



siteVIEW Enterprise

Distributed Monitoring Software

User Manual

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PREFACE

This document describes the installation and operation of TASC Systems' *siteVIEW Enterprise* distributed monitoring software.

Hardware and software described in this document is subject to on going development and improvement. Consequently there may be minor discrepancies between the information in this document and the performance and design of the hardware and software.

Refer to the siteCOMMANDER User Manual (document number 050-015-0002) for detailed instructions and examples of use of the siteCOMMANDER.



Before connecting any equipment to siteVIEW Enterprise, it is advised to read this manual in its entirety.

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1. PRODUCT DESCRIPTION

1.1. GENERAL DESCRIPTION

siteVIEW Enterprise is a distributed monitoring software package designed to work in conjunction with TASC hardware monitoring products. Currently, only the siteCOMMANDER is supported.

siteVIEW Enterprise is built with an easy to use graphical user interface that provides visibility into a network of siteCOMMANDERs. This simplifies the task of site monitoring by centralizing all site information and communication into a single software package.

siteVIEW Enterprise allows for multiple simultaneous client connections to the siteVIEW datawarehouse. With this ability, it is possible to setup a group of operators or dispatchers, in one or multiple locations, to supervise and control siteCOMMANDERs in the network.

siteVIEW Enterprise Components

- Datawarehouse
- Communication Server
- User Interface

1.2. siteVIEW Enterprise Key Features

- Client / Server Architecture
- Kenwood Fleetsync Protocol Integration
- Multi – Protocol Communication Routing
- Scheduled Polling and Log Retrieval
- Site to Site Mapping
- Custom Backgrounds
- Drag and Drop Site Panels
- Site Panel Grouping
- Various Alarm Reporting Options
- Simple Licensing Scheme

2. INTRODUCTION

2.1. Client / Server Architecture

siteVIEW Enterprise is based on a client/server software model with a central *Datawarehouse* for data storage.

With siteVIEW Enterprise the server portion of the model is handled by the *Communication Server*. The Communication Server handles communication with one or more sites through a communication port on the PC. The Communication Server stores the data from communication with the device in the *Datawarehouse*. Multiple Communication Servers can use the same *Datawarehouse* to store information.

The client, which is the siteVIEW *User Interface*, connects to the *Datawarehouse* and reads information stored by the Communication Server and displays it in an organized manner. Multiple clients can be connected to the same *Datawarehouse* at the same time and can view information for any Communication Servers connected to the *Datawarehouse*.

The *Alarm Manager* is another service that accesses the Datawarehouse. The Alarm Manager determines when an alarm condition has occurred and notifies the operator through the user interface.

2.2. siteVIEW Enterprise Licensing

2.2.1. The Security Dongle

The TASC siteVIEW Enterprise security dongle is a USB device, which contains:

- One Server License
- User Licenses
- Feature Add-On Licenses

Each Communication Server computer must have a security dongle in order for site monitoring to occur. The Communication Server reads the security dongle and retrieves the number of user licenses available and determines which feature add-ons are allowed.

The number of user licenses, determines the number of operators that can sign into siteVIEW Enterprise User Interface at any one time.

Any Feature Add-on licenses present determine whether or not certain features in siteVIEW are enabled. The available Feature Add-ons are viewed in the *About* form, which can be viewed by selecting “Help->About TASC siteVIEW Enterprise Edition” from the main menu.

Note: If the security dongle is removed from the computer, or if the Communication Server is stopped for any reason, site monitoring stops and any user licenses or Feature Add-on’s associated with the security dongle are disabled until the Communication Server restarts or the dongle is re-inserted.

3. STARTING THE USER INTERFACE

To launch the siteVIEW Enterprise Edition user interface, double click on the siteVIEW Enterprise icon that the installation placed on the computer desktop.



Figure 1 - siteVIEW Enterprise User Interface Icon

This can also be accomplished from the Windows start menu, select “Programs->TASC->siteVIEW Enterprise.”

After launching siteVIEW Enterprise, one of two things should occur:

- If siteVIEW is able to connect to a siteVIEW Enterprise Communication Server, a sign in form will appear. This is a typical scenario if the Communication Server is installed on the same computer as the user interface, or if the Communication Server connection was established previously.

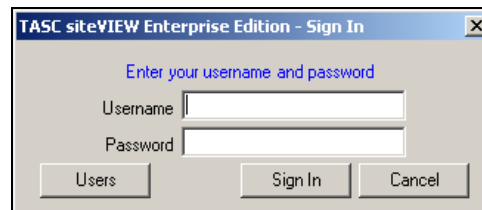


Figure 2 - User Interface Sign In

- If siteVIEW is not able to connect to a siteVIEW Enterprise Communication Server, the siteVIEW user interface will launch and at the bottom left corner of the application, the words “not connected” appear.

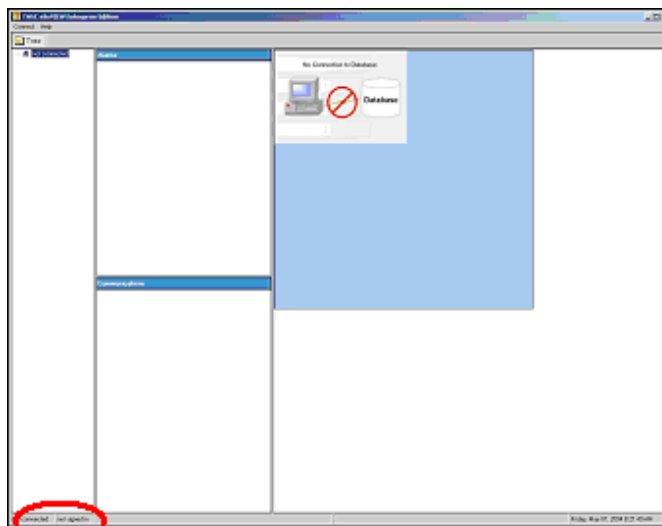


Figure 3 - User Interface - Not Connected to Datawarehouse

To connect to a communications server, siteVIEW user interface must be connected to the same Datawarehouse the Communication Server is connected to. To connect to a Datawarehouse, select “Connect->Connect to Datawarehouse” from the main menu and you will be presented with an open file form.

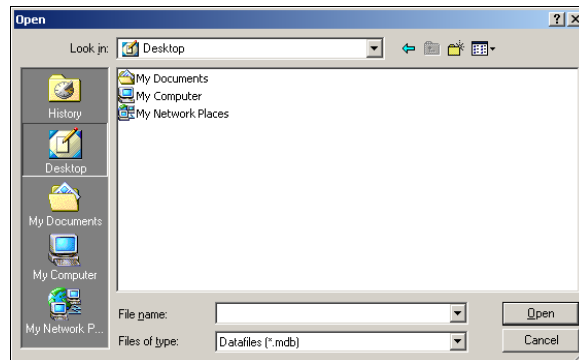


Figure 4 - Open Datawarehouse Form

Navigate to a siteVIEW Enterprise Datawarehouse and select open. After selecting “Open”, the sign in form will appear. The default Datawarehouse is created automatically during the installation of the Communication Server.



Note: Ensure you have the proper security rights to access the Datawarehouse file.

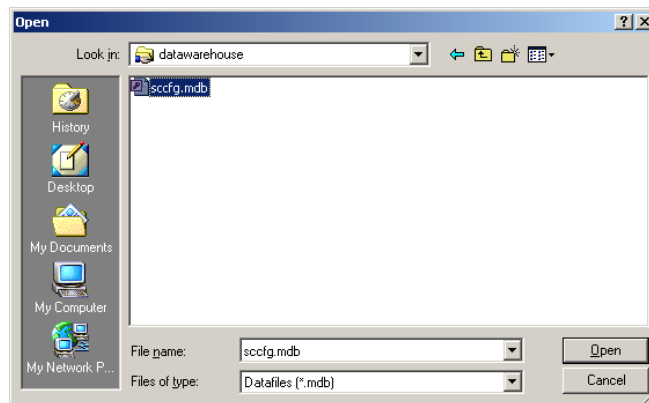


Figure 5 - Selecting Datawarehouse

Once the sign-in form appears, sign in using a valid username and password. When signing in to siteVIEW for the first time, use the username *svadmin* with password *siteview*. The svadmin is an administrator account with full rights to every part of siteVIEW Enterprise.



Note: To ensure proper security, change the svadmin password during the first sign in

4. THE GRAPHICAL USER INTERFACE

The TASC siteVIEW Enterprise Edition user interface consists of a main application window that is divided into several sections

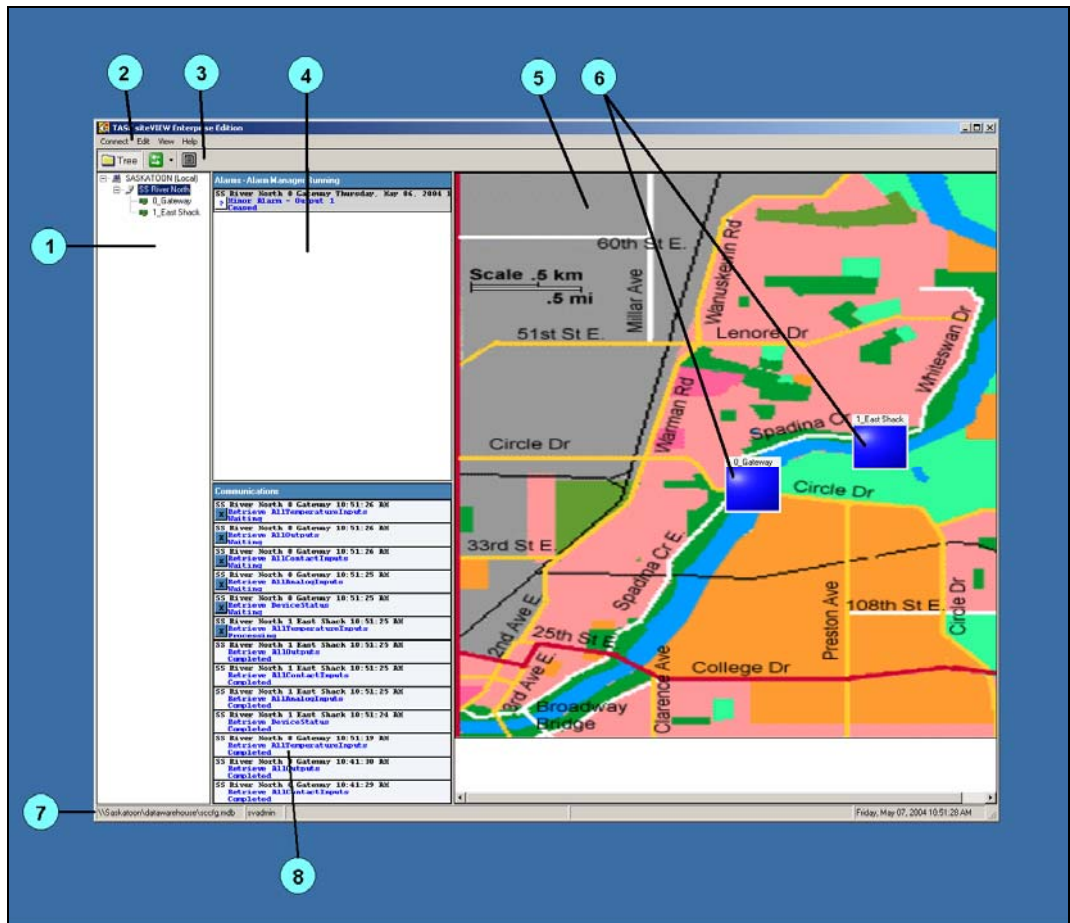


Figure 6 - siteVIEW Enterprise User Interface

- Tree View - A tree view of the nodes in a network
- Main Menu – Contains all available menu options
- Toolbar – Quick access to daily functions
- Alarm Panel – Detailed listing of all alarms
- Site Panel – Graphical display of sites or network
- Panel Component – Interactive elements in the network
- Status Bar – Real time program information
- Communication Panel – Listing of network communications

4.1. Site Navigation Tree

The Site Navigation Tree is a logical representation of a network of monitoring devices (ie. siteCOMMANDER), which are capable of reporting input and output states to siteVIEW through a gateway device and into a communication port (COM port) at the Communication Server.

The first level nodes of the Site Navigation Tree represent Communication Servers that are connected to the Datawarehouse. The second level nodes of the tree represent the communication port(s) on the Communication Server. The communication ports are used for communicating directly with the gateway device, which in turn communicate with the remote monitoring devices. The third level of tree nodes represents the physical device.

Right clicking on one of the three node levels (server, COM port, device) allows quick access to menu options, by displaying a context menu that pertains to the selected node.

Left clicking on a node causes the site panel to display a graphical representation of all nodes beneath the selected node.

4.2. Main Menu

The main menu allows access to configuration and monitoring of the tree nodes. Some menu items change depending on the node selected, and also depending on the user's security rights (see Section 5.1).

4.3. Tool Bar

The toolbar allows quick access to some menu options

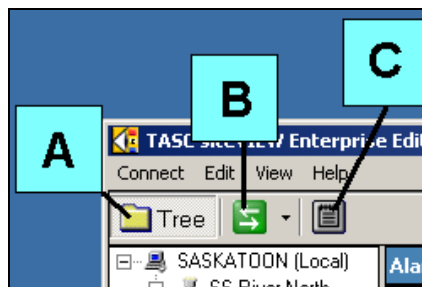


Figure 7 - Toolbar Buttons

- Hide/Show Site Navigation Tree
- Perform manual poll of siteCOMMANDERs
- View logs

4.4. Alarm Panel

The alarm panel displays a list of alarms that have not been cleared at the remote site. Each alarm item in the alarm panel has the following information:

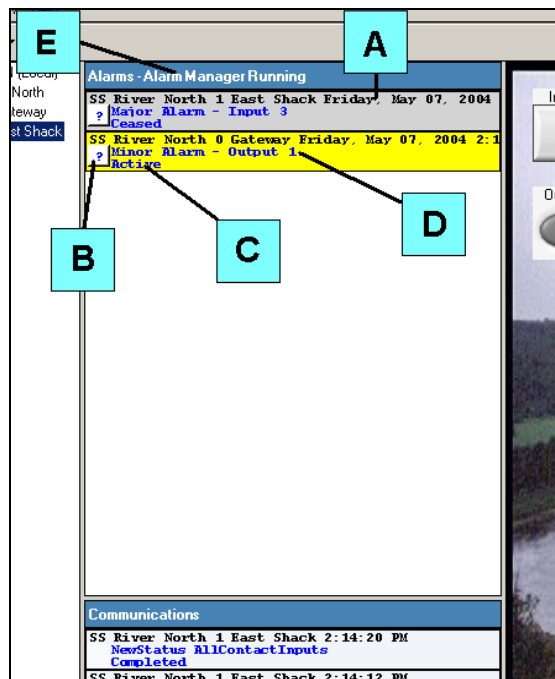


Figure 8 - Alarm Panel Components

- Port & device name of the alarm and the last time the alarm status changed
- Auto-find button
- Alarm status
- Alarm severity and the name of the I/O where the alarm condition occurred
- Running status of the alarm monitor

The auto-find button appears as a square button with a question mark in the center. Selecting the auto-find button causes the corresponding device node to be selected on the Tree View and for the corresponding panel to be drawn.

Double clicking on an alarm shows more detailed information about the selected alarm and allows the user to acknowledge and clear the alarm.

When an alarm is active and unacknowledged, the alarm will flash. Minor alarms flash yellow, major alarms flash orange and critical alarms flash red.

By default, when an alarm is cleared, it no longer shows in the alarm panel. However, by selecting "View->Show Cleared Alarms" from the main menu, you may show or hide cleared alarms.

4.5. Site Panel

The *Site Panel* displays a graphical representation of the currently selected tree node. This provides simplified visibility in networks of siteCOMMANDERs. The panel's size, background image, component placement, and color can all be configured.

4.6. Panel Components

The Site Panel is made up of images, text and *Panel Components*. Panel Components are interactive elements that allow the operator to navigate as well as monitor and control various areas of their network.

At a sever node, Panel Components represent the available and configured COM ports that are accessible on the network.

At a COM Port node, Panel Components represent the available and configured devices (siteCOMMANDERs) accessible on the network.

At a device node, Panel Components represent the specific physical inputs and outputs available to a particular device.

4.7. Status Bar

The status bar is used to display various messages to the user.

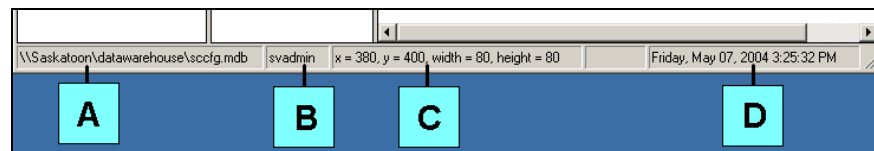


Figure 9 - Status Bar Components

- Datawarehouse connection status and path
- Current signed in user
- Component dimensions in pixels
- Current date and time

4.8. Communication Panel

The communication panel contains recent network communication traffic and the following details pertaining to those transactions:

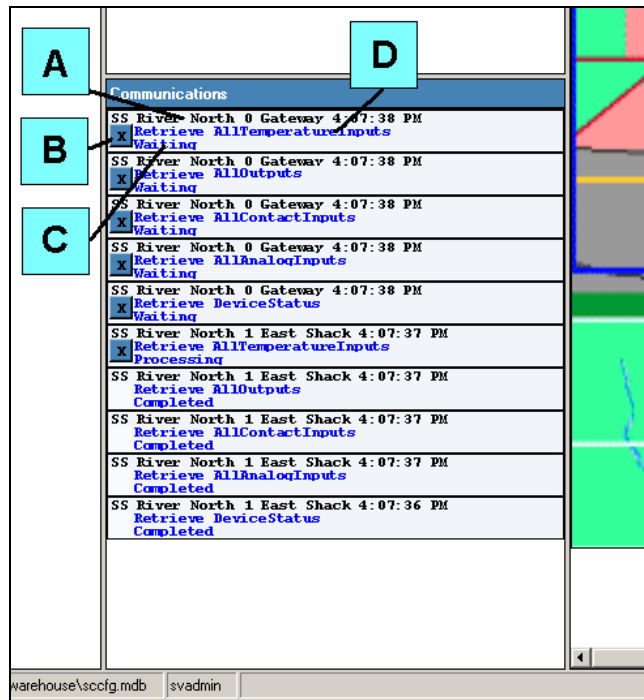


Figure 10 - Communication Panel

- Name of COM port and device the communication pertains to and the time when the communication request occurred
- Cancel transaction button
- Communication transaction status
- Communication transaction command and subcommand

When a new communication transaction is added to the communication panel, any transactions that are older than 15 seconds and are no longer processing, are removed from the communications panel.

Output control traffic is considered a special case. By updating an output a user either turns on or turns off that output. The output that is affected and the state that it is being set to are displayed next to the command and subcommand.

Communication	
SS River North 1 East Shack 8:26:28 AM	Update Outputs - Turn OFF Output 2
<input checked="" type="checkbox"/> Waiting	
SS River North 1 East Shack 8:26:25 AM	Update Outputs - Turn ON Output 4
	Completed
SS River North 1 East Shack 8:26:24 AM	Update Outputs - Turn ON Output 3
	Completed
SS River North 1 East Shack 8:26:22 AM	Update Outputs - Turn ON Output 2
	Completed
SS River North 1 East Shack 8:26:14 AM	Update Outputs - Turn OFF Output 2
	Completed

Figure 11 - Outputs Update Communication

5. USER ADMINISTRATION

5.1. Managing User Accounts

To create, modify or delete siteVIEW Enterprise user accounts open the user administration form, which can be viewed by selecting “Connect->Accounts->User Administration” from the main menu.

Figure 12 - User Administration

The following tasks may be performed using the user administration form:

- New user accounts may be added
- User names, usernames and passwords may be altered
- User accounts may be enabled or disabled
- Security rights may be altered
- Existing users may be deleted from the system

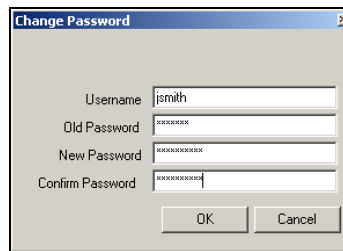
The following table lists the available security rights and the access associated with each type:

	User Maintenance	Device Configuration	Panel Layout	Alarm Control	Manual Polling	Output Control
View Only	None	Read	Read	Read	Read	Read
User	None	Read	Read	Read/ Write	Read/ Write	Read/ Write
Power User	None	Read/ Write	Read/ Write	Read/ Write	Read/ Write	Read/ Write
Admin	Read/ Write	Read/ Write	Read/ Write	Read/ Write	Read/ Write	Read/ Write

Figure 13 - Security Level Matrix

5.1.1. Changing An Account Password

A user can change their account password through the “Change Password” form by selecting “Connect->Accounts->Change Password.”



The "Change Password" dialog box contains four text input fields: "Username" (containing "jsmith"), "Old Password" (masked with asterisks), "New Password" (masked with asterisks), and "Confirm Password" (masked with asterisks). At the bottom are "OK" and "Cancel" buttons.

Figure 14 - Changing Your Password

5.1.2. Forced User Sign Out

In the case of a power failure or a system crash/reset, siteVIEW Enterprise may not get a chance to properly sign users out of the system. Also, there may be times when an operator(s) needs to be forcibly signed out of the system.

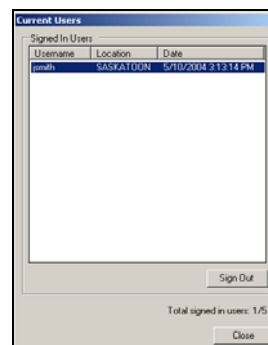
In either case, operators may be forced out by anyone who has more security rights than they do or operators may sign themselves out. To view users that are currently signed in, type in a valid username and password at the sign in prompt, and select the “Users” button.



The "TASC siteVIEW Enterprise Edition - Sign In" dialog box prompts the user to "Enter your username and password". It contains "Username" (containing "jsvadmin") and "Password" (masked with asterisks) fields. At the bottom are "Users", "Sign In", and "Cancel" buttons.

Figure 15 - User Sign In Form

This will open the “Current Users” form, with a list of users that are currently signed in, the computer that the user signed in from, and the date and time the he or she signed in.



The "Current Users" dialog box displays a table of signed-in users. The table has columns for "Username", "Location", and "Date". One user, "jsmith", is listed with location "SASKATOON" and date "6/10/2004 2:13:14 PM". Below the table is a "Sign Out" button. At the bottom, it shows "Total signed in users: 1/5" and a "Close" button.

Username	Location	Date
jsmith	SASKATOON	6/10/2004 2:13:14 PM

Figure 16 - Current Users

To sign a user out, select the user from the list of currently signed in users and select “Sign out”.

6. SYSTEM CONFIGURATION

The entire siteVIEW system is represented in two ways: it is represented as a logical tree, which is referred to as the *Tree View*, and as a graphical panel, which is referred to as the *Site Panel*. Items in the Tree View are referred to as *nodes*.

When a node on the tree is selected, menu options pertaining to that node are accessible through both the main menu, which is located at the top of the User Interface, and the context sensitive popup menu, which can be accessed by selecting a node with the mouse and then performing a right mouse click. This document will explain how to configure siteVIEW using the main menu, but the same functionality can be accessed using the context specific popup menu.

The Tree View displays a list of Communication Servers, the COM ports in use by the Communication Server and the devices that are monitored through the COM port(s). Main menu items pertain to the selected node.

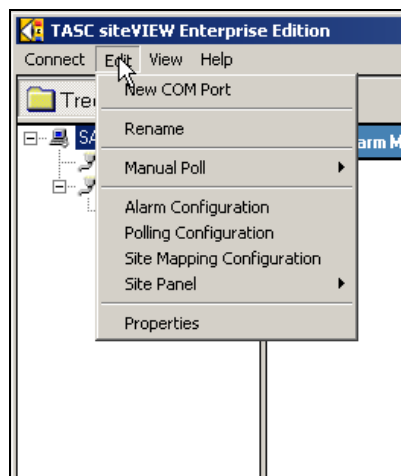


Figure 17 - Edit Menu

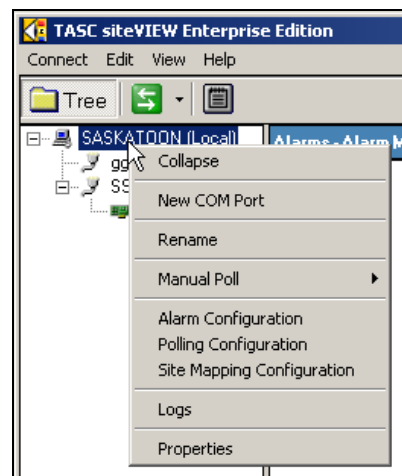


Figure 18 - Sever Level Context Menu

6.1. The Communication Server

The Communication Servers, which are connected to the system, are visible in the Tree View. To view information pertaining to a particular Communication Server, select the desired node in the Tree View and then select "Edit->Properties" from the main menu. This launches the server details form.

The server details form displays the machine name that the Communication Server resides on.

By default, siteVIEW Enterprise uses the NetBIOS name of the server for the name of that server node in the Tree View. Using the alias field, a system applicable name can be used. The alias is the only item on the server details form that can be modified.

The Communication Server software version, user licenses, and software add-ons are displayed in the Server Details form.

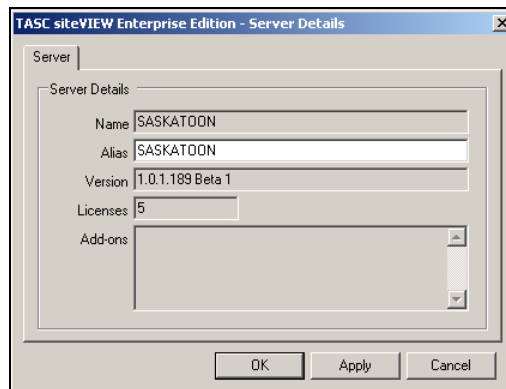


Figure 19 - Server Details

6.2. Adding a New COM port

Each Communication Server potentially has available COM ports, which can be used to monitor networks of hardware devices. To add and configure an available COM port for siteVIEW monitoring, select “Edit->New Port” from the main menu. This launches the COM port details form.

In the *COM port Details* form, the name, description, COM port, protocol and communication timers are set. After entering the required information, select Ok or Apply and the new COM port will be added to the site navigation tree.

Figure 20 - COM Port Details

6.2.1. COM Port Details

To view and change information pertaining to a particular COM port on a Communication Server, select the desired COM port node on the Tree View and then select “Edit->Properties” from the main menu. This launches the Port Details form.

Select a name for the COM port. The name will be how siteVIEW refers to this communication port throughout the application.

Figure 21 - COM Port Example

The description properties of both the COM port and device detail forms are displayed when a user hovers the mouse above a Site Panel control that represents the COM port or device.

The COM port field contains a list of communication ports available on the Communication Server.



The refresh button forces the Communication Server to rescan its COM ports and refresh the COM port list.



Figure 22 - COM Port Element

The Protocol drop down field sets the protocol, which is used to communicate on the communication port. By default this protocol is set to BNMap. Other protocols are available as Add-On features from TASC.

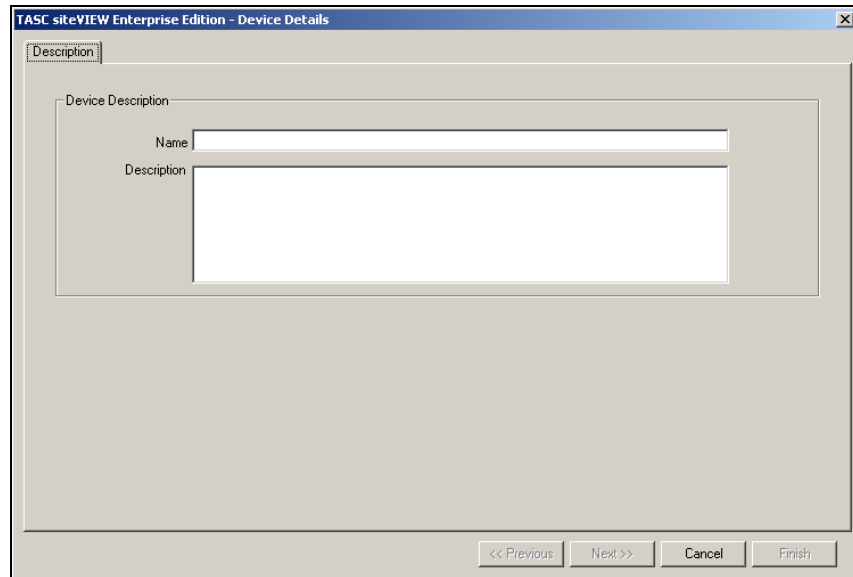
Two COM port timeout values exist. The packet timeout is the time the Communication Server will wait for a reply after transmitting a communication packet to a device. When the Communication Server is receiving a response packet, the packet bytes are received one at a time. The byte timeout is the time in which the Communication Server should wait between packet bytes, before deciding the packet has failed.

By increasing the packet timeout and the byte timeout, siteVIEW is more likely to receive a packet. If siteVIEW needs to frequently retry packet transmissions, it is possible that one or both of these timeout values needs to be increased. If these timeout values are too high, siteVIEW communication may seem to take an unusually long time. Achieving the correct balance of timing values ensures that packets are handled efficiently.

6.3. Adding a New Device

Each Communication Server COM port is capable of communicating to a network of hardware devices. To add and configure a device for siteVIEW monitoring, first highlight the COM Port that connects the network of hardware devices to the Communication Server and select "Edit->New Device" from the main menu. This launches the *Device Details* form.

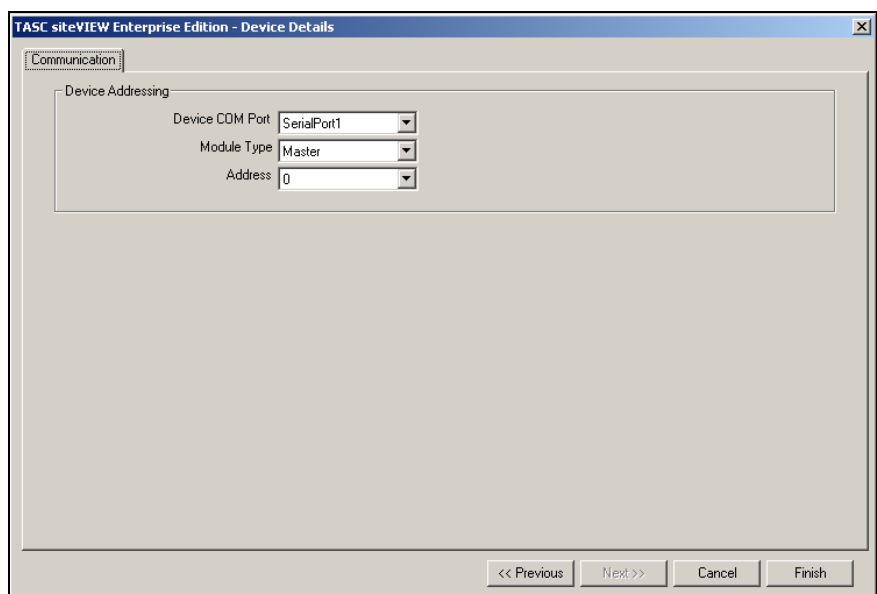
First, the device details form will display the device description page. Enter the device name and description and select the next button to proceed. The device name chosen will be used by siteVIEW to make reference to the device. The description appears when a user hovers over the Site Panel control that represents the device.



The screenshot shows the 'TASC siteVIEW Enterprise Edition - Device Details' window with the 'Description' tab selected. The 'Device Description' section contains a 'Name' text box and a 'Description' text area. At the bottom right, there are four buttons: '<< Previous', 'Next >>', 'Cancel', and 'Finish'.

Figure 23 - Creating a New Device

After entering the device name and description (optional), select the Next button to continue to the device communication configuration. The correct device COM port, module type and address must be selected in order for proper communication to occur. The device COM port is the communication COM port on the device that siteVIEW will attempt to communicate to. The module type and address specify which device to communicate with on the selected device COM port.



The screenshot shows the 'TASC siteVIEW Enterprise Edition - Device Details' window with the 'Communication' tab selected. The 'Device Addressing' section contains three dropdown menus: 'Device COM Port' (set to 'SerialPort1'), 'Module Type' (set to 'Master'), and 'Address' (set to '0'). At the bottom right, there are four buttons: '<< Previous', 'Next >>', 'Cancel', and 'Finish'.

Figure 24 - New Device Communication Properties

Sometimes it may be required to configure a device before placing the device at a site. A device can be configured locally by connecting the device directly to the Communication Server COM port and then selecting “Edit->Configure Local Device” from the main menu. This menu item is only available if a COM port tree node is selected. The local connection will attempt to communicate to a device on the selected server COM port.

Configuring a device locally allows a user to configure communication features on the device that are not available otherwise. A device configured through a local connection does not appear on the site navigation tree, and is no longer accessible once the form is closed.

6.3.1. Device Details

After communication with a device has been successfully established, additional device configuration is made available. Selecting “Edit->Properties” from the main menu opens the device details form. The device details form provides the ability to configure a device.

The device details form has multiple tabs. The available tabs may differ from device to device. Depending on the device’s firmware version, the available siteVIEW add-ons, and the type of device. Currently, the only device type supported by siteVIEW is the TASC siteCOMMANDER. See Appendix A for information on how to configure a siteCOMMANDER using siteVIEW Enterprise.



WARNING: Making configuration changes to a device will cause the device to restart its firmware. As a result the device outputs will turn off. This could unintentionally activate/deactivate equipment located at the remote site without warning. It is the customer’s responsibility to ensure personnel or property is not damaged.

6.4. Site Panel

Each server, COM port and device has a panel associated with it. The panel contains controls that graphically map out the items available at the server, COM port or device. A server’s panel contains controls that represent COM ports, a COM port’s panel contains controls that represent devices, and a device’s panel contains controls that represent the device’s inputs and outputs. Performing a left mouse click on a panel control that represents a COM port or a device causes siteVIEW to display the panel for the selected COM port or device, essentially traversing the Tree View. Performing a left mouse click on a panel control that represents an output causes siteVIEW to turn on or turn off the associated output. Panel controls that represent device inputs serve as visual indicators of the inputs real life state.

A user can modify the layout and appearance of the panel and the panel controls to give more meaning to the panel.

6.4.1. Background Properties

The Site Panel background properties form can be modified in the *Panel Details* form, which is opened by selecting “Edit->Site Panel->Properties” from the main menu. The Panel Details form pertains to the currently displayed panel.

The panel height and width affect the total size of the panel. This can be different from the actual height and width that the user sees. The panel height and width can be set larger or smaller than the actual viewable area of the PC screen.

An image may be set as the panel background by selecting it from the list. When an image is selected, a preview of the image is shown in the picture box above the image list. To add an image to the list, select the Browse button, navigate to the desired image file and select ok. The Rename and Delete buttons rename and delete a selected image on the image list.

The mode setting determines how the background image will be fit into the background.

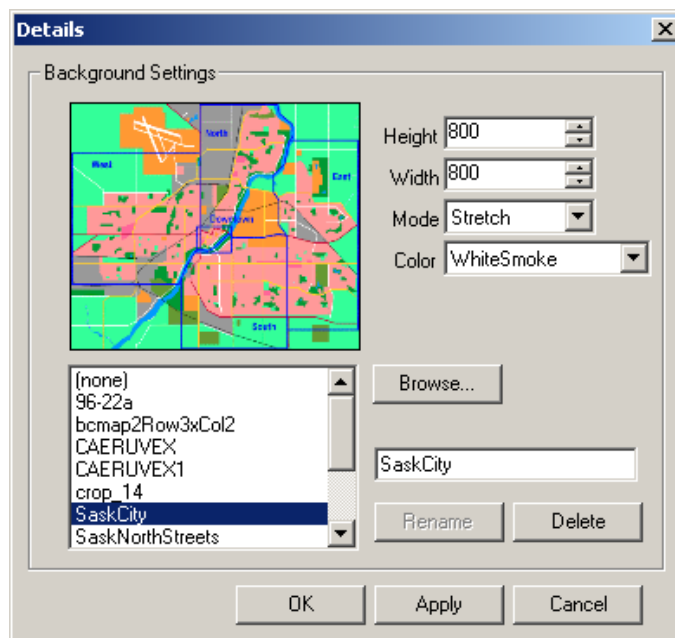


Figure 25 - Background Properties

Color sets the panel background color.

6.4.2. Panel Control Properties

There are several types of panel controls. Individual panel controls may be customized to give the control more meaning. Panel controls represent COM port connections to sites, devices, contact inputs, analog inputs, temperature inputs and outputs. In most cases it makes sense to represent sites and devices by a boolean push button, contact inputs and outputs only have two

states and so they are best represented by a visual on or off using a boolean, and analog and temperature inputs have ranges and are best represented by knobs and slides.

Selecting “Edit->Site Panel->Unlock Panel” from the main menu unlocks the currently displayed panel and allows the individual panel controls to be modified. While a panel is unlocked, the normal functionality of the panel controls ceases. Selecting a panel control opens a form that shows the panel control’s display properties. On the top of the panel control display properties form is a drop down field of all the controls that belong to the current panel. This drop down field, along with the previous and next buttons, is used to navigate through the panel controls.

Certain panel control properties are common for all panel control types. Other properties are specific to a control type. The Disable User Control and confirmation properties are only available if the control it represents is an output. When the confirmation property is selected siteVIEW will prompt a user for confirmation if the user turns the output on or off. The Disable User Control option removes user control entirely. An administrator can set these settings accordingly

The name of the panel control can be changed and shown or hidden using the Panel Control Display Properties form. A panel control can be made visible or hidden, or it can be deleted completely by selecting the delete button. Panel control colors, types and styles are all changed using the panel control display properties form.

Figure 26 - Display Properties

6.4.3. Panel Control Types

Four panel control types are available in siteVIEW. The four panel control types are: boolean, slide, knob and display.

Boolean















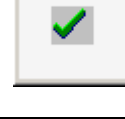


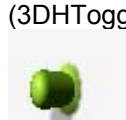









Vertical Toggle (VToggle) 	Horizontal Toggle (HToggle) 	Square LED (SquareLED) 	Square Star LED (SquareStarLED) 
Round LED (RoundLED) 	Round Star LED (RoundStarLED) 	Round Push Button (RoundPushButton) 	Square Push Button (SquarePushButton) 
Vertical 3D Slide (V3dSlide) 	Horizontal 3D Slide (H3dSlide) 	Vertical Slide (VSlide) 	Horizontal Slide (HSlide) 
Toggle On/Off (ToggleOnOff) 	Command OK (CommandOK) 	Bitmap (Bitmap) 	3D Vertical Toggle (3DVToggle) 
3D Square LED (3DSquareLED) 	3D Horizontal Toggle (3DHToggle) 	3D Round LED (3DRoundLED) 	3D Push Button (3DPushButton) 
3D Vertical Rocker (3DVRocker) 	3D Horizontal Rocker (3DHRocker) 	3D Vertical Slide Switch (3DVSlideSwitch) 	3D Horizontal Slide Switch (3DHSideSwitch) 
3D Toggle On/Off (3DToggleOnOff) 	3D Command OK (3DCommandOK) 	3D Bitmap (3DBitmap) 	

Figure 27 - Boolean Styles of Panel Controls

Boolean control types are used to represent on and off, or are used as buttons. Properties specific to this control type include the off color, off text, off text color, on color, on text and on text color.

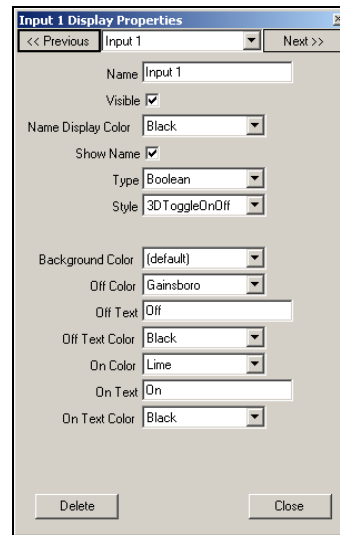


Figure 28 - Boolean Element Properties

Knob

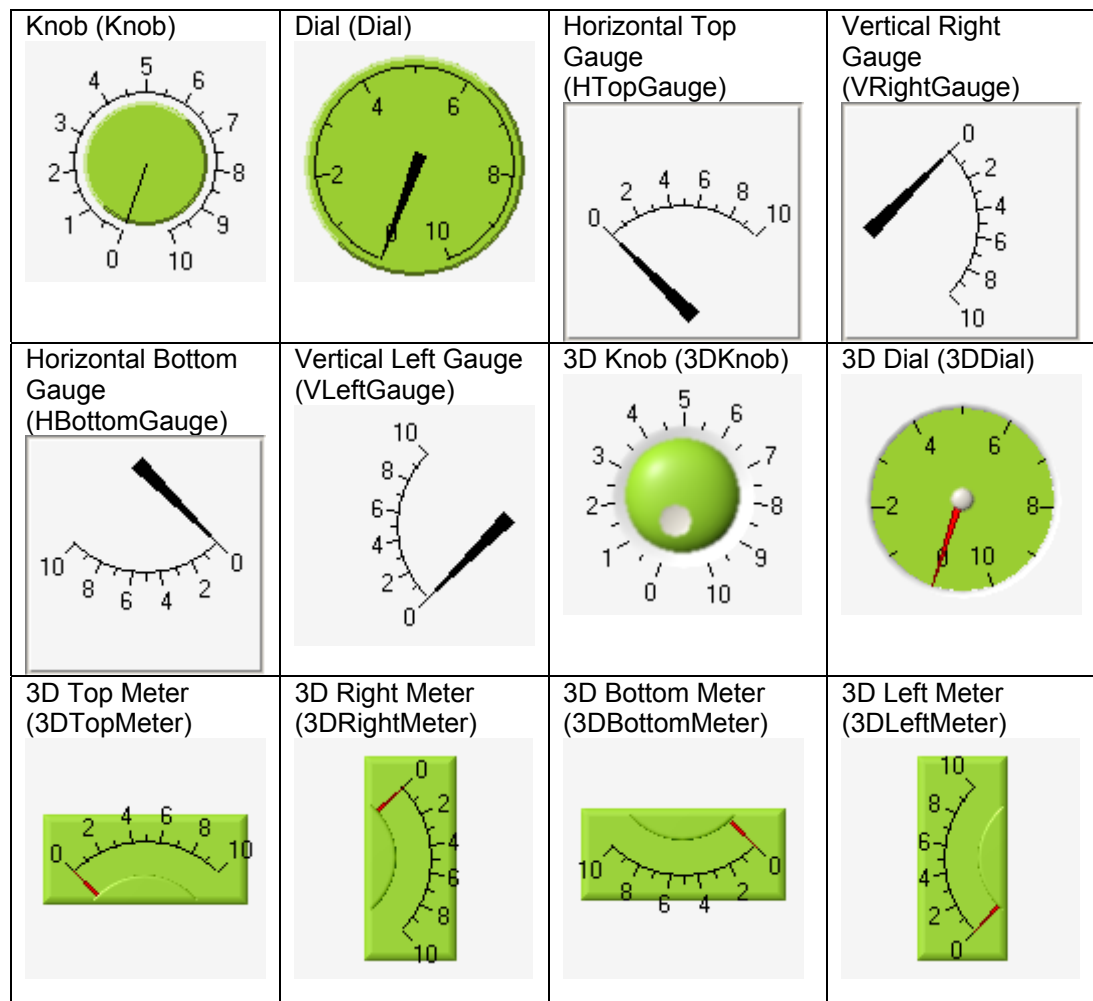


Figure 29- Knob Styles of Panel Controls

Knob control types are used to represent a range of values. Properties

specific to this control type include the foreground color, format string, axis caption, axis maximum and minimum, axis inversion, and the start and end of the arc of values. The knob control type is represented as an arc.

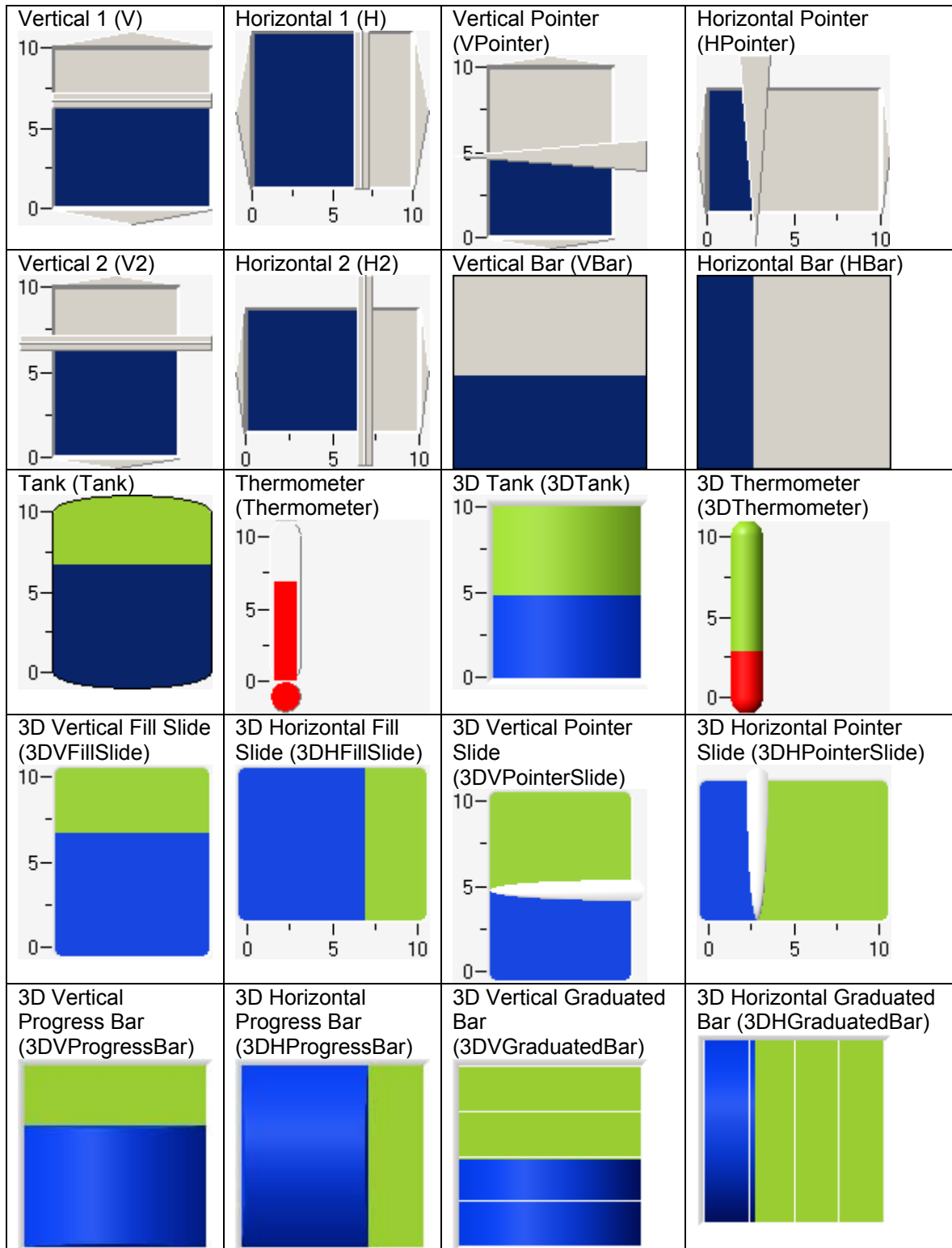
The format string is discussed in more detail at the end of this section. The axis minimum and maximum specify the minimum and maximum values that the knob will display. The axis can be inverted so that the numeric scale is shown in reverse order. The arc start and end values determine the arc's span. When the arc start and end values are set to -1 a default value is used.

The screenshot shows the 'Analog 1 Display Properties' dialog box. It has a title bar with the text 'Analog 1 Display Properties' and a standard Windows icon. Below the title bar are navigation buttons: '<< Previous', 'Analog 1', and 'Next >>'. The main area contains the following settings:

- Name: Analog 1
- Visible: ☒
- Name Display Color: Black
- Show Name: ☒
- Type: Knob
- Style: 3DDial
- Background Color: (default)
- Fore Color: Gainsboro
- Format String: (empty text box)
- Axis Caption: (empty text box)
- Axis Max: 10
- Axis Min: 0
- Invert Axis: ☒
- Arc Start: -1
- Arc End: -1

At the bottom of the dialog are two buttons: 'Delete' and 'Close'.

Figure 30 - Knob Properties

Slide**Figure 31 - Slide Styles of Panel Controls**

Slide control types are like the knob control type since they are also used to represent a range of values. Properties specific to this control type include the fore color, format string, axis caption, axis maximum and minimum, axis inversion. The slide property is represented as a vertical or horizontal line.

The format string is discussed in more detail at the end of this section. The axis minimum and maximum specify the minimum and maximum values that the slide will display. The axis can be inverted so that the numeric scale is shown in reverse order.

The dialog box 'Temperature 1 Display Properties' has the following fields and values:

- Navigation: << Previous, Temperature 1, Next >>
- Name: Temperature 1
- Visible: ☒
- Name Display Color: Black
- Show Name: ☒
- Type: Slide
- Style: 3D Thermometer
- Background Color: (default)
- Fore Color: Gainsboro
- Format String: 0.0
- Axis Caption: Temperature (" C)
- Axis Max: 40
- Axis Min: -40
- Invert Axis: ☐
- Buttons: Delete, Close

Figure 32 – Slide Style Properties

Display



Figure 33 - Display Style of Panel Controls

Display control types are used to display numeric values using a text string. Properties specific to this control type include the fore color and format string.

The format string is discussed in more detail at the end of this section

The dialog box 'Analog 2 Display Properties' has the following fields and values:

- Navigation: << Previous, Analog 2, Next >>
- Name: Analog 2
- Visible: ☒
- Name Display Color: Black
- Show Name: ☒
- Type: Display
- Background Color: (default)
- Fore Color: Gainsboro
- Format String: (empty)
- Buttons: Delete, Close

Figure 34 - Display Style Properties

6.4.4. Format String

The following are examples of the variables and components that can be used to form a Format String.

- . (decimal point) - specifies the beginning of the number within the label. Use # and 0 to the right of the decimal point to specify the precision. If you do not include a decimal point in the format string, a decimal point is assumed to be the first character in the format string
- 0 - specifies the precision to the right of the decimal point. For example, ".#0" always produces two digits to the right of the decimal point, even when given an exact number such as 1.0
- # - specifies the precision to the right of the decimal point. For example, "##" produces up to two digits to the right of the decimal point. Thus, 1.0 produces 1, while 1.025 produces 1.03
- e, E - specifies exponential notation. "E" specifies the capital letter, while "e" specifies the lowercase letter
- *nn - scales labels. For example, ".*10" prints the value 1.0 as 10
- +nn or -nn - offsets labels. For example ".+20" prints the value 1.0 as 21
- k - specifies symbolic notation. For the format string ".k", 1.0 prints as 1, 1000 prints as 1k, and .001 prints as 1m
- "text" - specifies to add text to the label. For example, '".V"' adds a V to the right of every label. Thus, 1.0 becomes 1 V
- \$, % - specifies to print these special characters
-

The following are two useful format string examples:

- Celsius to Fahrenheit Conversion

Using the equation $^{\circ}\text{F} = (1.8)^{\circ}\text{C} + 32^{\circ}$ to calculate the Fahrenheit value, a format string of `*1.8 + 32` would be used and would result in the following:

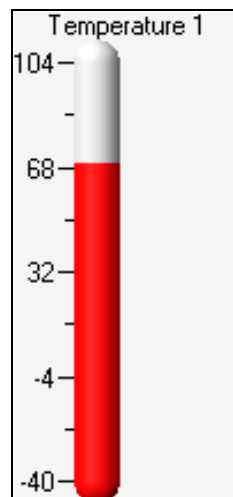


Figure 35 - Celcius to Fahrenheit Conversion

- Adding Text

Using the previous example for converting Celsius to Fahrenheit, adding the string "°F" to the format string would become $*1.8 + 32 \text{ "°F"}$ and would result in the following:

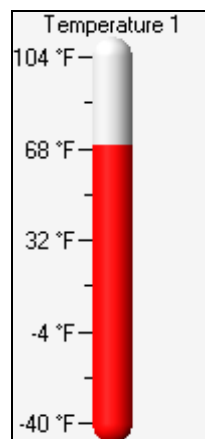


Figure 36 - Adding Text to Format String

6.4.5. Adding Controls to a Panel

It may be useful to have multiple components on a panel that represent the same input or output. For example, it may be useful to show an analog or temperature value as a dial or thermometer, and at the same time have a text representation of the same information.

To add controls to a panel, first unlock the panel by selecting "Edit->Site Panel->Unlock Panel" from the main menu. While the Site Panel is unlocked, select "Edit->Site Panel->Add I/O" to open the "Add Panel I/O" form. Ensure the control is being added to the correct panel, then choose an input or output from the I/O list and select the add button.

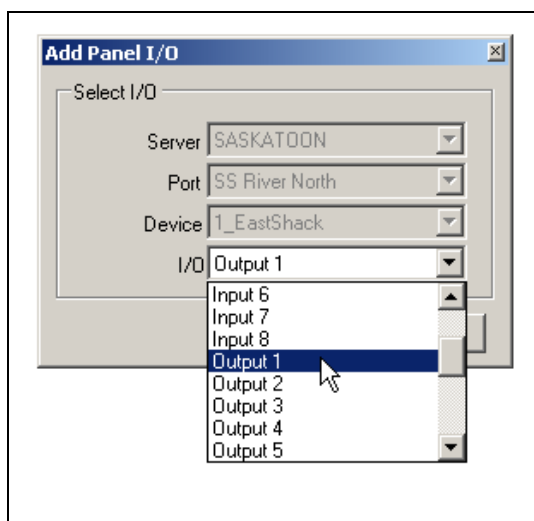


Figure 37 - Adding I/O to a Panel

The new control will appear in the top left corner of the panel. Move the control to the desired location and change the control properties as needed.

It may be useful to have two panel controls representing the same output. By disabling user control on one of the outputs, the disabled control will show the actual device value. Whereas the control that allows user control would be out of sync with the device starting from the time a user changes the output until the device response is received.

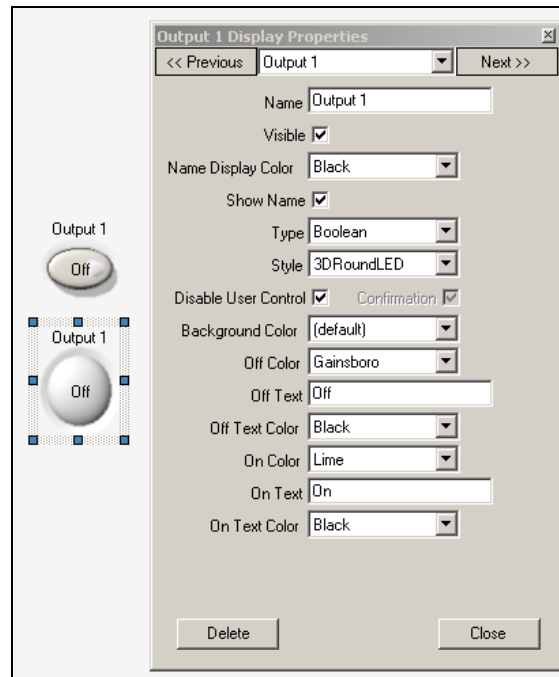


Figure 38 - Panel Control Properties

6.4.6. Panel Import and Export

A panel may be exported to a file and re-imported later into the same panel or into a different panel. If any differences exist between two panels, those differences are ignored. For example, if a panel file that contains a temperature input control is imported into a panel with no temperature input to match, the resulting panel will not contain a temperature input control. The import and export functionality can be accessed by selecting “Edit->Site Panel->Import Panel” and “Edit->Site Panel->Export Panel” respectively.

6.5. Alarm Conditions

Each input and output can have alarm conditions associated with it. Alarm conditions set boundaries for inputs or outputs, allowing the user to be notified when the value goes outside this boundary. When the value is outside the alarm conditions boundary, the alarm has then been triggered and the user is notified. A user can then manage the alarm by taking necessary actions as defined by his procedures or the instructions associated with the alarm.

6.5.1. Configuring an Alarm

Selecting “Edit->Alarm Configuration” from the main menu opens the alarm configuration form. From this form a user can create new alarm, and delete or modify existing ones.

When creating an alarm, ensure the server, COM port, device and device I/O are selected correctly. Changes made to the alarm configuration form do not take affect until the update button is selected or add is selected while creating a new alarm condition.

The alarm severity is used to place importance and priority on alarms. Three alarm severity options exist: Minor, Major and Critical. Minor alarms are the least severe and Critical alarms are the most severe.

An alarm can be enabled or disabled by changing the Enabled option.

The type and number fields indicate the input or output the alarm condition applies to.

The alarm conditions for a contact input or an output have only two choices and that is On or Off. In other words an alarm can be set to trigger when the input or output is on or when it is off.

The analog or temperature input alarm conditions are based on the low and high set points of the device’s input, which are configured through the device details form and displayed as read-only fields in the alarm configuration form. When an input’s value crosses one of its set points, the device then notifies siteVIEW of the change. The alarm can be triggered if the input’s values go above a set point, below a set point or the set point change can be ignored.

The alarm details are useful for providing instructions to the user when the alarm occurs.

The screenshot shows the 'Alarm Configuration' window. It has a top section for 'Alarm Properties' with dropdowns for Server (SASKATOON), COM Port (SS River North), Device (1_EastShack), and I/O (Analog 1). Below these are Severity (Minor), a checked 'Enabled' checkbox, Type (Analog), and Number (1). The 'Alarm Condition' section shows 'Ignore' selected, a value of 1.951219E, and 'Is Greater Than' selected with a value of 10. A 'Details' text area contains 'Pump rpms too high'. To the right, there's a 'Sound' section with 'Text Messaging' selected, a 'Name' field with 'NOTIFY', a 'Select' button, and a 'Play Interval' of 20 seconds. At the bottom, there are 'New', 'Update', and 'Delete' buttons. Below the main form is a table of existing alarms.

Server	COM Port	Device	Name	Type	Number	Severity	Condition
SASKATOON	SS River ...	1_EastShack	Input 1	Input	1	Minor	is off
SASKATOON	SS River ...	1_EastShack	Output 1	Output	1	Minor	is off
SASKATOON	SS River ...	1_EastShack	Analog 1	Analog	1	Minor	value > 10

Figure 39 - Alarm Configuration Form

The list on the bottom of the alarm configuration form displays alarm conditions. Select an entry from the list to see the alarm condition details. If an alarm condition does not appear on the alarm condition list, ensure the filter is selected correctly.

6.5.2. Alarm Sounds

The sound field displays the name of a sound file to play on the event the alarm is triggered. If an alarm is selected the sound interval can be changed. The sound interval determines the length of time siteVIEW will wait before replaying the sound file.

Selecting the select button beside the sound field opens the select sound form. From this form a user can select a sound file to play when the alarm condition it is associated with is triggered.

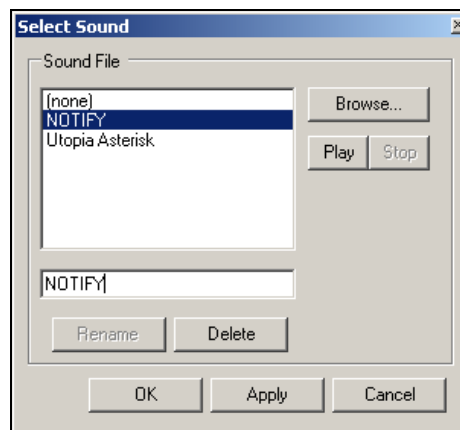


Figure 40 - Alarm Sound Properties

From the select sound form, sound files may be deleted, renamed or sampled, and new sound files may be loaded. siteVIEW is capable of playing most common sound file types including wave (.wav), midi (.mid), mpeg layer 3 (.mp3) and windows media audio (.wma).

6.6. Automated Polling

Automated Polling is used to check the status of selected siteCOMMANDERS within the network at scheduled intervals. This is used to ensure that conditions at remote locations remain within acceptable parameters.

Selecting "Edit->Polling Configuration" from the main menu opens the polling configuration form. From this form a user can create polling schedules, and delete or modify existing ones.

Changes made to the polling configuration form do not take effect until Update is selected after making changes to an existing polling schedule or add is selected while creating a new polling schedule.

A scheduled poll tells siteVIEW to communicate with a device at a specified time. The type of communication depends on the type selected. Available scheduled poll communication types are:

- **DeviceStatus:** retrieves the device status. This ensures that siteVIEW has not lost communication with the device. Also it allows siteVIEW to detect if any device configuration has changed. If a change in device configuration is detected, siteVIEW will automatically download the new configuration settings.
- **AllContactInputs:** retrieves the contact input values.
- **AllTemperatureInputs:** retrieves the temperature input values.
- **AllOutputs:** retrieves the output values.
- **AllAnalogInputs:** retrieves the analog input values.
- **MMaxLogCount:** retrieves the min/max log count. If the returned value is more than zero, siteVIEW will automatically download and clear the min/max log.
- **SampleLogCount:** retrieves the sample log count. If the returned value is more than zero, siteVIEW will automatically download and clear the sample log.
- **StaticMMaxLog:** retrieves and then clears the current min/max values.
- **RTCRamLog:** retrieves values stored in the real time clock (RTC) random access memory (RAM). The data logger timers are stored in the RTC RAM.

Sub Command	Frequency	Start Date	Start Time	End Date	End Time
DeviceStatus	every 1 Hour	6/29/2004	8:49 AM	none	9:02 AM

Figure 41 - Polling Configuration Form

A scheduled poll has an interval. This interval specifies how often the scheduled poll is to occur. An interval of every two hours will cause the scheduled poll to occur every two hours for the selected days, starting from the start date and ending on the end date. The scheduled poll end date can be set to never end by removing the end date option. If the selected interval is in minutes or hours, an end time may be specified. If an end time is

specified but no end date is specified, the scheduled poll will occur indefinitely but only between the specified times each day. An end time cannot be specified if the time interval specified is day, week, month or year.

Scheduled polls without the enabled option selected will not occur, but can be re-enabled by selecting the Enabled option and then selecting Update.

In order for a scheduled poll to occur, at least one siteCOMMANDER must be assigned to the scheduled poll. There are two list-boxes in the scheduled poll form, each showing a list of Communication Servers, along with the Communication Server's COM ports and the devices connected to those COM ports. The Excluded list contains devices that will not be included in this scheduled poll; whereas the Included list contains devices will all be polled at the scheduled time. After including or excluding devices in the scheduled poll the update button must be selected in order to Update the schedule poll.

Deleting a scheduled poll permanently deletes the scheduled poll for all devices associated with the scheduled poll.

The list on the bottom of the scheduled polling configuration form lists existing scheduled polls. Clicking on an entry in the list shows the schedule details. If a scheduled poll does not appear on the scheduled poll list, ensure the device filtering options are selected correctly.

6.7. Site Mapping

Selecting "Edit->Site Mapping Configuration" from the main menu opens the site mapping configuration form. From this form a user can map outputs to any other input or output which is monitored by siteVIEW. The site mapping configuration form is also used to delete or modify existing mappings.

Changes made to the site mapping configuration form do not take effect until update is selected after making changes to an existing output mapping or add is selected while creating a new output mapping.

An output mapping tells siteVIEW to turn on or turn off a specified output based on the result of some other input or output in siteVIEW.

Site Mapping Configuration

Site Mapping Properties

Input Condition

Server: SASKATOON, COM Port: SS River North, Device: 1_EastShack, I/O: Input 1, Condition: Is Off, Type: Input, Number: 1

Output Action

Server: SASKATOON, COM Port: SS River North, Device: 1_EastShack, I/O: Output 1, Action: Turn Off

☒ Enabled

New Update Delete

Server	COM Port	Device	Name	Type	Number	Condition	Target Server	Target Device
SASKATOON	SS River North	1_EastShack	Input 1	Input	1	is off	SASKATOON	SS River North

Close

Figure 42 - Site Mapping Configuration Form



WARNING: Site Mapping cannot occur if siteVIEW loses its connection to the mapped device. If the target device is unreachable then no output event can occur.

The input condition is specified for a specific server, COM port, device and input or output on that device. When the input or output condition occurs, siteVIEW is then to take the specified output action. An input condition can occur when an input or output is turned on or off, or an input condition can occur when an analog or temperature value is less than or greater than one of its set points.

The site mapping condition form allows a user to modify, delete and enable or disable site mappings.

The list on the bottom of the site mapping configuration form displays site mappings. Select an entry from the list to see the site mapping details. If a site mapping does not appear on the site mappings list, ensure the filter is selected correctly.

7. MONITORING AND CONTROLLING DEVICES

Once the siteCOMMANDER devices are configured, they are then ready for monitoring and control. Monitoring and control using siteVIEW includes viewing the current status of devices, controlling device outputs and responding to alarms.

siteVIEW does not exit completely when the siteVIEW user interface is closed (by selecting the close button in the top right corner of the main application form). Instead siteVIEW is minimized to the system tray. To exit the siteVIEW user interface completely, select "Connect->Exit siteVIEW" from the main menu. Once siteVIEW is closed, the communication service and alarm monitor continue to function. Communication with the configured sites, auto polling, site mapping and new status information returned from the device all continue to occur even though the user interface has been closed.



WARNING: Even though the User Interface may be closed, monitoring, alarm reporting, scheduled polling and Site Mapping continue to occur for the rest of the User Interfaces connected to the Datawarehouse

7.1. Device Inputs and Outputs

siteVIEW can monitor several types of inputs and output. Those inputs and outputs can be represented in different meaningful ways.

Panel control outputs can be turned on and off, but inputs cannot be changed. Outputs may be controlled if the user has the required access rights. When controlling outputs, the value displayed on the panel will be different than the actual output value while the command is being sent.

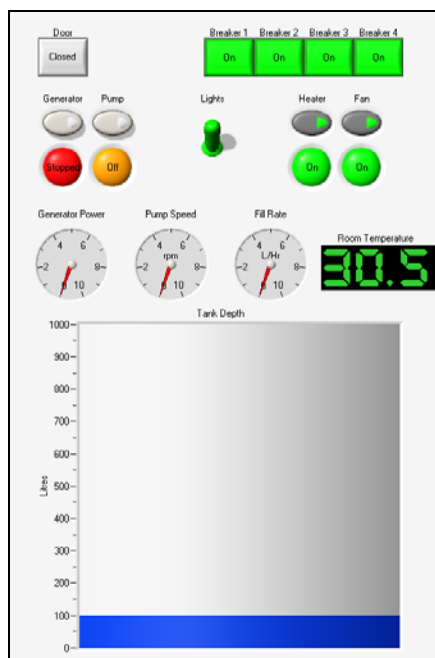


Figure 43 - Site Panel Example

7.2. Alarm Handling

Alarm conditions pertain to input and output values. When an alarm condition occurs, an alarm is triggered and the siteVIEW user is notified in several ways. Visually, the affected input or output Panel Component will blink on and off, the associated navigation tree node displays an alert icon and an alarm is added to the alarm panel.

WARNING: the 3DCommandOk and 3DToggleOnOff Boolean control styles do not blink during an alarm condition.

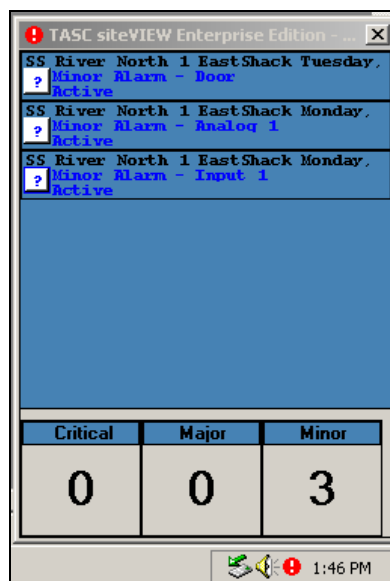


Figure 44 - Alarm Pop-Up Notification

If siteVIEW is minimized when an alarm occurs, the siteVIEW system tray icon will display a blinking alert icon and an alarm popup screen is displayed above the siteVIEW system tray icon, in the bottom right area of the screen.

If the triggered alarm has a sound file associated to it, the sound file will play while the alarm is active or until the user mutes the alarm sound.

The alarm popup form displays a summary of active alarms. Whereas the alarm panel displays all active and inactive alarms that have not been cleared. Each entry of the alarm popup form and each entry on the alarm panel have a find button with a question mark on it. Selecting the find button navigates the user to the device where the alarm occurred, and the device panel is displayed.

Each alarm entry on the alarm panel and alarm popup displays information about the input or output where the alarm has occurred. Performing a double mouse click on an alarm panel entry displays the alarm details form.

Figure 45 - Alarm Details Form

The Alarm Details form gives details of the alarm location, the time the alarm's status last changed and details about the alarm. The Details field is useful for providing instructions to a user in the event that the alarm is triggered.

If an alarm has a sound file associated to it, selecting the mute button stops the sound from playing until the alarm has been triggered again. The snooze button causes the alarm sound to stop and not resume again until five minutes later. If within those five minutes the alarm condition ceases, the snooze is interrupted and the sound will not occur again until the next time the alarm is triggered.

The status of the alarm is displayed in the status field. A user can change the status of the alarm by selecting an action and then selecting the Set button. Active alarms can be cleared or acknowledged. Acknowledging an alarm causes the alarm to remain in the alarm panel, but all other alarm indications

stop. Clearing an alarm removes the alarm from the alarm panel completely. But selecting “View->Show Cleared Alarms” causes cleared alarms to be displayed on the alarm panel as well.

Alarm panel entries have different colors based on the alarm severity and status. Critical alarms appear with a red background, major alarm backgrounds are orange and minor alarm backgrounds are yellow. When an alarm has become inactive or when an alarm is cleared, the alarm panel entry background turns grey. The background of an active alarm blinks when the alarm is neither acknowledged nor cleared.

7.3. Manually Polling the Devices in the Network

Options exist that allow a user to manually initiate a poll of the devices. This allows the operator to retrieve the current status of the siteCOMMANDER at any time. To perform a manual poll select one of the “Edit->Manual Poll” submenus. Selecting the manual poll button on the tool bar can access the same functionality.

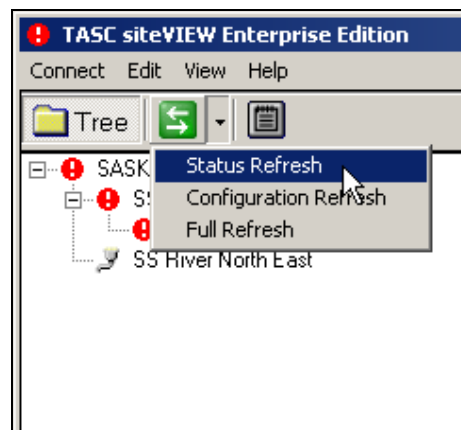


Figure 46 - Manual Poll Options

Selecting “Edit->Manual Poll->Status Refresh” causes siteVIEW to retrieve the status and I/O values of all devices under the currently selected node.

For instance, if a Server node is selected then all COM Ports and their respective devices will be polled.

If a COM Port Node is selected then all devices within that COM Port will be polled.

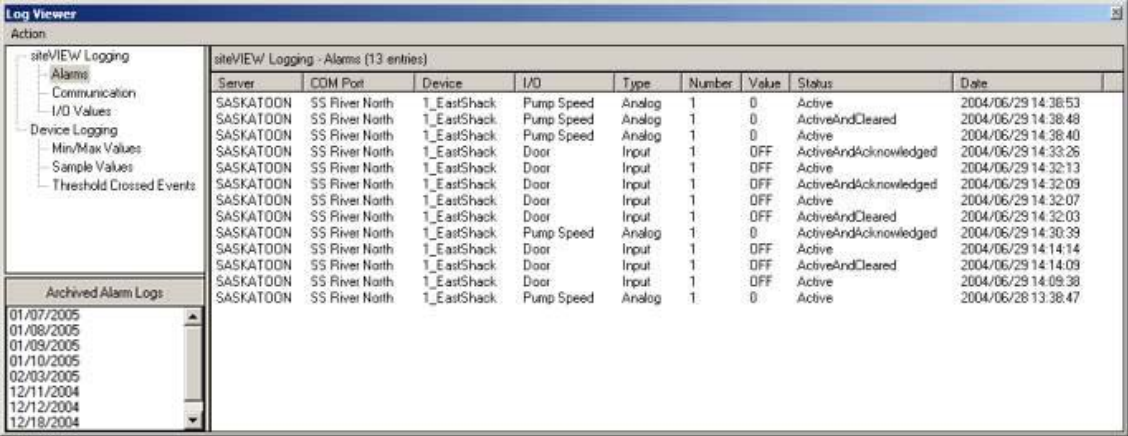
If a device node is selected then only that particular device will be polled.

A status refresh retrieves a device’s status and I/O values. A configuration refresh retrieves the device’s configuration settings. A full refresh performs the functionality of a status refresh and a full refresh combined.

8. LOGGING

Each time an alarm occurs, or an I/O value changes or communication with a device occurs, siteVIEW records the event in a log. This is known as siteVIEW logging.

A device also has logging of its own. This kind of logging is referred to as device logging.



The screenshot shows the 'Log Viewer' application window. On the left is a sidebar with a tree view containing 'siteVIEW Logging' (expanded), 'Alarms', 'Communication', 'I/O Values', 'Device Logging', 'Min/Max Values', 'Sample Values', and 'Threshold Crossed Events'. Below this is a list of 'Archived Alarm Logs' with dates from 01/07/2005 to 12/18/2004. The main area displays 'siteVIEW Logging - Alarms (13 entries)' in a table format.

Server	COM Port	Device	I/O	Type	Number	Value	Status	Date
SASKATOON	SS River North	1_EastShack	Pump Speed	Analog	1	0	Active	2004/06/29 14:36:53
SASKATOON	SS River North	1_EastShack	Pump Speed	Analog	1	0	ActiveAndCleared	2004/06/29 14:38:48
SASKATOON	SS River North	1_EastShack	Pump Speed	Analog	1	0	Active	2004/06/29 14:38:40
SASKATOON	SS River North	1_EastShack	Door	Input	1	OFF	ActiveAndAcknowledged	2004/06/29 14:33:26
SASKATOON	SS River North	1_EastShack	Door	Input	1	OFF	Active	2004/06/29 14:32:13
SASKATOON	SS River North	1_EastShack	Door	Input	1	OFF	ActiveAndAcknowledged	2004/06/29 14:32:09
SASKATOON	SS River North	1_EastShack	Door	Input	1	OFF	Active	2004/06/29 14:32:07
SASKATOON	SS River North	1_EastShack	Door	Input	1	OFF	ActiveAndCleared	2004/06/29 14:32:03
SASKATOON	SS River North	1_EastShack	Pump Speed	Analog	1	0	ActiveAndAcknowledged	2004/06/29 14:30:39
SASKATOON	SS River North	1_EastShack	Door	Input	1	OFF	Active	2004/06/29 14:14:14
SASKATOON	SS River North	1_EastShack	Door	Input	1	OFF	ActiveAndCleared	2004/06/29 14:14:09
SASKATOON	SS River North	1_EastShack	Door	Input	1	OFF	Active	2004/06/29 14:09:38
SASKATOON	SS River North	1_EastShack	Pump Speed	Analog	1	0	Active	2004/06/28 13:38:47

Figure 47 - siteVIEW Logs

The log viewer can be viewed by selecting “View->Logs” from the main menu or by selecting the logs button from the toolbar.

The log viewer form displays log entries on the right and a list of log types on the left. From the main menu of the log viewer form a user can export, clear or refresh log entries. Logs are automatically archived to prevent the logs from becoming unmanageably large. A list of archived logs is shown on the bottom left of the Log Viewer. Select an archived log to view it in the Log Viewer.

8.1. siteVIEW Logging

Each time an alarm’s status changes an entry for the alarm is recorded in the alarms log. Each time communication occurs between siteVIEW and a device, the communication is recorded in the communications log. Each time an I/O value is returned from a device, an entry is recorded in the I/O values log that indicates this value.

8.2. Device Logging

A device may be set up to perform logging locally. If device logging is enabled for a device, it can be manually retrieved or automatically retrieved by siteVIEW Enterprise by setting up an automated poll. To retrieve a device's log manually, select the device's node on the navigation tree and then select "Edit->Data Logger" from the main menu. This will open the device data logger form.

The first time the device data logger form is opened for a device, most of the information will be unavailable. There are two refresh buttons on the device data logger form that allow a user to refresh the logger information. If the data logger is running, the data logger information will constantly change at the device and siteVIEW will not be aware of the changes without performing another refresh.

A user can download the sample log or the min/max log and when the download has completed, siteVIEW automatically clears the log that was downloaded. Or a user can manually clear the log without downloading the values.

The data logger can be stopped and started from the device data logger form. The time the logger was started is displayed in the field labeled start time.

Several timers exist in the device Data Logger form. These values are not stored in the data logger and they cannot be automatically downloaded. The timers are only available for viewing through the device data logger form. The timers display the total accumulated time the carrier operated squelch (COS) was active and accumulated time the inputs were on. The last update time displays the last time these values were updated.

8.3. Logging Properties

You can access the Log Viewer Properties page by selecting "Action->Properties" from the Log Viewer menu.

8.3.1. Log Archiving

By default logs available from the Log Viewer are automatically archived every Sunday at 3:00 am. The log archiving interval is configurable from the Log Viewer Properties page.

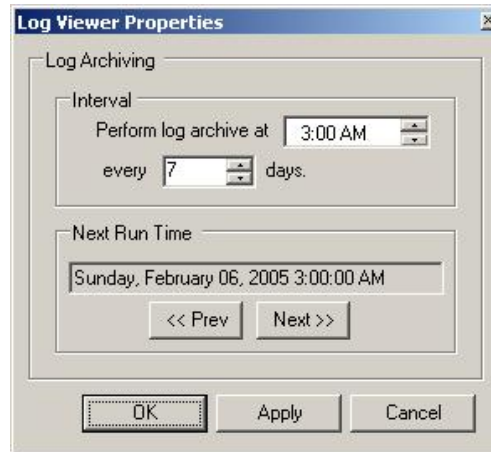


Figure 48: Log Viewer Properties

9. TROUBLESHOOTING

9.1. Event Viewer

TASC siteVIEW uses the Windows operating system's event viewer to track when the Communication Server and alarm monitor stop and start. The event viewer is also used to track Datawarehouse connections, to track dongle information such as licenses and add-ons, and to track siteVIEW server application errors.

To access the event viewer, select Administrative Tools from the Windows control panel. Under administrative tools, select event viewer. The TASC siteVIEW event log is specific to TASC siteVIEW Enterprise.

The event viewer can be used to help troubleshoot problems with the security dongle and Datawarehouse connectivity problems.

9.2. Solutions to Problems

I cannot sign into siteVIEW because there are no licenses available

- Look in the event viewer and ensure the Communication Server properly detected the dongle and connected to the Datawarehouse.
- Ensure the siteVIEW user interface is connecting to the same Datawarehouse that the Communication Server is connected to.
- It may be possible the Communication Server is not running for some reason. Restarting the computer that the Communication Server resides on should start the Communication Server.

siteVIEW will not detect my dongle

- Ensure the dongle is properly inserted into an available USB connection on the computer where the Communication Server resides. Do not remove the dongle at any time while the Communication Server is running.
- If the dongle is properly inserted and siteVIEW still does not detect the dongle, remove the dongle and restart the computer. Once the computer has restarted then insert the dongle and allow the operating system to find and install any drivers it needs. Once the operating system has detecting the dongle, siteVIEW should function properly.

The Communication Server is not running

- Restart the computer. This will force the Communication Server to start as well.

The alarm manager is not running

- Restart the computer. This will force the alarm manager to start as well.

I cannot make changes to the system

- Ensure the login user you are using has the appropriate rights to access the siteVIEW features you wish to use.

siteVIEW is unable to make a connection to a device

- Ensure the device addressing is correct, because otherwise siteVIEW will not be able to connect to the device.
- Ensure the device is connected properly.

siteVIEW tells me the COM port is already in use

- Ensure no other applications are using a COM port that siteVIEW is expecting to use for monitoring. Once an application is closed and the COM port is freed up again for siteVIEW to use, select "Edit->Properties" for the COM port that had difficulties, and then select the refresh button to allow siteVIEW to resume monitoring on the COM port.

I cannot connect to the Datawarehouse

- Ensure the security rights, of the *Datawarehouse* you are trying to connect to and the folder it is located in, allow you access.

I cannot establish a connection with a local device

- Ensure the device is attached to the same Communication Server and COM port that you are using siteVIEW to connect with.

10. TASC SITECOMMANDER CONFIGURATION

The TASC siteCOMMANDER is a hardware device that can be used in conjunction with siteVIEW Enterprise. The device has its own firmware configuration that can be changed either using its own configuration software (SCCU) or by using siteVIEW Enterprise. This section discusses how to change the siteCOMMANDER device settings.

10.1. Description

The description tab contains the name and description of the device. This tab is not available for a locally connected device.

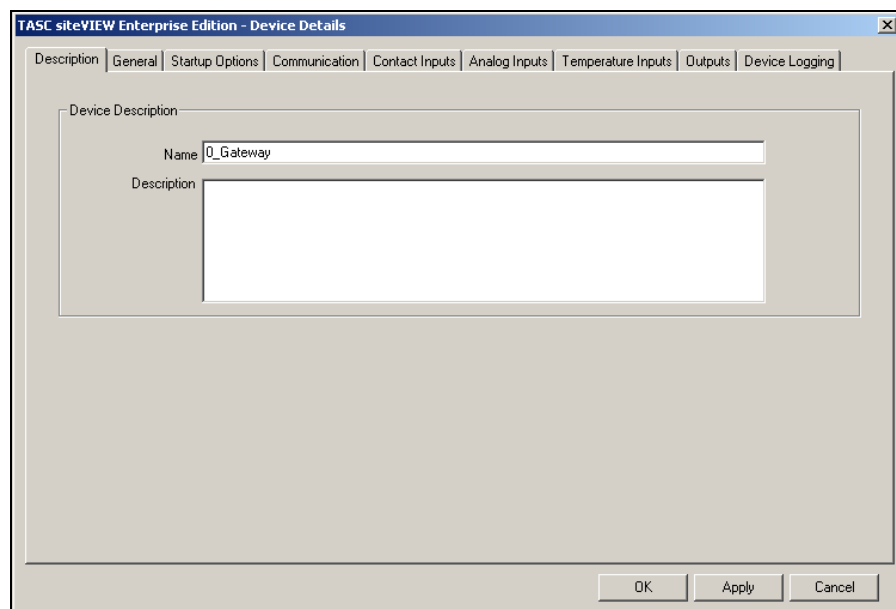


Figure 49 - Device Properties

10.2. General

The general tab contains read-only information about the device such as the device type, the device's internal firmware version, extra device options available, the number of child modules attached to the device and the number of temperature sensors that are attached to the device.

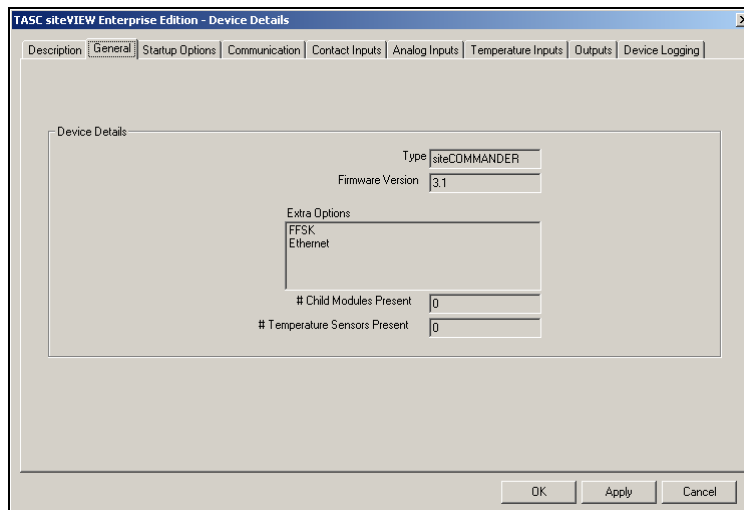


Figure 50 - Device Properties - General

10.3. Startup Options

The startup options tab contains configuration that pertain only to the startup of the device. The startup delay is the length of time in seconds that the device will wait after starting, before it begins monitoring. The enable power save option causes the device to switch into low power mode. When the device is in low power mode, it will have a sleep time. At the end of each sleep interval, the device will wake up and check its status. The wake on COS option causes the device to wake up out of low power mode when it detects a carrier operated squelch from the ffsk module.

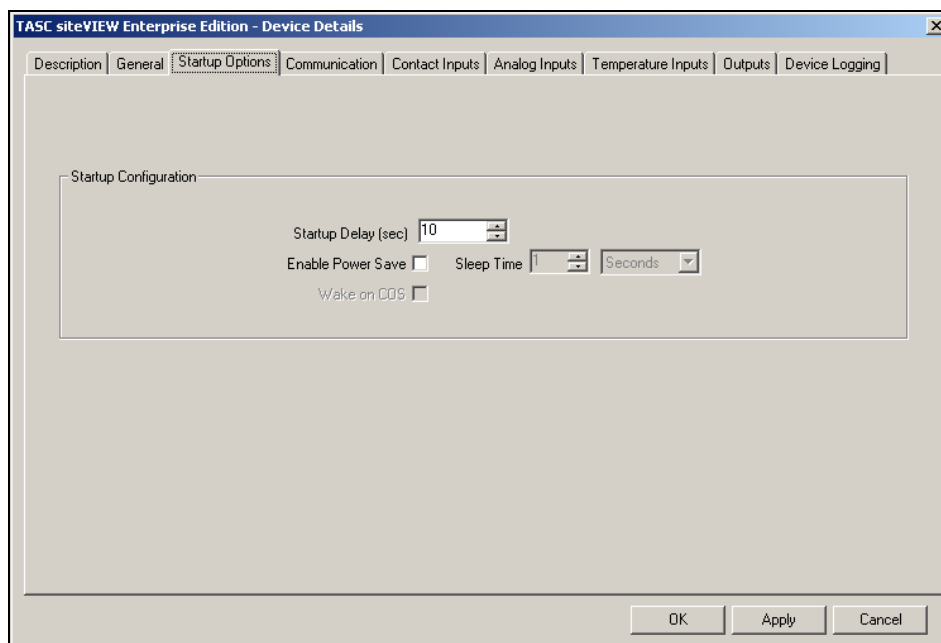


Figure 51 - Device Properties - Startup Options

10.4. Communication

Making changes to the communication form after the first communication has been established causes the communication configuration to be altered.

The device COM port specifies the COM port the device is to use as its primary COM port.

The module type of the device determines the role of the device. The following is a quick description of each mode:

- **Gateway:** This mode is used on a single device to connect a network of siteCOMMANDERs to the siteVIEW Enterprise Communication Server.
- **Master:** This mode is used in point-to-point or point-to-multipoint applications not involving siteVIEW products
- **Slave No Mapping:** This mode is used for remote devices in siteVIEW and non-siteVIEW applications
- **Slave Input Mapping:** This mode is used strictly for point-to-point or point-to-multipoint applications not involving siteVIEW products

The COM port retry count decides how many times the device should send a message before giving up. The retry timeout determines how long to wait for a response after sending a packet.

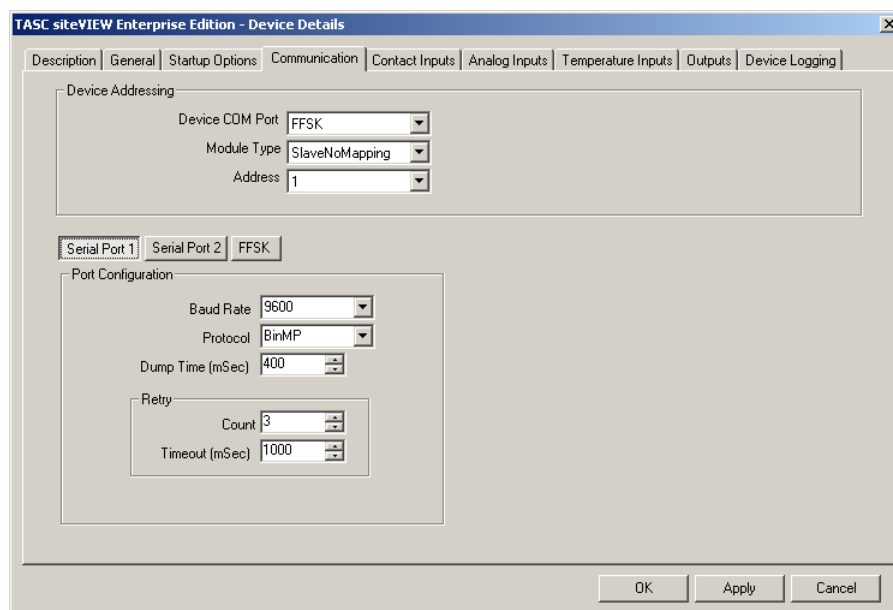


Figure 52 - Device Properties - Communication

Serial port 2 and the FFSK port can only be changed when siteVIEW is in a local connection with the device. This is to ensure that siteVIEW does not lose connectivity with the device it is configuring. To configure serial port 2 and the FFSK port siteVIEW must connect to the device locally.

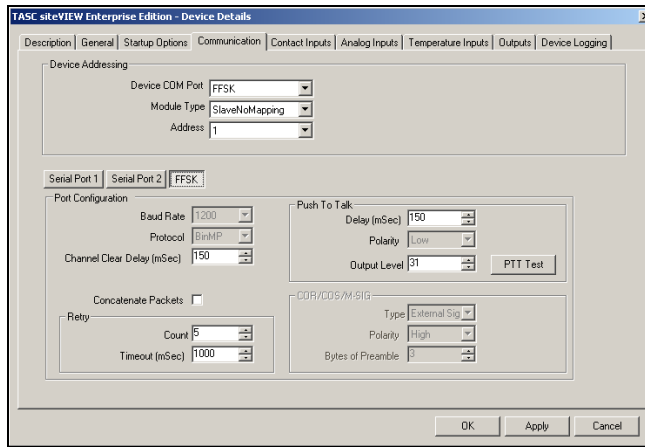


Figure 53 - Device Properties - FFSK Communication

10.5. Contact Inputs

If enable event is selected for a contact input, the device will notify siteVIEW whenever the input is turned on or off. The off state specifies if the input is normally in the open state or if it is normally closed. The state that is specified as normal then becomes the off state of the device.

The input mode can be set as normal or toggle. If normal is selected, the input is edged triggered. If toggle is selected, the input is triggered based on levels; the input will alter its state on alternating positive levels.

An input can be set such that when the input is turned on, an output is turned on and when the input is turned off that same output is then turned off. The hold time specifies the amount of time the input must stay on before the output will be turned on or off. The local output specifies the output to be turned on and off. The output delay indicates how long the device should wait before turning on the local output.

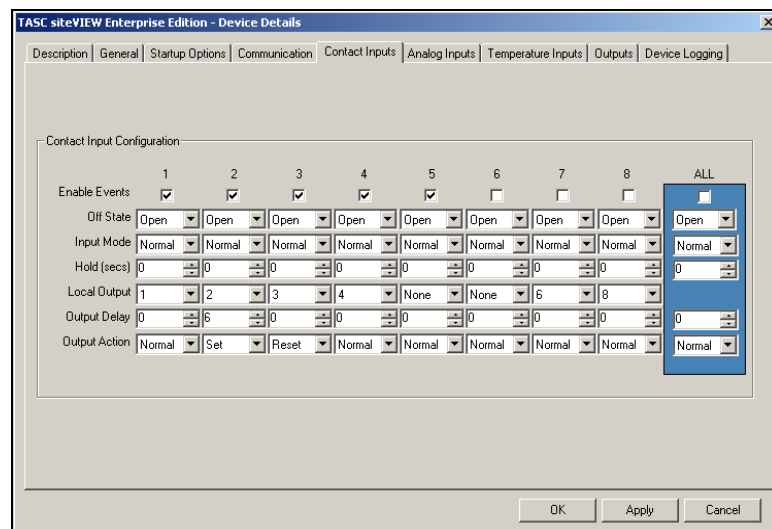


Figure 54 - Device Properties - Contact Inputs

The output action can be normal, set or reset. If the output action is normal, then the output turns on when the input is turn on and the output turns off when the input is turned off. If the output action is set, then the output is turned on when the input is turned on, but the output is unaffected when the input is turned off. Reset causes the output to be turned off when the input is turned on, but is unaffected when the input is turned off.

10.6. Analog Inputs

If enable event is selected for an analog input, the device will notify siteVIEW whenever the input crosses either the low or high set point voltage.

The range indicates the analog input type that is connected to the device. If this value is not set correctly, siteVIEW may report invalid analog input information.

An analog input can be set such that when the input voltage goes above the high set point, an output is turned on and when the input voltage goes below the low set point an output is then turned off. The invert set points option causes the event to occur when the voltage goes below the high set point voltage, or above the low set point voltage.

The hold time specifies the amount of time the analog input must stay above or below the set point before the output will be turned on or off. The local output specifies the output to be turned on and off. The output delay indicates how long the device should wait before turning on the local output.

The screenshot shows the 'TASC siteVIEW Enterprise Edition - Device Details' window with the 'Analog Inputs' tab selected. The window contains a table for configuring 8 analog inputs and an 'ALL' button. Each input has the following settings:

Input	1	2	3	4	5	6	7	8	ALL
Enable Events	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Invert Set Points	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Range	0-5.00V	0-5.00V	0-5.00V	0-5.00V	0-5.00V	0-5.00V	0-5.00V	0-5.00V	0-5.00V
High Voltage Set Points									
Voltage	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90
Hold (secs)	1	1	1	1	1	1	1	1	1
Local Output	None	None	None	None	None	None	None	None	None
Output Delay	0	0	0	0	0	0	0	1	0
Low Voltage Set Points									
Voltage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hold (secs)	1	1	1	1	1	1	1	1	1
Local Output	1	2	None	None	None	None	None	None	None
Output Delay	0	0	0	0	0	0	0	1	0

Buttons: OK, Apply, Cancel

Figure 55 - Device Properties - Analog Inputs

The siteCOMMANDER module cannot accept voltages on its inputs that are negative with respect to ground. Application of negative voltages to the digital and analog inputs will damage the module.

The module provides fixed input ranges of 0-2.56V, 0-5.12V, 0-25.0V and 4-20mA depending on jumper settings. Four user ranges of X2, X4, X10 and X20 can also be programmed based on a 5 V internal reference.

10.6.1. Analog Input Jumper Configuration

Each analog input may be set to a different range via jumpers J1 to J16 in conjunction with the SCCU utility. Each analog input has two jumpers noting that the order of jumpers is reversed, i.e. J1 & J2 correspond to the highest analog input.

Analog	Jumper block
8	J1 / J2
7	J3 / J4
6	J5 / J6
5	J7 / J8
4	J9 / J10
3	J11 / J12
2	J13 / J14
1	J15 / J16

Figure 56 - Device Properties – Analog Jumper Configuration

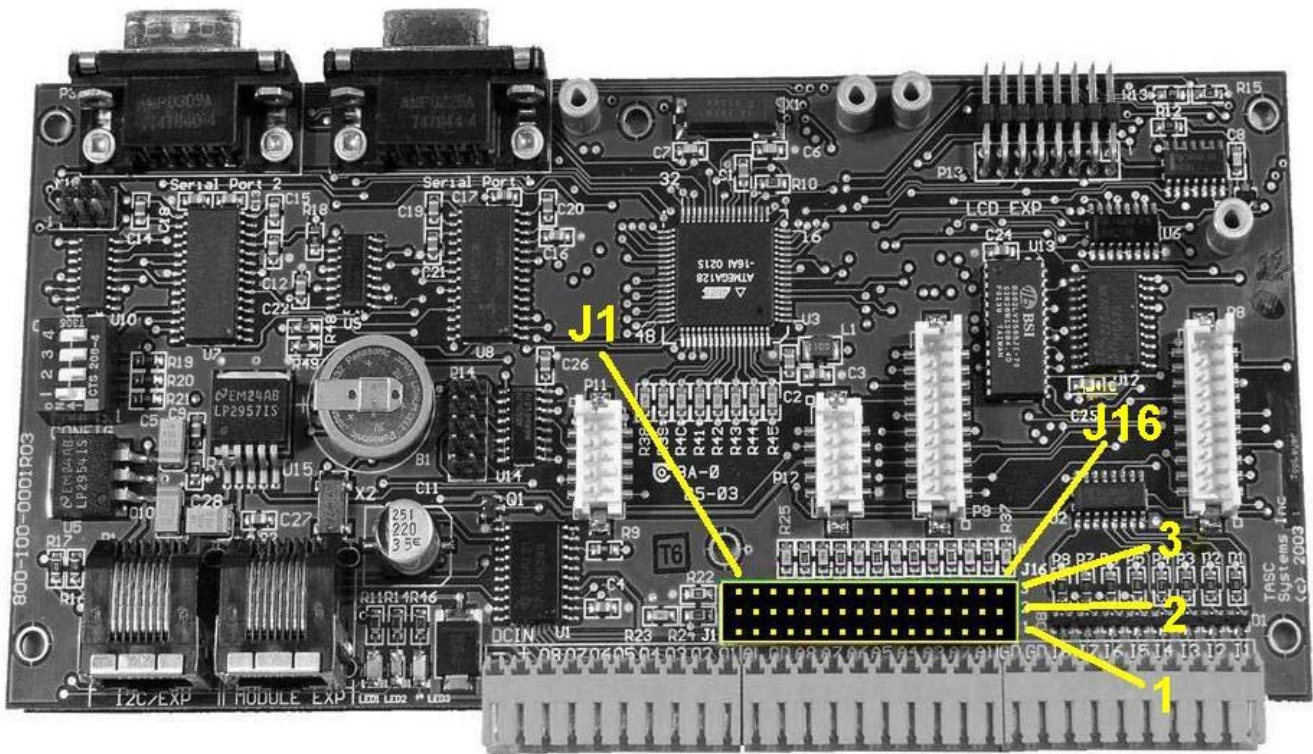


Figure 57 - Device Properties – Photo of siteCOMMANDER Analog Jumpers

Each pair of jumpers configures one of four programmed ranges.

Analog	0-2.56V 0-5.0V User Range	0-25V	4-20mA
1	J16-1 to J16-2 J15 Out	J16-3 to J16-2 J15-1 to J15-2	J16-1 to J16-2 J15-2 to J15-3
2	J14-1 to J14-2 J13 Out	J14-3 to J14-2 J13-1 to J13-2	J14-1 to J14-2 J13-2 to J13-3
3	J12-1 to J12-2 J11 Out	J12-3 to J12-2 J11-1 to J11-2	J12-1 to J12-2 J11-2 to J11-3
4	J10-1 to J10-2 J9 Out	J10-3 to J10-2 J9-1 to J9-2	J10-1 to J10-2 J9-2 to J9-3
5	J8-1 to J8-2 J7 Out	J8-3 to J8-2 J7-1 to J7-2	J8-1 to J8-2 J7-2 to J7-3
6	J6-1 to J6-2 J5 Out	J6-3 to J6-2 J5-1 to J5-2	J6-1 to J6-2 J5-2 to J7-3
7	J4-1 to J4-2 J3 Out	J4-3 to J4-2 J3-1 to J3-2	J4-1 to J4-2 J3-2 to J3-3
8	J2-1 to J2-2 J1 Out	J2-3 to J2-2 J1-1 to J1-2	J2-1 to J2-2 J1-2 to J1-3

Figure 58 - Device Properties – Analog Jumper Ranges

When a range is selected via the jumper block, the corresponding range must also be set in the analog configuration pages for the device.

10.6.2. User Ranges

The user may select one of four external analog ranges by supplying an external 'potential divider' resistor network. 1% tolerance resistors should be used. To configure an analog input for an externally supplied resistor network, set the jumpers the same as for 5V.

The following table shows suggested external resistor network values for the user range settings.

2 x 5V = 10V	4 x 5V = 20V	10 x 5V = 50V	20 x 5V = 100V
Ra = 10K Ω	Ra = 30K Ω	Ra = 90K Ω	Ra = 190K Ω
Rb = 10K Ω	Rb = 10K Ω	Rb = 10K Ω	Rb = 10K Ω

Figure 59 - Device Properties – Suggested External Resistor Values

10.7. Temperature Inputs

If enable event is selected for a temperature input, the device will notify siteVIEW whenever the input crosses either the low or high set point voltage.

The device may have zero to eight temperature inputs present. The present indicator lets the user know which input is available for configuration.

A temperature input can be set such that when the input temperature goes above the high set point, an output is turned on and when the input temperature goes below the low set point an output is then turned off.

The hold time specifies the amount of time the temperature input must stay above or below the set point before the output will be turned on or off. The local output specifies the output to be turned on and off. The output delay indicates how long the device should wait before turning on the local output.

Figure 60 - Device Properties - Temperature Inputs

10.8. Outputs

The off state specifies if the output is normally in the open state or if it is normally closed. The state that is specified as normal then becomes the off state of the device.

The output mode can be set as latch or pulse. If latch is selected, when the output is turned on it is left on until the output is turned off again. If pulse is selected, when the output is turned on the output only stays on for the length of times specified by the pulse width.

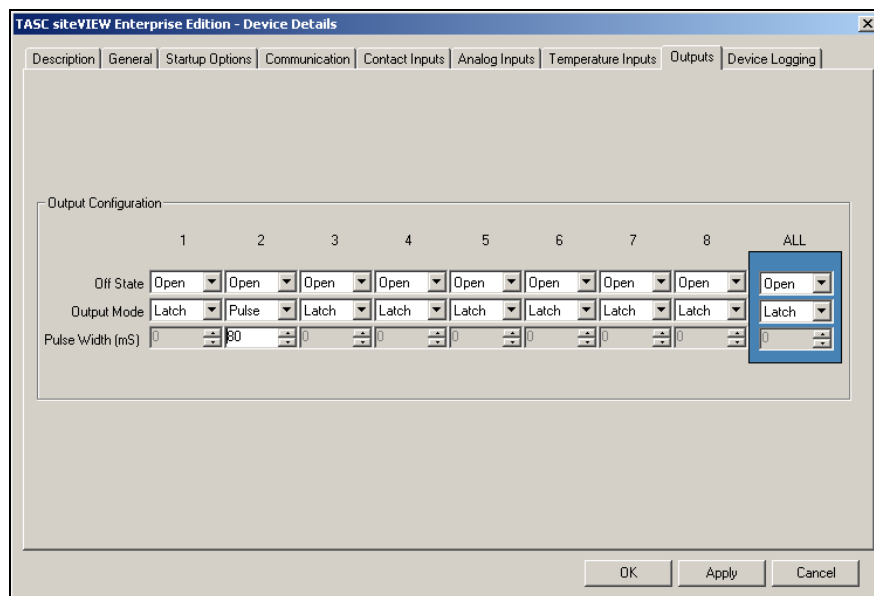


Figure 61 - Device Properties - Outputs

10.9. Device Logging

<Need a description of log air time>

The log roll over determines what the device will do when its log file becomes full. If log roll over is enabled, the device will overwrite the oldest log entry to create a new one. If log roll over is not enabled, the device will stop logging when the data logger buffer is full.

Selecting power up run ensures the data logger starts automatically whenever the device starts up.

The data logger logs sample data at selected intervals and it logs min/max data for selected inputs. The buffer allocation determines how much of the data logger buffer is allocated to each data logger type.

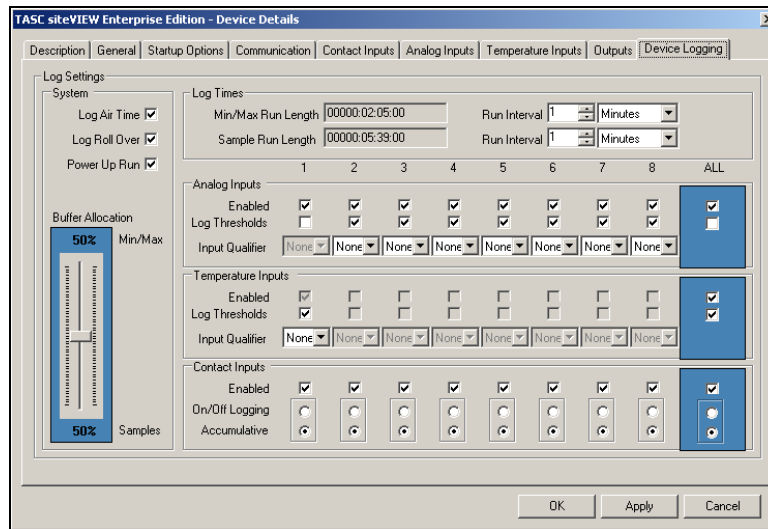


Figure 62 - Device Properties - Device Logging

The enabled option determines if the selected input is included when logging. The analog and temperature inputs have a log thresholds option that will cause the data logger to log each time the input's value crosses its high or low set point. The input qualifier decides that the input value can only be logged when the specified input qualifier is on.

The contact inputs can be logged each time they are turned on or off, or they can be logged as accumulative on times.