

COGNEX

VisionView[®] Application Note

Rockwell HMI Panels

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Introduction

This application note describes the necessary steps to integrate the Cognex VisionView® application onto a Windows® CE-based Rockwell HMI panel. The VisionView application can be configured for the run-time environment of the machine HMI panel. The VisionView application can be deployed on the following Rockwell devices:

- PanelView Plus 6 700 (640 x 480)
- PanelView Plus 6 1000 (640 x 480)
- PanelView Plus 6 1250 (800 x 600)
- PanelView Plus 6 1500 (1024 x 768)
- PanelView Plus 7 Standard 5.7" (640x480)
- PanelView Plus 7 Standard 6.5" (640 x 480)
- PanelView Plus 7 Standard 10.4" (800 x 600)
- PanelView Plus 7 Standard 15" (1024 x 768)

Note:



- The VisionView application can be deployed on Rockwell panels running Windows CE 6.0.
- The minimum supported HMI panel screen resolution is 640 x 480.

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>.

Installation and Configuration

Install the Software to the PC

1. Install FactoryTalk[®] View software to the PC.
2. Install the VisionView CE-SL software to the PC. This will automatically install the following to the PC:

Files	Description
VisionView_1.6.8_x86.cab	A file provided by Cognex and used to install VisionView and its required components to the following Rockwell panels: • PanelView Plus 6 700 (640 x 480) • PanelView Plus 6 1000 (640 x 480) • PanelView Plus 6 1250 (800 x 600) • PanelView Plus 6 1500 (1024 x 768)
VisionView_1.6.8_ARM.cab	A file provided by Cognex and used to install VisionView and its required components to the following Rockwell panels: • PanelView Plus 7 Standard 5.7" (640x480) • PanelView Plus 7 Standard 6.5" (640 x 480) • PanelView Plus 7 Standard 10.4" (800 x 600) • PanelView Plus 7 Standard 15" (1024 x 768)
CognexSampleApplication.apa	A sample application that is provided as an archived project. This application can be restored on the PC and loaded in FactoryTalk View Studio.
CognexSampleApplication.mer	A file that is generated when the CognexSampleApplication.apa sample application is compiled in FactoryTalk View Studio. This file can be downloaded and ran on the panel.

Install the Software to the Panel

1. Insert the USB drive or Secure Digital (SD) card into the PC.
2. From the PC, navigate to the VisionView folder that contains the panel installation files. The default location is: C:\Program Files (x86)\Cognex\VisionView\CE-SL 1.6.8\Rockwell\CAB.
3. Copy the VisionView_1.6.8_x86.cab and VisionView_1.6.8_ARM.cab files to the USB drive or SD card.
4. Remove the USB drive or SD card from the PC and insert it into the applicable slot on the HMI panel.
5. From the HMI panel, use My Device to navigate to the location of the removable media (for USB drives, this will be "USB Storage") and double-click the drive to view its contents.

- Double-click the appropriate **.cab** file based on your HMI panel model. If the incorrect .cab file is double-clicked, an error message will be displayed.

 **Note:** If installing VisionView to an unsupported Rockwell Panel, it is important to use the correct .cab file based on the HMI panel's processor type.

File	HMI Panel Model
VisionView_1.6.8_x86.cab	- PanelView Plus 6 700 (640 x 480) - PanelView Plus 6 1000 (640 x 480) - PanelView Plus 6 1250 (800 x 600) - PanelView Plus 6 1500 (1024 x 768)
VisionView_1.6.8_ARM.cab	- PanelView Plus 7 Standard 5.7" (640x480) - PanelView Plus 7 Standard 6.5" (640 x 480) - PanelView Plus 7 Standard 10.4" (800 x 600) - PanelView Plus 7 Standard 15" (1024 x 768)

During the installation process, you will be prompted for the installation location for the application. It is recommended to install to the default location (\\Program Files\\VisionView).

 **Tip:** To uninstall the VisionView application from the panel, navigate to the Control Panel, select **Remove Programs** and select the Cognex VisionView application from the list.

Configure FactoryTalk View Studio

Note: By using the CognexSampleApplication.mer included in the installer, you can skip steps 1 through 6. By default, the CognexSampleApplication.mer is installed to: C:\Program Files (x86)\Cognex\VisionView\CE-SL x.x.x\Rockwell\HMI Sample Application.

1. From the PC, launch the FactoryTalk View Studio software.
2. From the Tools menu, select **Application Manager**.
3. From the Application Manager dialog, select **Restore Application**. Click **Next**.

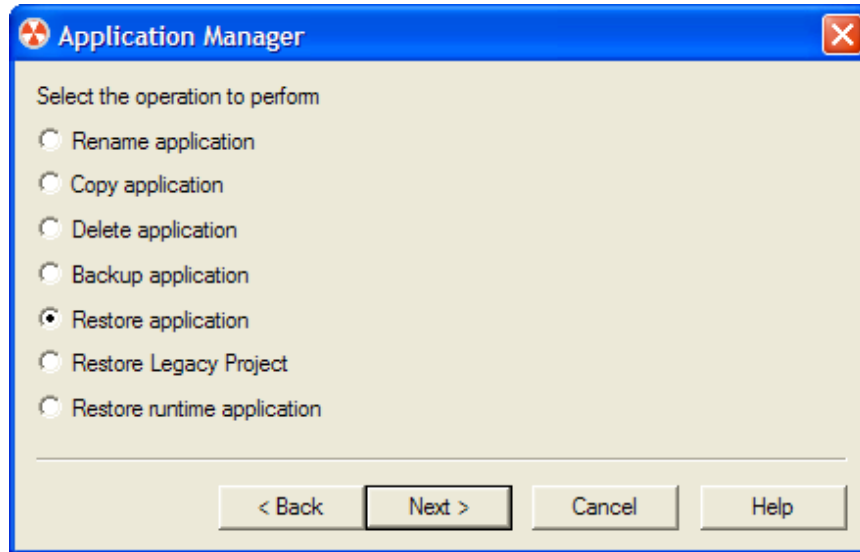


Figure 2-1: Application Manager: Select the Operation

4. Browse to the **CognexSampleApplication.apa** file. The default location is: C:\Program Files (x86)\Cognex\VisionView\CE-SL x.x.x\Rockwell\HMI Sample Application. Select **Restore the Factory Talk View Machine Edition application**. Click **Next**.

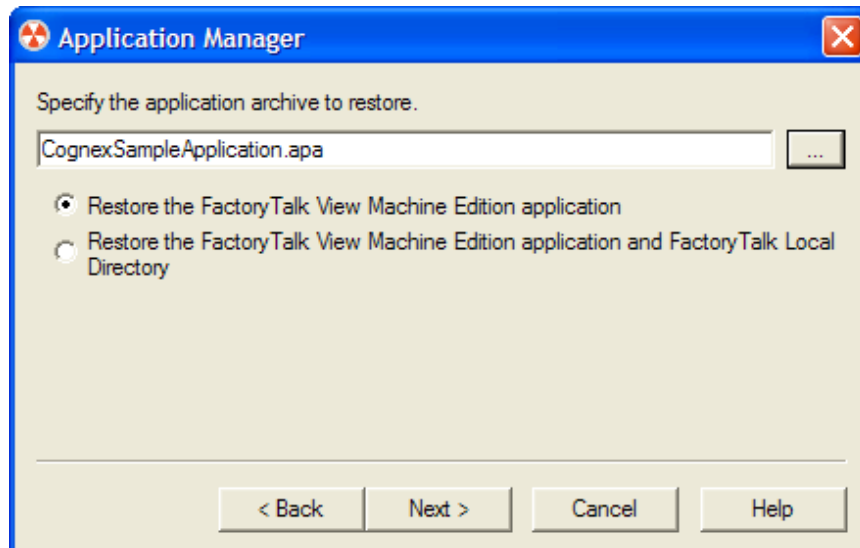


Figure 2-2: Application Manager: Select the Application Archive

5. From the File menu, select **Open** and open the **CognexSampleApplication**.

- 6. From the Application menu, select **Create Runtime Application**. This will generate a "CognexSampleApplication.mer" file.
- 7. Download the **CognexSampleApplication.mer** file to the panel. Refer to the FactoryTalk View Studio documentation for detailed instructions on this process.

Using the CognexSampleApplication in FactoryTalk Studio

The CognexSampleApplication.apa sample application uses the FactoryTalk Studio ME Program Launcher ActiveX control. The ME Program Launcher allows VisionView to be launched, closed, or shown based on tag bindings to the properties of the control. The properties of the **Show VisionView**, **Launch VisionView** and **Close VisionView** buttons set tag values that are bound to the properties of the ME Program Launcher.

Note:

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- The ME Program Launcher (version 2.0.0.2 or higher) must be installed on the PC that is used to design the HMI with FactoryTalk View Studio. For information on installing the ME Program Launcher, refer to the Rockwell Automation Knowledge Base (Answer ID: 20474).
 - If not using the CognexSampleApplication.apa, you will need to insert the ME Program Launcher ActiveX control into your application and configure it to launch the VisionView application.
 - If buttons controls are included in the HMI application to "Show" or "Close" the VisionView application, the buttons will only be functional when the screen that launched the VisionView application is active. If multiple screens are used in the HMI application, external "Show" and "Close" buttons should not be used in the HMI application. Instead, use the Minimize and Close buttons that are displayed on the runtime screen of the VisionView application.

Configure the ME Program Launcher Property Sheet

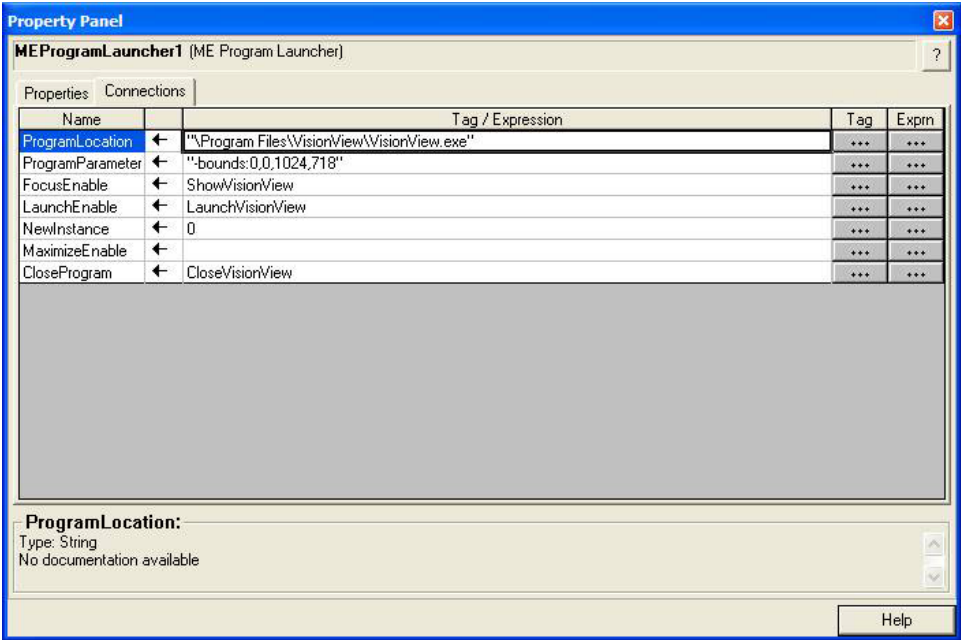


Figure 2-3: Property Panel

- **ProgramLocation:** Specifies the location of the VisionView.exe file.

- **ProgramParameter:** If VisionView is launched with no command line arguments, it is opened in full screen and topmost mode, without a windowed frame (default mode). The following optional command line arguments may be specified in the ProgramParameter field to launch the VisionView application in different modes.

 **Note:** The VisionView application can be launched from the Start Menu or the desktop shortcut icon (opened in default mode).

Table 2-1: ProgramParameter

Parameter	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.
-nomimize	The VisionView application's Minimize button (displayed in the lower right of the Run Mode screen) is not displayed.

Note:

- 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 ProgramParameter 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.
- "ShowVisionViewMacro" is included in the sample application. This macro can be used to bring the VisionView application to the front when hidden behind other windows.

- **FocusEnable:** Specifies **ShowVisionView** to show the application when it is minimized.
- **LaunchEnable:** Specifies **LaunchVisionView** to set the condition for launching the VisionView application.
- **NewInstance:** This property is set to **0** to designate that only a single instance of VisionView is executed. Thus, if VisionView is already running and the launch condition is set, then the running instance of VisionView will receive focus.
- **MaximizeEnable:** This field should be left blank.
- **CloseProgram:** Specifies **CloseVisionView** to exit the VisionView application.

License

License the VisionView Application

To deploy the VisionView application on the panel, you must purchase and install a license. To install a license, launch the VisionView application, click the green key button in the Cognex VisionView Setup screen, enter the Activation ID provided by Cognex in the Enter the Activation ID screen, and click **OK**.

