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InControlWare 2.02.02

View Center Runtime User Guide

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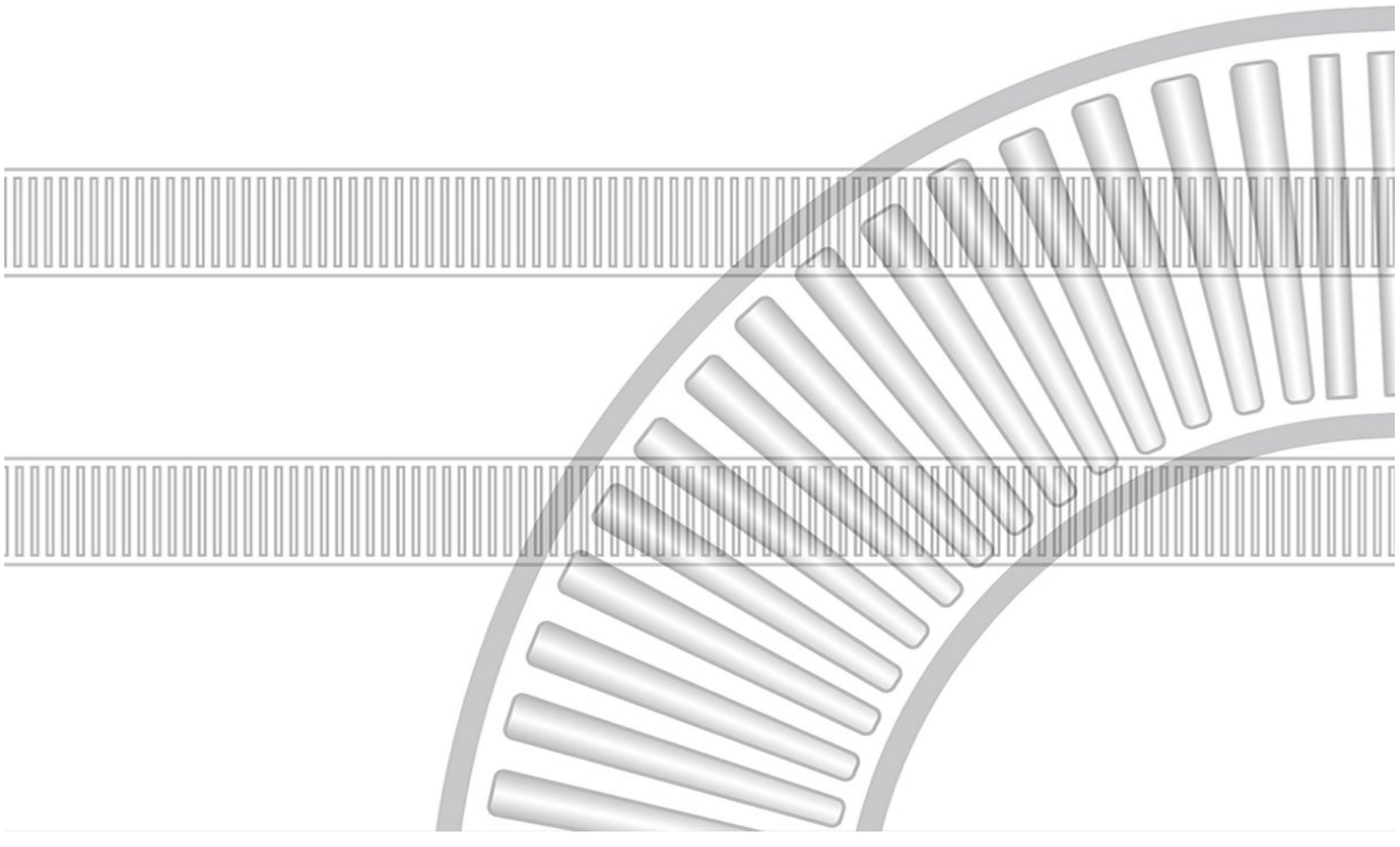

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About This Guide

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This document describes InControlWare's View Center and how it is used to monitor a material handling system.

1.1 InControlWare

InControlWare is a suite of software products designed to manage the operation of material handling systems and related resources in a warehouse, distribution center, or fulfillment center. It includes an intuitive user interface that is based on standard Microsoft Windows technology and leverages that technology to provide a complete front end for the systems that are being managed.

InControlWare's user interface is built around a common framework that employs menus, a toolbar, and a status bar surrounding a multi-panel display. This display area is managed with user tabs that present information based on a particular function or application within InControlWare.

The InControlWare framework can be uniquely configured to meet the needs of each client system and supports dynamic features that are specific to each station and user. Tabs, menu items, and other display features can be configured differently to meet the needs of each operating station as well as to provide or restrict access for individual users.

1.2 View Center

View Center displays a two- or three-dimensional graphical model of the material handling system. It provides an easy-to-use overview of the system, making it a valuable troubleshooting tool. It provides an excellent graphical perspective to users that are new or unfamiliar with the subtleties of a facility. All of the conveyors and many of the devices that are used in a system are displayed on the screen. Different colors are used to represent conveyor and device status. You can pan and zoom the model to view detailed areas of the system.

1.3 Documentation Conventions

Many typographical conventions are used to distinguish between the different kinds of information presented in this guide, as follows:

Table 1-1 Documentation Conventions

Convention	Description
Bold	Used to identify menu selections, toolbar selections, and section references.
Italic	In paragraph text, italic identifies the titles of documents that are being referenced. When used in conjunction with the monospace text described below, italic identifies a variable that should be replaced by the user with an actual value.
`monospace text`	Text that represents programming code.
`monospace italic text`	Variables in programming code.
CTRL+X	A combination of keystrokes that are pressed simultaneously.
Function | **Function**	A path to a function or dialog box within an interface. For example, "Select **File** | **Open**" indicates that you should select the **Open** function from the **File** menu.
( ) and |	Parentheses enclose optional items in command syntax. The vertical bar separates items in a list of choices. For example, any of the following four items can be entered for this command: persistPolicy (Never | OnTimer | OnUpdate | NoMoreOftenThan)

1.3.1 Notes, Tips, and Important Information

The following callouts and icons are used to highlight information throughout this guide:

Note or Tip

A Note highlights related information or information that is tangential to the topic being discussed. A Tip highlights useful information that can be used to simplify the tasks that are being discussed.

Important

Important callouts are used to highlight information of great significance or value that the reader should be certain to know before proceeding.

Notes, Tips, and Important callouts are not safety notices.

View Center Concepts

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View Center introduces a number of important features and concepts to InControlWare. Where most of the panels in InControlWare deal with system information using HMI-style status screens, View Center provides a graphical model of the material handling system, allowing you to see the system as it appears on the floor from the InControlWare interface. At a glance, you can view system status for individual conveyor segments, logical areas such as shipping lines, and electrical devices. Search capabilities are included so that you can quickly find the conveyor or device that you would like to view.

All of the conveyors and devices that are controlled by and reporting status to the machine controller are represented in the View Center model. Colors are used to represent conveyor and device status. Gray items are not currently reporting status.

As you work within View Center, you will notice a number of new terms, concepts, and features. Terms and concepts that are unique to View Center are:

- Drag and Drop Alarms
- Areas
- Camera Views
- User Views

These concepts are discussed throughout the remainder of this chapter. Features that are unique to View Center are discussed throughout the remainder of this guide.

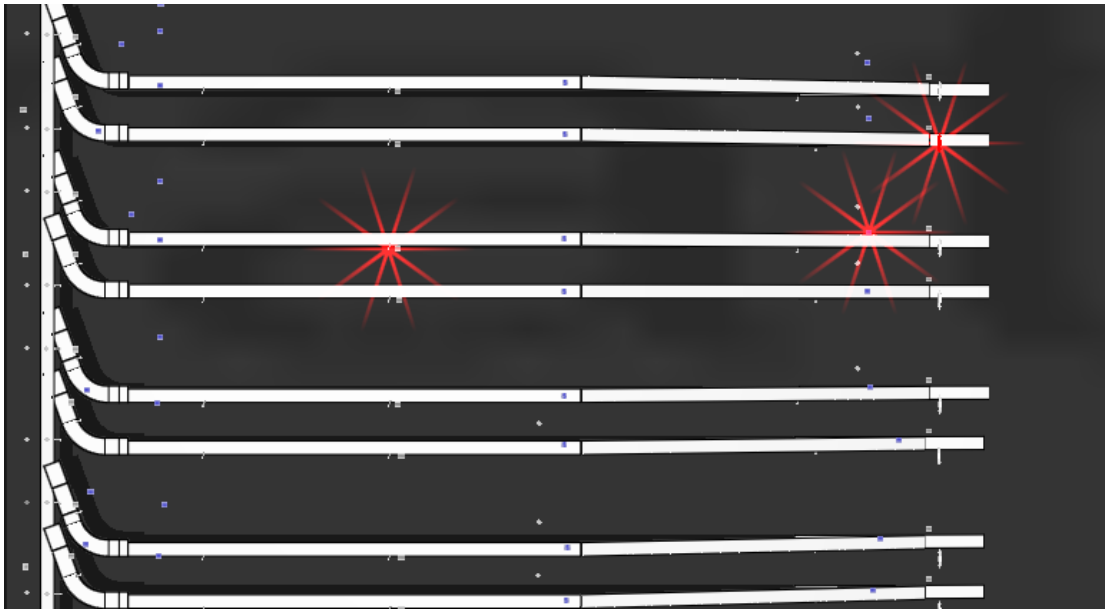
2.1 Adding View Center to a Project View

To add a View Center panel to a project view, you'll need to create a split panel. The VCTab class and VCToolAccordion class should then be added to the panel. Both of these classes can be found in the ViewCenter.dll. If you would also like to add the Alarm Viewer to the panel, use the AlarmViewer class in the CommandCenter.dll.

2.2 Drag and Drop Alarms

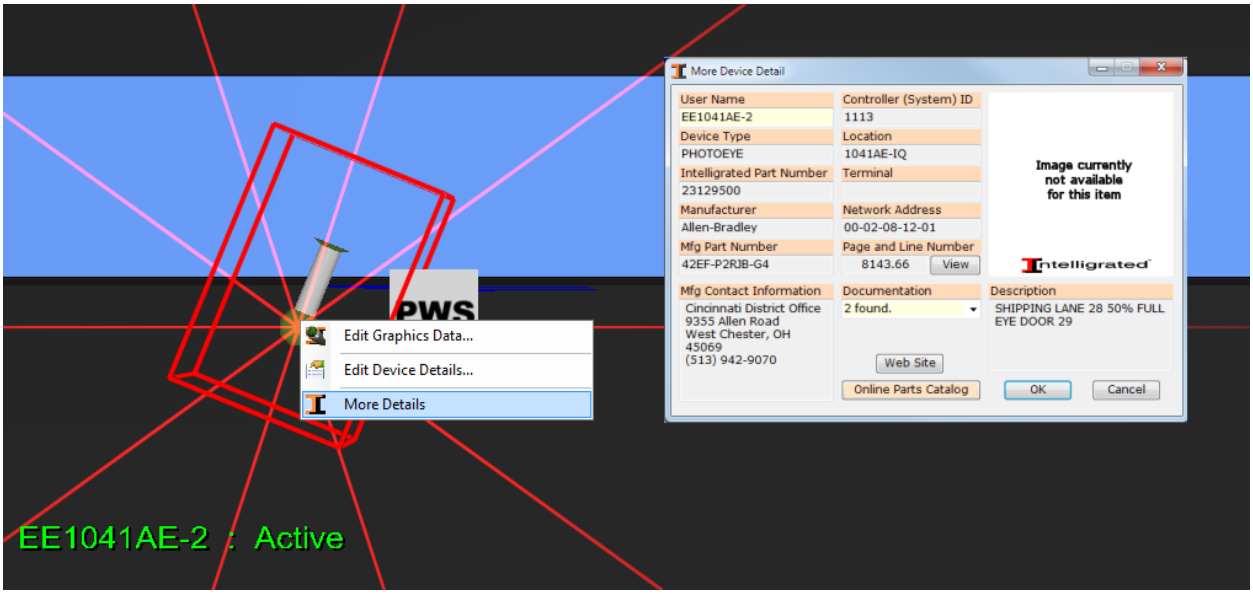
Although alarms and events are standard InControlWare features, View Center introduces some additional functionality. If a conveyor or device is in an alarm state, it will be highlighted with a starburst in the model. If the current view does not show the faulted equipment, and if the Alarm Viewer panel has been configured to display with View Center, you can drag the alarm from the Alarm Viewer into the model. This causes View Center to pan the view so that the starburst appears in the center of the window.

Figure 2-1 View Center Alarms



You can then zoom in on the component and right click on it to view further details.

Figure 2-2 Device Details



2.3 Camera Views

Camera views are changes to the perspective of the model in View Center. As you adjust the view, zooming in and out or dragging the model around to see different components, View Center takes snapshots of the perspectives. For this reason, each perspective can be considered a camera position or a camera view. View Center saves the camera views so that you can return to them at any time. For additional information about camera views, refer to Section 4.1.8, **Previous and Next Camera Views**.

2.4 User Views

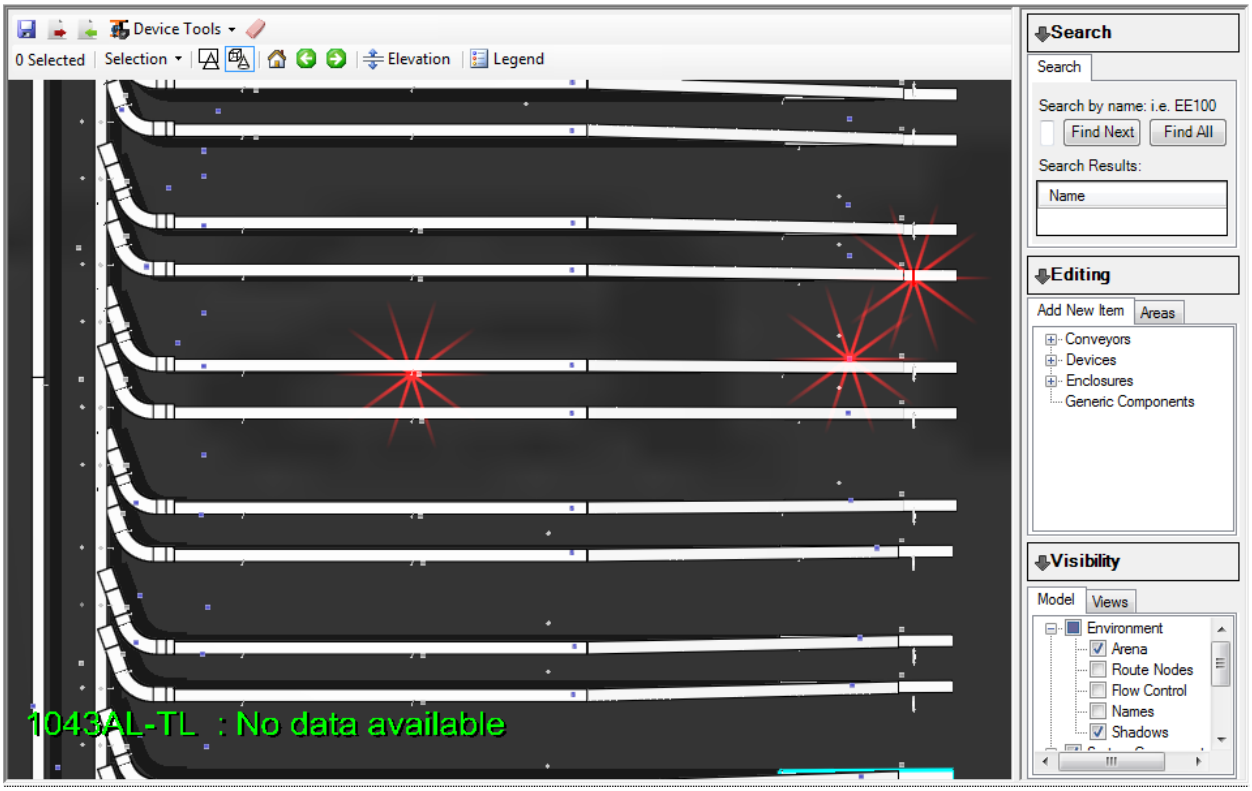
There are several features in View Center that you can use to change the view of the system model. This allows you to focus in on specific areas or components and to view the system from different perspectives. If you find that you are often returning to a specific perspective, you can save it as a user view. In this way, you can return to that view at any time without having to repeatedly perform the individual tasks that created the view. For additional information about user views, refer to Section 7.2, **Working with User Views**.

The View Center Runtime Panel

3

The View Center Runtime panel contains a Tool Accordion, a toolbar, and a model of the system. The Tool Accordion contains a number of features that can be used to search for items and change the items that are displayed. The toolbar provides additional features that can be used to alter the view of the system in the model.

Figure 3-1 View Center Designer



3.1 The Tool Accordion

The Tool Accordion contains the Search and Visibility groups. You can expand and collapse each of these groups by clicking on the group's heading. The fields and other items within each group can be used as follows:

Table 3-1 Tool Accordion Groups

Group	Description
Search	The Search group contains fields and buttons that you can use to search for components in the View Center model. For a complete description of this group, refer to **Chapter 5, Using the Search Feature**.
Visibility	The Visibility group contains items that you can use to show/hide items in the View Center model. For a complete description of this group, refer to **Chapter 7, Using the Visibility Features**.

The groups in the Tool Accordion provide a convenient way for you to manage, filter, and locate all of the items that have been rendered in the View Center model. Each of the groups can contain one or more tabs that add functionality to the group.

3.2 The Toolbar

The View Center toolbar is located at the top of the model window. You can use the buttons in this toolbar to perform a variety of tasks.

Figure 3-2 View Center Toolbar

For a complete description of the toolbar, refer to **Chapter 4, Working with the View Center Model**.

3.3 The Model

The model window contains the rendering of the material handling system. The parts of the system that are displayed will depend on the selections you have made in the Tool Accordion. Similarly, the manner in which they are displayed (e.g., two or three dimensional, part of the system or all of it) will depend on the selections you have made in the Tool Accordion and the toolbar.

You can manipulate the view of the system in the model window using your mouse and keyboard. For additional information, refer to the *View Center Quick Reference Guide*.

3.4 The Alarm and Event Viewers

It is also possible for the View Center panel to include the Alarm and/or Event Viewers. These viewers are standard InControlWare panels that can appear with any panels in the interface. For detailed information about the Alarm and Event Viewers, refer to the *Alarms & Events User Guide*. For information about functionality that is unique to View Center, refer to **Section 2.3, Drag and Drop Alarms**.

Working with the View Center Model

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The model in the View Center window is a graphical representation of the material handling system. As you monitor the system, it is likely that you will want to focus in on areas and items of interest. To do so effectively, you will need to pan, zoom, rotate, and otherwise manipulate the model so that these key items and areas are clearly visible. This chapter provides the information needed to manipulate the system model in the View Center window.

4.1 The View Center Toolbar

The View Center toolbar is located at the top of the model window.

Figure 4-1 View Center Toolbar

You can use the buttons in this toolbar to:

- Make the view of the model two-dimensional or three-dimensional.
- Return to the default model view.
- Switch to previous and next camera views.
- Change the elevations that are displayed in the model.
- Review the color codes and quick key information for the model.

4.1.1 Viewing the Model in Two and Three Dimensions

You can display the model in either two dimensions or three dimensions by selecting the the following buttons:

Table 4-1 Two-Dimensional and Three-Dimensional Buttons

Button	View	Description
	2D	Displays the system as a two-dimensional model. Controls that do not apply to two-dimensional models are grayed out in this mode.
	3D	Displays the system as a three-dimensional model.

Figure 4-2 Two-Dimensional View

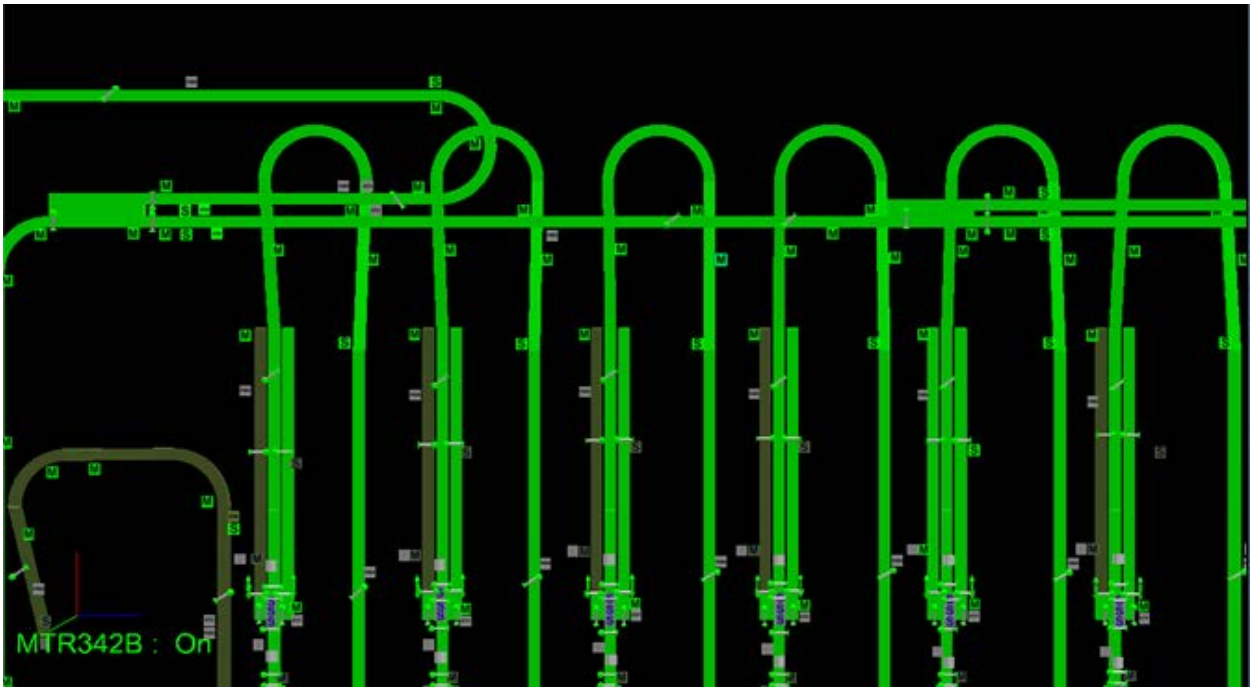
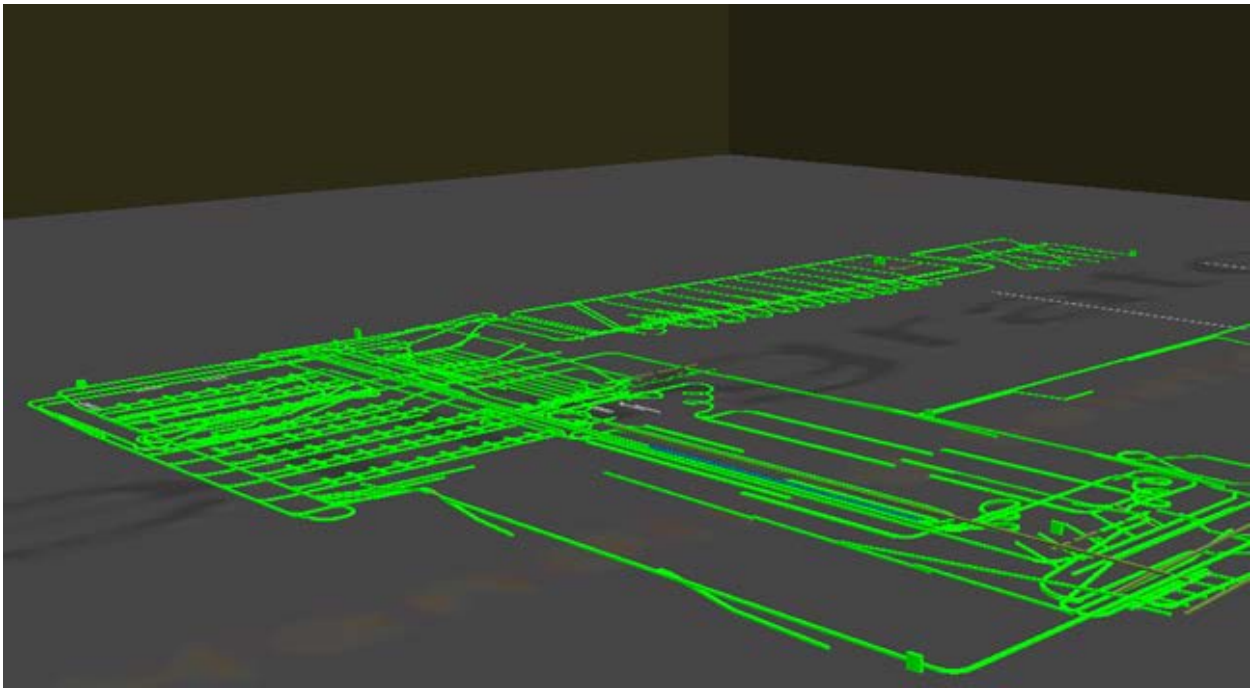


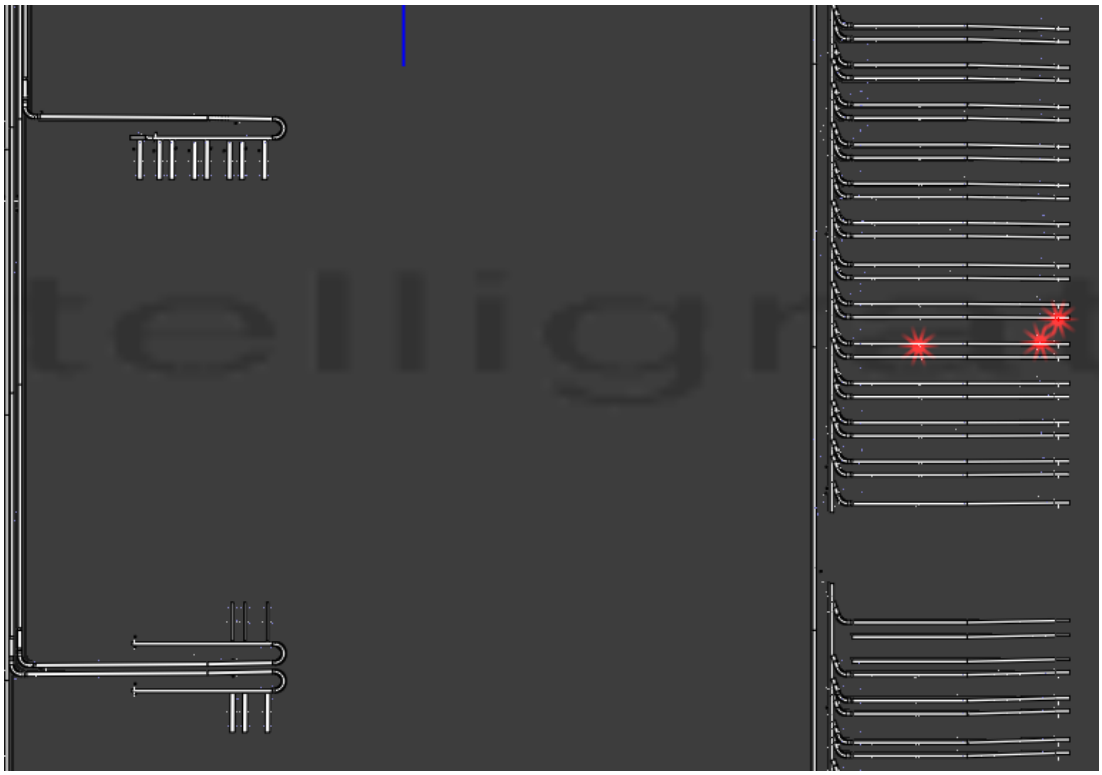
Figure 4-3 Three-Dimensional View



4.1.2 The Home View

You can use the Home ( ) button to display the model in its default view.

Figure 4-4 Sample Home View



4.1.3 Previous and Next Views

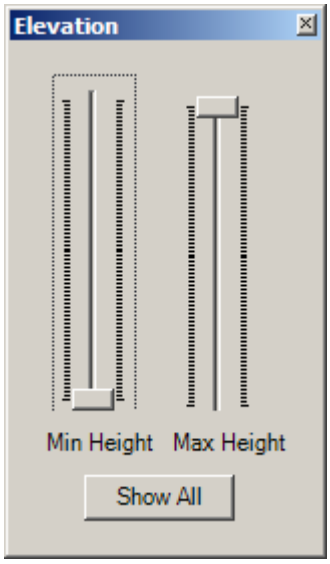
Views are changes to the perspective of the model. As you adjust the view, zooming in and out or dragging the model around to see different areas, View Center takes snapshots of the perspectives. View Center then saves the views so that you can return to them at any time.

Use the **Previous View** button ( ) to go back to earlier views and the **Next View** button ( ) to go forward to later ones.

4.1.4 Changing the Model's Elevation

You can use the model's elevation to hide different levels of the system. This can be useful if you are trying to zoom in on a single component and you would like to eliminate the visual clutter in the area. To change the elevation of the model:

1. Select the **Elevation** button in the toolbar. A dialog box appears.



2. Use the **Min Height** slider to hide components from the bottom up.
3. Use the **Max Height** slider to hide components from the top down.
4. To display all of the components again, select the **Show All** button.

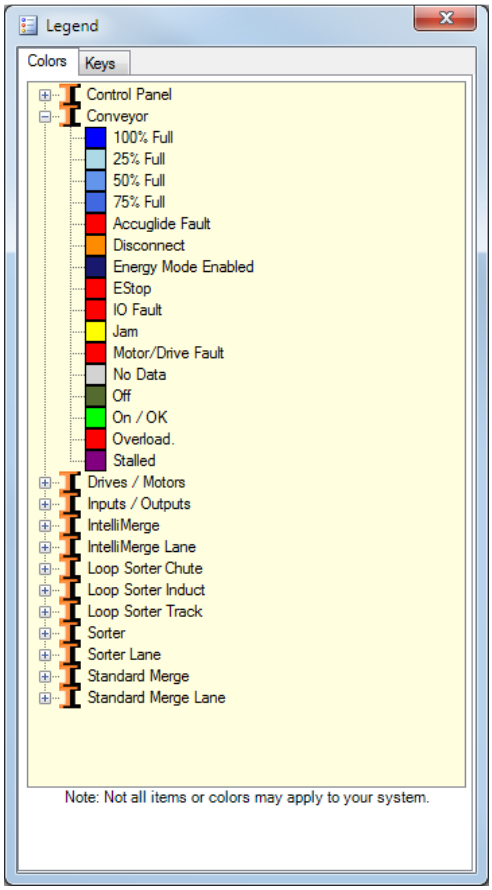
4.1.5 Using the Legend

A legend is included in View Center to help you translate the color codes that are used in the model and to provide a list of the shortcut keys that can be used to change the view of the model. To view the legend, select the **Legend** button in the toolbar. The two available tabs in the legend, Colors and Keys, are described in the following sections.

Colors

The Colors tab provides a list of the colors that are used in the model and the statuses that they identify.

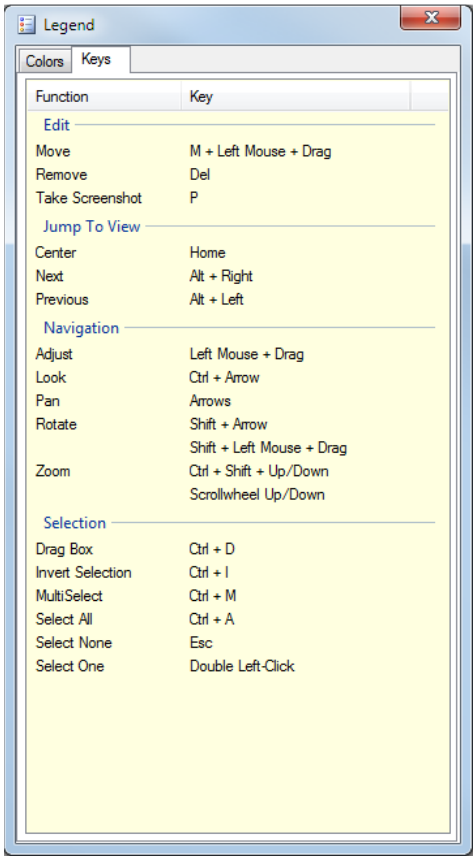
Figure 4-5 Legend Colors Tab



Keys

The Keys tab provides a list of the shortcut keys that can be used to adjust the model view.

Figure 4-6 Legend Keys Tab



4.1.6 Rotating, Panning, and Adjusting Elevation

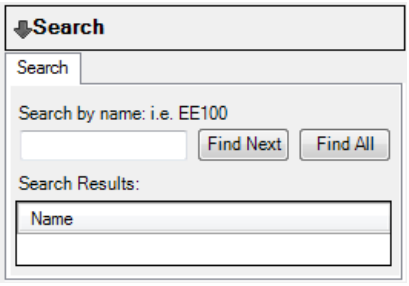
You can rotate, pan, zoom, and adjust the elevation of the model in the View Center window. For a complete list of quick keys, mouse controls, and combos that can be used in the model window, refer to the *View Center Runtime Quick Reference Guide*.

Using the Search Feature

5

You can use the Search feature in the Tool Accordion to search for components in the model by name. The components that match the entered string are listed in the Search Results list. Double-clicking on one of the search results centers the model window on that component and selects it.

Figure 5-1 Search Feature

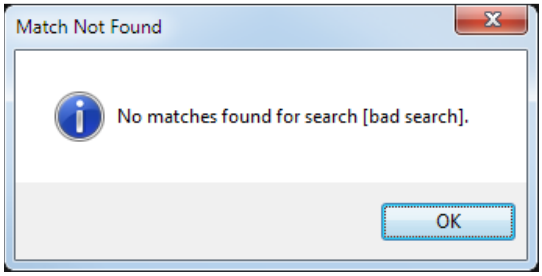


To perform a search, complete the following steps:

1. Enter the name or a portion of the name that you want to search for in the **Search by Name** field.

2. Press ENTER or click the **Find All** button. View Center will search for the names of any components that include the string that you entered and display the results in the Search Results list.

If the string that you enter does not have any matching component names in the model, a prompt will be displayed informing you of this.



3. Double click on a component in the Search Results list to view it in the model. You can use the **Find Next** button to display the next item in the Search Results list.

Using the Visibility Features

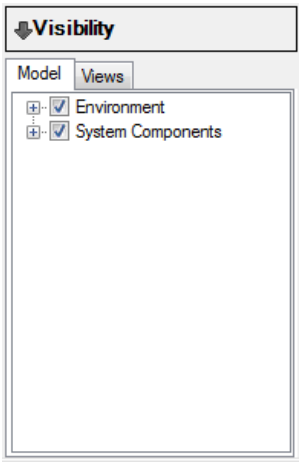
7

The View Center Visibility features allow you to change what is displayed in the model. You can do so in two ways: by changing which components are displayed or by changing the view that is used.

6.1 Showing/Hiding System Components

The Model tab in the Visibility group contains a list of checkboxes that you can use to select what is displayed in the model. There are two categories: Environment and System Components.

Figure 6-1 Model Tab



The following table describes the items in the list:

Table 6-1 Component List Selections

Option	Description
Arena	Enable this checkbox to display the two back walls in the model.
Names	Enable this checkbox to display the names of the components.
Shadows	Enable this checkbox to display the shadows that are created by the virtual light source. This will improve performance on older machines.
Conveyor	Enable this checkbox to display all of the conveyors in the system. Click on the plus (+) symbol next to this checkbox to view a sub list of conveyor types. Enable checkboxes in this sub list to view specific conveyor types in the model. Disable checkboxes to hide conveyor types in the model.
Devices	Enable this checkbox to display all of the devices in the system. Click on the plus (+) symbol next to this checkbox to view a sub list of device types. Enable checkboxes in this sub list to view specific device types in the model. Disable checkboxes to hide device types in the model.
Enclosures	Enable this checkbox to display all of the enclosures in the system. Click on the plus (+) symbol next to this checkbox to view a sub list of enclosure types. Enable checkboxes in this sub list to view specific enclosure types in the model. Disable checkboxes to hide enclosure types in the model.
Generic Components	Enable this checkbox to display all of the generic components in the system. Generic components are not necessarily physical objects. They might be items of interest that do not fit into the other categories, such as to highlight an alarm at a specific location.

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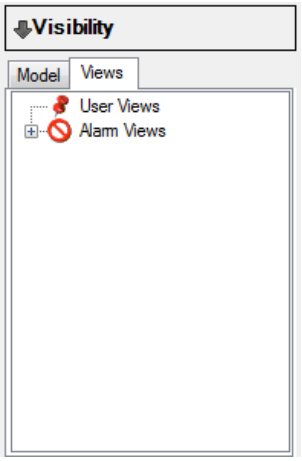
6.2 Working with User Views

As you adjust the view in the model, you can create user views. Creating a user view saves the model's current perspective so that you can return to it at any time.

To begin creating user views, select the **Views** tab in the Visibility group. This tab contains a list of the user views and alarm views that have been created.

Figure 6-2 Views Tab



Note

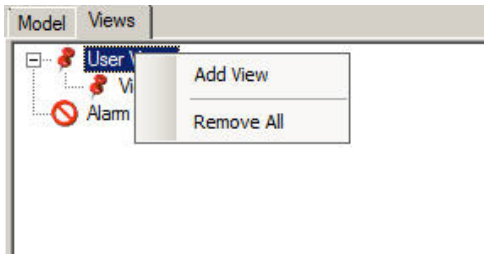
Alarm views are automatically created by View Center. Devices that are in an alarm state will have an entry in the Alarm Views list. Double click the device in the list to locate and display that device in the model.

When the user views are displayed, you can work with them as described in the following sections.

6.2.1 Adding a User View

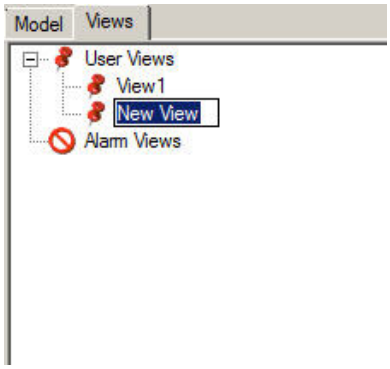
To create a new user view, complete the following steps:

1. Highlight the **User View** item in the Views list.
2. Right click the **User View** item to display the context menu.



3. Select **Add View** from the context menu.

   A new item named New View will appear in the User View list.



4. Enter the name of the view in the **New View** field. The name should describe the view so that you can readily identify it in the future.
5. Press ENTER to save the view.
6. You can now return to that view at any time by double clicking on it in the list or by right clicking it and selecting **Go To** from the context menu.

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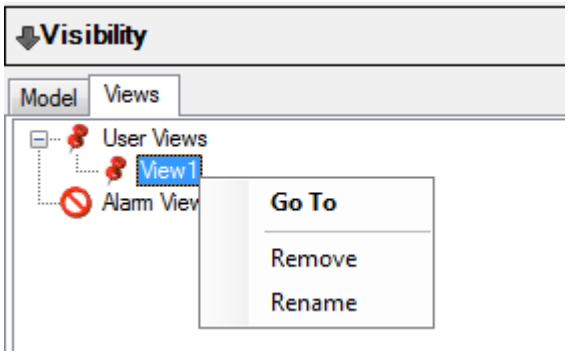
Note

User views are saved as part of the View Center model. They are not stored for individual users.

6.2.2 Renaming a User View

To rename a user view, complete the following procedure:

1. Highlight the view in the list and right click it to display the context menu.



2. Select the **Rename** option from the menu. The view's field will become active.
3. Enter a new name for the view.
4. Press ENTER to save the new name.

6.2.3 Deleting a User View

To delete a user view, highlight the view in the list and right click it to display the context menu. Select **Remove** from the menu. The highlighted view will be removed from the list.

Note

If you would like to delete all of the views, highlight the **User View** item at the top of the list and right click it to display the context menu. Select **Remove All** to delete all of the user views. Keep in mind that this will delete the views for all users.

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