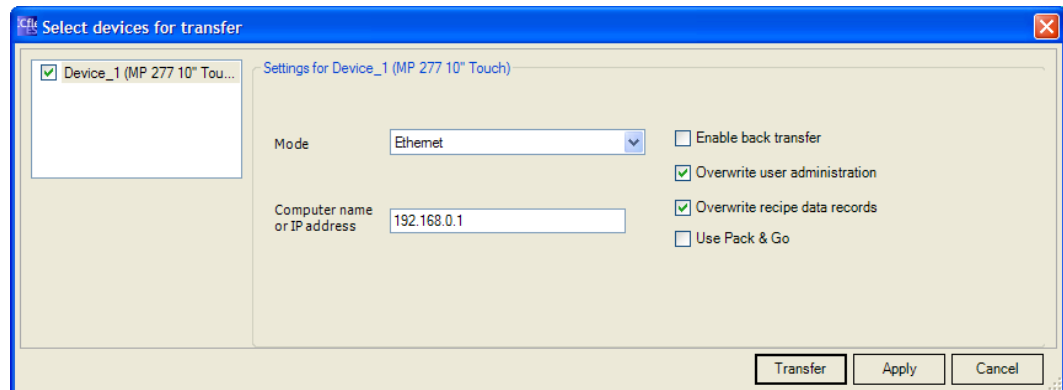
NOTE By default, the SiemensMP277.zip and SiemensMP377.zip files are installed to: C:\Program Files\Cognex\VisionView\CE-SL x.x.x\Siemens.



- The sample application includes four buttons across the bottom of the screen to demonstrate the use of the CognexHMI function: **Show VisionView (Bounds Launch)**, **Show VisionView (Fullscreen Launch)**, **Hide VisionView** and **Close VisionView**. Select the appropriate button control and make adjustments to the CognexHMI function as needed (refer to *Using the CognexHMI Function in WinCC flexible 2008*, below).



- Save any changes to the project.
- From the Project menu, select **Compiler > Generate** to compile the application.
- From the Project menu, select **Transfer > Transfer** to open the Select devices for transfer dialog.
- Select the appropriate device and configure the transfer settings.



- Click the **Transfer** button to transfer the HMI application from the PC to the Siemens panel and to automatically install the CognexHMIFuncs.dll file to the panel.

1.6 Using the CognexHMI Function in WinCC flexible 2008

VisionView may be accessed via the CognexHMI function, available under the Vision function group. The CognexHMI function has two parameters: **Operation** and **Arguments**. There are three operations: **Show VisionView**, **Hide VisionView** and **Close VisionView**.

1.6.1 Show VisionView

Launches the VisionView application. If the VisionView application is already running but is hidden, **Show VisionView** will unhide the application.

NOTE The VisionView application can be launched from the Start Menu or the desktop shortcut icon.

1.6.1.1 Arguments

By default, when the VisionView application is launched (i.e., the first time Show VisionView is called) in full-screen and topmost mode, without a windowed frame. The following optional command line arguments may be specified in the Arguments parameter field to launch the VisionView application in different modes.

Table 1-1: Arguments

Argument	Description
-bounds:x,y,w,h	Launches the VisionView application as a sub-region of the screen. The x and y values represent the coordinate positioning of the screen. The w and h values represent the pixel height and width of the screen. Minimum values: 640 (width) and 430 (height).
-windowed	Launches the VisionView application with a windowed frame that has Minimize, Maximize and Close buttons. In this mode, the VisionView application's Minimum and Close buttons (displayed in the lower right of the Run Mode screen) are not displayed. The VisionView application is allowed to be hidden behind other windows.
-nottopmost	The VisionView application is allowed to be hidden behind other windows.
-nominimize	The VisionView application's Minimize button (displayed in the lower right of the Run Mode screen) is not displayed.

NOTES

- If the command line argument is not formatted properly, the VisionView application will ignore it.
- If more than one argument is specified, they must be separated with a space. For example, when "-bounds:x,y,w,h" and "-windowed" arguments are specified, the Arguments field should be: "-bounds:0,0,640,430 -windowed".
- When specifying the bounds, spaces are not permitted within the argument. If less than the minimum value is specified for the width and/or height, VisionView uses the minimum value for the screen size. For example, if "-bounds:0,0,600,430" is specified, the screen size will be 640 x 430.
- When the VisionView application is launched using the "-windowed" command line argument and not maximized, the window may be moved. However, if moved, it may not be resized dynamically and the Minimize and Close buttons will not be displayed within the VisionView application.

1.6.2 Hide VisionView

Hides the VisionView application. At runtime, when the Hide VisionView button is pressed, the VisionView application is still running in the background and all sensors are still connected, but the window is hidden.

1.6.3 Close VisionView

Closes and exits the VisionView application.

1.6.4 Outputs

The CognexHMI function returns a value of **1** when the VisionView application is running or hidden and a value of **0** when the VisionView application is closed. This value may be used to deactivate controls that should not be available when VisionView is or isn't running.

1.7 License the VisionView Application

To deploy the VisionView application on the panel, you must purchase a license and install the license using Cognex Explorer. To install the license, you will need to launch Cognex Explorer from a networked PC, copy the Activation ID from the entitlement letter provided by Cognex, and paste the Activation ID into the appropriate field in the License application step within Cognex Explorer. Refer to the *Cognex Explorer Help* file for more information.

1.8 Emergency License

An emergency license allows you to operate the VisionView application for a fixed period of time without verification from Cognex. There are 5 emergency licenses available for each VisionView CE-based HMI panel, valid for 3 days for each activation. Emergency licenses are intended to allow you to keep critical PCs, processes and production lines running in cases where a standard license becomes invalid and it is not possible to perform online licensing immediately to solve the problem. Using an emergency license allows you to keep running until you solve the problem. Refer to the *VisionView Help* file for more information.