



SCCU
for siteRSM

User Manual

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PREFACE

This document describes the configuration of TASC Systems siteRSM main module hardware.

The siteRSM is a remote site monitoring and control product.

All screenshots were taken using software running under Windows operating system. The appearance on your computer may differ depending on your operating system.

Hardware and software described in this document are subject to ongoing 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.

The siteRSM is designed for flexibility of use and installation and is therefore highly configurable and should only be installed by an appropriately trained technician.

The user should ascertain that this product is suitable for the intended application. TASC Systems Inc. accepts no responsibility, liability, for misuse, or damage resulting from the inappropriate use of the product described herein.



Before connecting any equipment to the siteRSM, the user is advised to read the Installation Procedure section of this document in its entirety. Application of voltages in excess of the built-in protection could seriously damage the siteRSM and the equipment connected to it.

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RELATED DOCUMENTS

- [siteRSM User Manual \(050-015-0052\)](#)
- [siteVIEW Enterprise 2.0 Centralized Alarm Monitoring Software User Manual \(050-015-0050\)](#)
- [Digital Input Expansion to siteRSM 19" 1RU Installation Guide \(050-015-0057\)](#)
- [Analog Input Expansion to siteRSM 19" 1RU Installation Guide \(050-015-0056\)](#)
- [Bi-directional Power Sensor \(BPS\) User Manual \(050-015-0059\)](#)
- [Differential Sensor User Manual \(050-015-0049\)](#)

REVISION HISTORY

Revision	Date	Changes
050-015-0055R00	August 2009	First Release
050-015-0055R01	November 2009	Added analog sensor - AC Voltage Sensor Corrected offset range selection for differential sensors

1. OVERVIEW

1.1. The siteRSM Configuration Utility (SCCU)

The siteRSM configuration utility is called SCCU. SCCU provides a means to set the module's many operating parameters using a personal computer.

SCCU is also used as the configuration utility for the TASC siteCOMMANDER product and references to the siteCOMMANDER in various areas within the utility is normal. Specific areas that are relevant to the siteRSM will be available for use while siteCOMMANDER specific items not relevant to the siteRSM will be grayed out and unavailable for use.

When first shipped, the siteRSM module's configuration is set to the factory defaults. When the configuration is Read, you may edit any of the available parameters and Write them back into the siteRSM's configuration memory using SCCU.

The computer system that SCCU is installed onto must meet the following minimum requirements:

- Pentium II 200 MHz CPU
- Serial port
- 128MB RAM
- CD-ROM Drive
- 10MB of free hard disk space
- Windows 98, Windows NT, Windows ME, Windows 2000 or Windows XP operating system

The SCCU can be used to configure a siteRSM module in three ways:

Direct - Via a serial cable connection between the module and the SCCU computer. When connecting directly, connect a standard DB-9 serial cable between Serial Port 1 and the nominated serial port on your computer (COM1, COM2 etc).

Remotely – Once the basic configuration has been programmed, the module may be reconfigured remotely via the primary transmission medium.

OffLine Edit Mode - A configuration may be prepared in advance and saved to disk on the SCCU computer for later uploading to the module.

2. INSTALLATION

2.1. Setup and Installation

SCCU is supplied on an installation CD. Place the CD in the computer CD ROM drive. If the CD does not automatically run, use Windows® Explorer to access the **setup.exe** file and double click on it.

The following CD menu will be displayed:

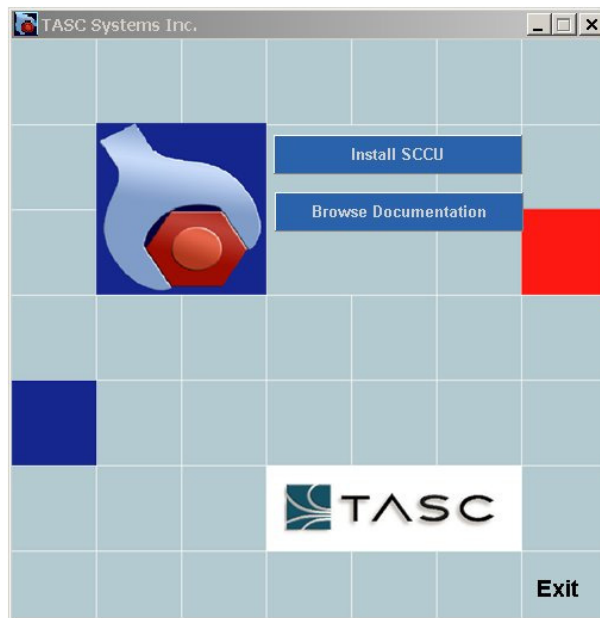


Figure 1 - SCCU Installation Menu

Clicking on the *Install SCCU* button will take you to the Program Installation Wizard. The Wizard will guide you through the installation process. Follow the on-screen instructions until the installation is complete.

Clicking on the *Browse Documentation* button will take you to another menu of various relevant documents for reference.

2.1.1. SCCU Main Window

Launch the SCCU program from the program group folder that was created during the installation process. By default, this folder is called "TASC".

When SCCU is first started, a number of items are shown grayed out in the main window. They are gray due to having no current data to available to view. Perform a Read on an attached device to make them available.

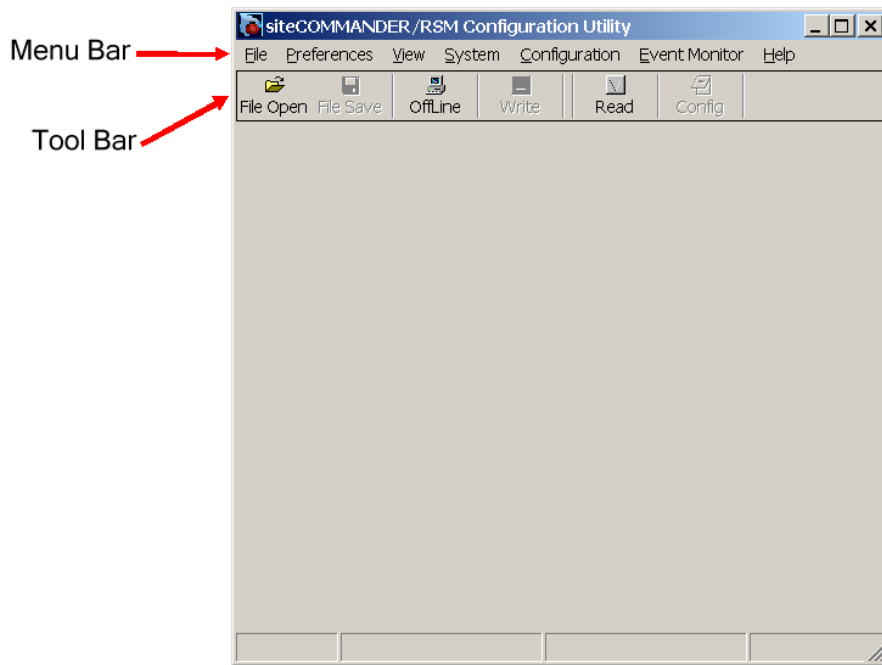


Figure 2 - SCCU Main Window


Alternatively, press the *OffLine* button  from the SCCU Tool Bar. Once the appropriate device is selected, the grayed out items will become available.



Figure 3 - siteRSM OffLine Device Selection



Note: Since there is no physical hardware connected to SCCU in OffLine mode, SCCU does not limit access to features and functionality. When creating a configuration file for future uploading, ensure that the configuration matches the hardware prior to uploading into a device.

2.1.2. SCCU Menu Bar

2.1.2.1. File

Open: Loads a previously stored configuration file made using SCCU. This can in turn be used to write to another siteRSM.

Save As: Saves the current configuration parameters stored in SCCU.

Exit: Closes the SCCU program.

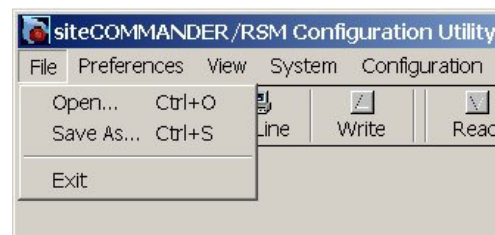


Figure 4 - File Menu Bar Selection

2.1.2.1. Preferences

Local Connection: Allows the user to select which COM port will be used to connect locally to the siteRSM as well as the timing parameters.

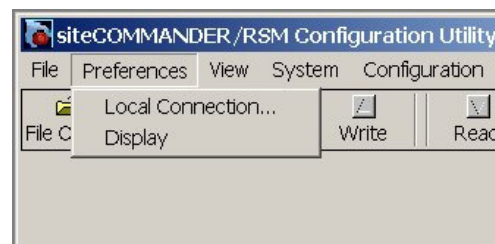


Figure 5 - Preferences Menu Bar Selection

Selecting *Local Connection* will display the following window:

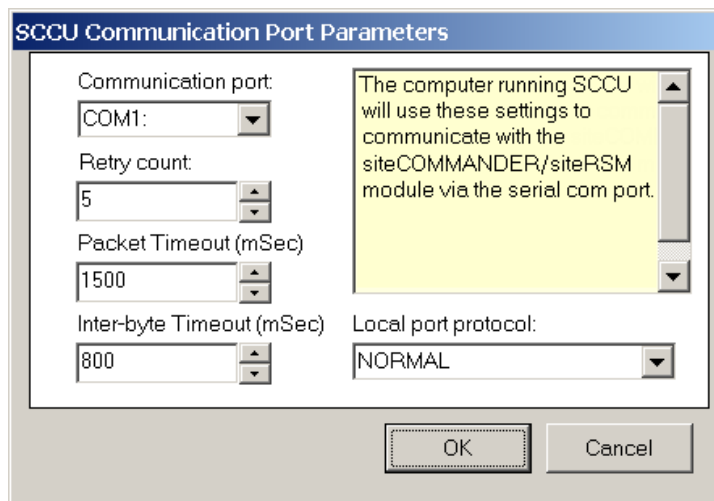


Figure 6 - Local Connection Window

Communication Port: Select COM1 for local connection.

Range: COM1 – COM256 / Default COM1

Retry Count: Select the amount of times SCCU will retry when failing to connect to a siteRSM.

Range: 2 – 10 / Default 5

Packet Timeout (mSec): Selects how long to wait for a response after sending a packet.

Range 100ms – 30000ms / Default 1500ms

Inter-byte Timeout (mSec): This determines how long the COM port should wait between incoming bytes before timing out.

Range 100ms – 2000ms / Default 800ms

Local Port Protocol: Select Normal.

Display: Select whether the Temperature Inputs will be viewed in Celsius or Fahrenheit. Check the box for Fahrenheit. *Default Celsius*



Figure 7 - Display Window

2.1.2.1. View

Current System Status: Shows the real time view of all contact inputs and allows control of the digital outputs. This is only available when a device is connected to SCCU. Please see section 4.1 of this manual for more information.

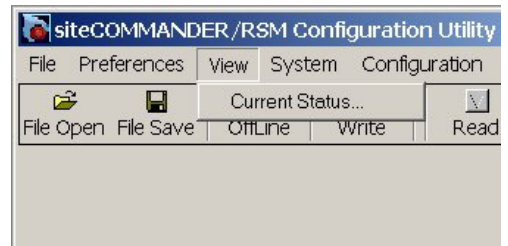


Figure 8 - View Menu Bar Selection

2.1.2.1. System

Date and time: There is no date and time setting in the siteRSM. Subsequently, this item is grayed out. Used with other hardware applications.

Reset System NVR: Allows user to reset the siteRSM to factory defaults. Please see section 4.4 for more information.

ReStart System: There is no restart system in the siteRSM. Subsequently, this item is grayed out. Used with other hardware applications.

Flash Upload: Allows the user to upload firmware to the siteRSM. Please see section 4.5 for more information.

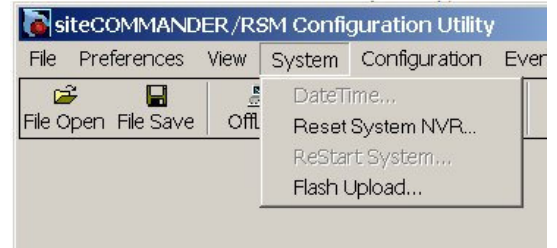


Figure 9 - System Menu Bar Selection

2.1.2.1. Configuration

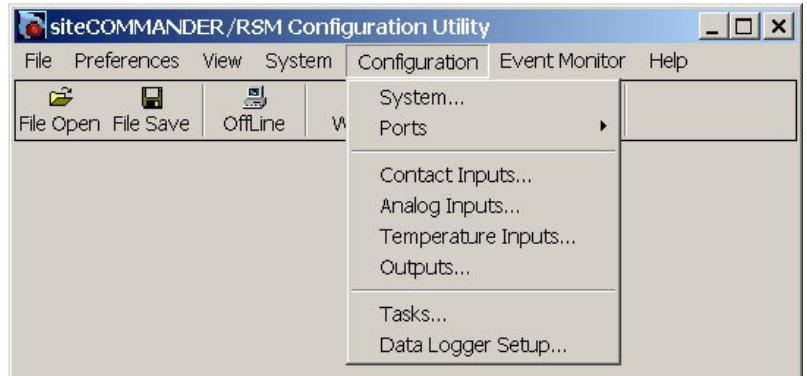


Figure 10 - Configuration Menu Bar Selection

Details on the Configuration menu bar item is explained in detail in Section 3 of this manual.

2.1.2.1. Event Monitor

Serial Port 1: This is not configurable in the siteRSM and will be grayed out

Serial Port 2: This is not configurable in the siteRSM and will be grayed out

FFSK: This is not configurable in the siteRSM and will be grayed out

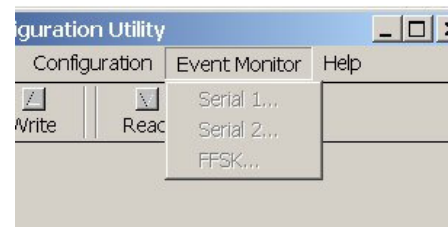


Figure 11 - System Menu Bar Selection

2.1.2.1. Help

About: Provides information regarding the version of SCCU that is currently installed.

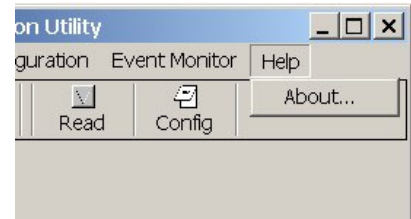


Figure 12 - Help Menu Bar Selection

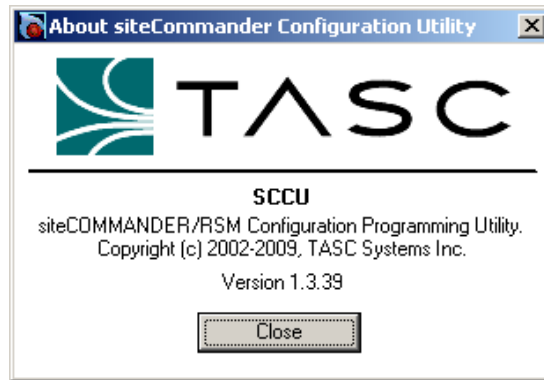


Figure 13 - Software Version Window

2.1.3. The SCCU Tool Bar

The Tool Bar provides one-click access to common functions.



Figure 14 - SCCU Tool Bar



File Open: Provides access to previously saved configuration files. Configuration files can be opened, loaded into SCCU and then *Write* to the siteRSM module.



File Save: Allows an SCCU memory configuration to be saved as a disk file. This button will be disabled (grayed out) when SCCU is first launched, since the SCCU memory will contain no useful information.



OffLine: Allows a defaulted configuration to be edited in the SCCU memory without being connected to a siteRSM module. The edited configuration may be saved to disk using the *File Save* button.



Write: Writes a SCCU memory configuration into the siteRSM module. The tool will be disabled (grayed out) when SCCU is first launched, since the SCCU memory will contain no useful information.



Read: Reads a siteRSM module's configuration into the SCCU. The PC communication port must first be selected and a cable connected to Serial Port 1 on the siteRSM module.



Config: This item provides a summary list of all analog inputs, digital inputs and digital outputs that are currently configured to report events in a single window. This window gives a quick snap shot on how the I/O is configured.

An example of this window is shown below:

Input/Output Configuration Display Summary													
Contact Inputs													
#	Input State	Input Mode	Hold Time	Local Output	Local Hold	Output Maps				Destination Station Maps			
01	N.C.	NORM	000	00	000	00, 00, 00, 00	00, 00, 00, 00	000, 000, 000, 000	000, 000, 000, 000				
02	N.C.	NORM	000	00	000	00, 00, 00, 00	00, 00, 00, 00	000, 000, 000, 000	000, 000, 000, 000				
03	N.C.	NORM	000	00	000	00, 00, 00, 00	00, 00, 00, 00	000, 000, 000, 000	000, 000, 000, 000				
04	N.C.	NORM	000	00	000	00, 00, 00, 00	00, 00, 00, 00	000, 000, 000, 000	000, 000, 000, 000				
05	N.O.	NORM	000	01	000	00, 00, 00, 00	00, 00, 00, 00	000, 000, 000, 000	000, 000, 000, 000				
06	N.O.	NORM	000	02	000	00, 00, 00, 00	00, 00, 00, 00	000, 000, 000, 000	000, 000, 000, 000				
07	N.O.	NORM	000	03	000	00, 00, 00, 00	00, 00, 00, 00	000, 000, 000, 000	000, 000, 000, 000				
Analog Inputs													
#	High Set(V)	High Hold	Local Out	Local Hold	Destination Station	Input Maps	Low Set(V)	Low Hold	Local Out	Local Hold	Destination Station	Input Maps	
01	2.56	001	00	001	000,000	00,00	0.00	001	00	001	000, 000	00, 00	
02	2.56	001	00	001	000,000	00,00	0.00	001	00	001	000, 000	00, 00	
03	2.56	001	00	001	000,000	00,00	0.00	001	00	001	000, 000	00, 00	
04	2.56	001	00	001	000,000	00,00	0.00	001	00	001	000, 000	00, 00	
05	2.56	001	00	001	000,000	00,00	0.00	001	00	001	000, 000	00, 00	
06	2.56	001	00	001	000,000	00,00	0.00	001	00	001	000, 000	00, 00	
07	2.56	001	00	001	000,000	00,00	0.00	001	00	001	000, 000	00, 00	
Outputs													
#	Output State	Output Mode	Pulse Width										
01	N.O.	LATCH	0										
02	N.O.	LATCH	0										
03	N.O.	LATCH	0										
04	N.O.	LATCH	0										
05	N.O.	LATCH	0										
06	N.O.	LATCH	0										
07	N.O.	LATCH	0										
													Exit

Figure 15 - Input/Output Configuration Display Summary

2.1.4 Tool Tips

Resting the mouse on a Tool Bar item will provide a tip as to what the function of the tool is.

3. CONFIGURATION

3.1. Connecting to the siteRSM

To access the siteRSM, click the *Read* button  from the Tool Bar menu.

3.1.1. Connect Local

All communications to the siteRSM will be made via the *Connect Local* button when using SCCU. The *Connect Remote* button is only used with the TASC siteCOMMANDER product.

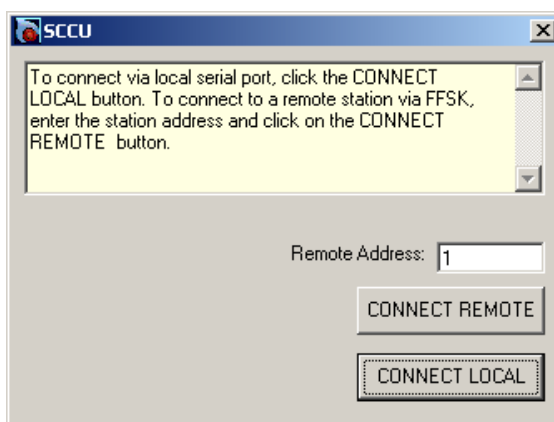


Figure 16 - Connection Window

A progress window will pop up and read the data from the siteRSM.

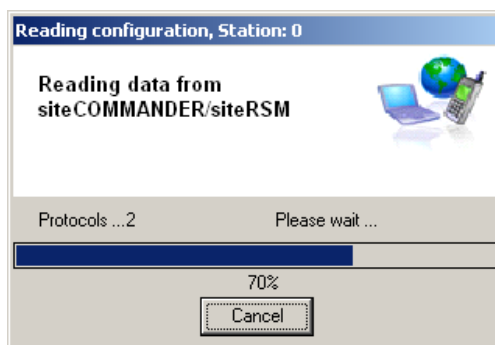


Figure 17 - Progress window

After performing a *Read* to the siteRSM device, the System Configuration window will pop up. System configuration items are those that affect global module operation.

Figure 18 - Typical System Configuration Form

Once connected to a siteRSM module, the station configuration is shown in the *Station Configuration* panel. Information on the siteRSM module firmware revision, any optional expansion modules that are fitted, and temperature channel sensors will be shown in this panel. The Station Configuration panel is an informational panel only.

The System Configuration window may also be accessed by selecting *System* in the *Configuration* drop down on the Menu Bar.

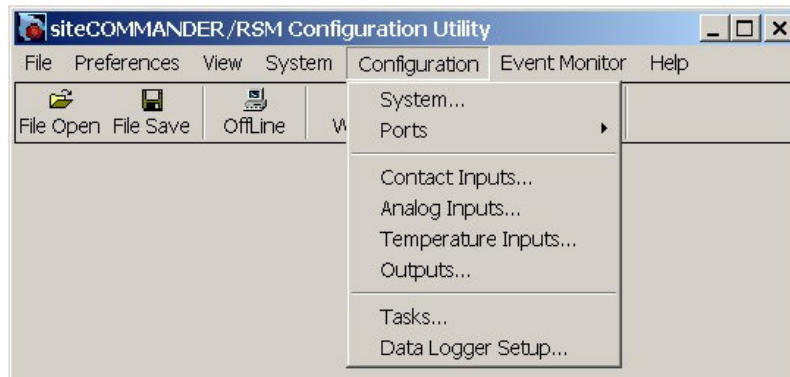


Figure 19 - System Configuration

Module Address: This is the unique address that is allocated to the module. The address may be set to between 1 and 254 inclusive. All siteRSM modules in a closed system require this unique address so that the siteVIEW Enterprise software can poll specific sites.

Module Mode: Only one mode is currently active in the siteRSM, Slave-Nomapping, the siteRSM will communicate directly via its serial interface to a PC running siteVIEW Enterprise 2.0 through various backhauls serially. This field is grayed out and cannot be changed.

Primary Transmission Path: This tool selects the primary path the module will use to communicate with other stations in the network. This is the transmission path that the module will use when sending event messages.

Startup Delay: This is hard coded into the firmware at 30sec. This allows other peripheral equipment in the station sufficient time to stabilize after power has been applied to the site. This field is grayed out and cannot be changed.

SERIAL PORT 1: This is Port 1 on the main module. This is a RS232 channel capable of 9600 baud only.

SERIAL PORT 2: This is Port 2 on the main module. This is a RS232 channel capable of 9600 baud only.

The factory default transmission medium is Serial Port 2.

Power Save Options: The siteRSM places itself into a low power mode when there is an inactivity of data on any of its serial ports. The fields are not configurable and are grayed out.

For more information on current consumption and low power mode refer to the siteRSM User Manual.

3.1.2. OK / Cancel

Click OK to keep the configuration changes.



Note: Variables are not written into the siteRSM's configuration memory until the Write button (located on the Tool Bar) is clicked.

To discard any changes, click the Cancel button.

3.2. Configuring the Communication Ports

The siteRSM has two main communication ports. They are both RS232 asynchronous serial ports.

The ports configuration menu is accessed by selecting *Ports* in the *Configuration* drop down menu.

Select the port to configure.

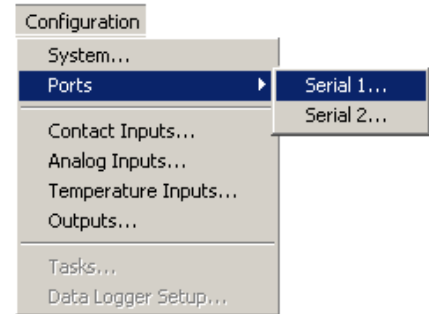


Figure 20 - Port Selection



Note: The actual port that will be used as the **PRIMARY** transmission medium is set via Transmission Path in the System window as shown in Section 3.1.1. - Figure 18.

A typical setup form for Serial Port 1 is shown below. The setup for Port 2 is identical.

Figure 21 - Serial Port 1 Configuration

Baud rate: The baud rate is hard coded in the firmware to communicate at 9600 and is subsequently grayed out.

Inter-byte Timeout (mSec): The maximum time a COM Port will wait between incoming data bytes before the incoming data is considered complete.

Range: 0 to 4000ms / Default 300ms

Retry Count: The retry count sets the amount of times the siteRSM module will re-send the status information in the event that siteVIEW doesn't acknowledge receipt of it.

Range: 1 to 99 / Default 5

Retry Packet Timeout (mSec): The maximum amount of time a COM Port will wait for a response after sending out a request.

Range: 100 to 20000ms / Default 500ms

3.2.1. OK / Cancel

Click OK to keep the configuration changes.



Note: Variables are not written into the siteRSM's configuration memory until the Write button (located on the Tool Bar) is clicked.

To discard any changes, click the Cancel button.

3.3. Configuring Contact Input Channels

There are two types of inputs on the siteRSM module. There are 8 digital inputs suitable for monitoring switches or contact closures. These are referred to as 'Contact' input channels and may be ON or OFF.

The module also has a group of 8 analog input channels suitable for monitoring various voltages. Detail on configuring the analog inputs can be found in Section 3.4.

From the drop down Menu Bar, select *Configuration / Contact Inputs*. This menu option is only available when OffLine Edit mode is activated or after configuration has been Read from the module using the Read button from the Tool Bar.

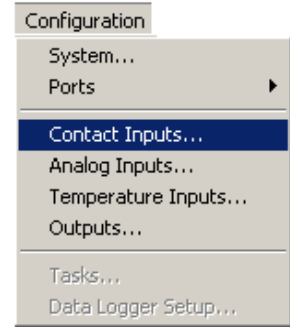


Figure 22 - Selecting Contact Inputs

The Contact Input Configuration window will pop up when selected (shown below) which allows the inputs to be configured.

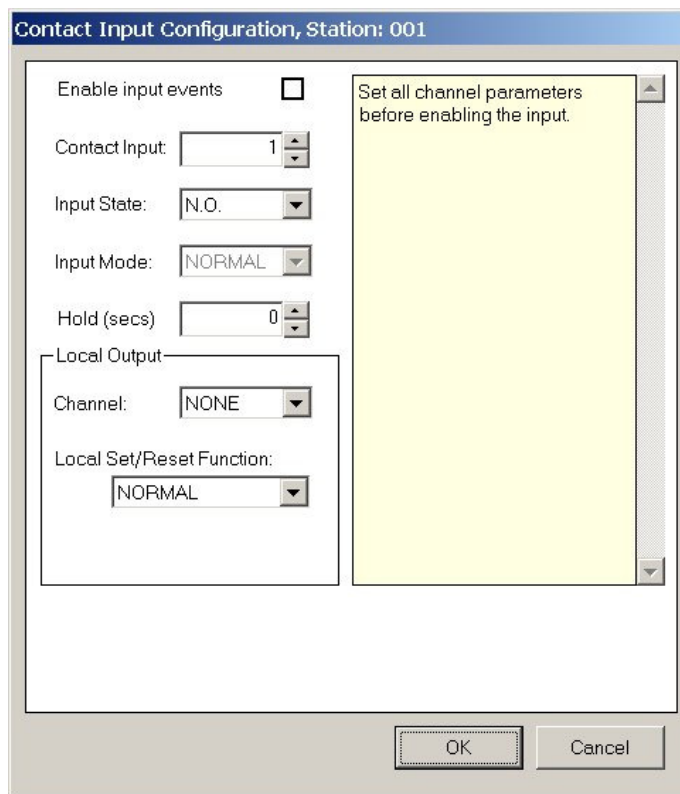


Figure 23 - Contact Input Channel Configuration

3.3.1. Contact Input Configuration

Enable Input Events: It is recommended that all channel parameters be set before enabling an input. Once a channel is configured for the application, it is enabled by checking this box. An enabled channel will report a status change event to the TASC siteVIEW Enterprise Central Database immediately after the validated event occurs. If a channel is not enabled, the status of the channel will still be updated if polled by the siteVIEW Enterprise software.

Contact Input: The desired input channel for configuration is selected via the Contact Input up/down arrows.

Input State: This is the OFF or normal state of the input signal. The input signal can be either N.C. (normally closed or low level input) or N.O. (normally open or high level input).

Default: N.O.

Input Mode: Factory set to NORMAL operation. Not user accessible.

Hold (secs): If desired, each input channel can be associated with a hold timer. A change in input event status will not be sent on the network until the input event has been present for the time specified in the Hold time control. If the event is to be instantaneous, set this control to zero (0). The hold time is specified in seconds. The hold timer can be used to ignore short signal impulses by specifying a hold time of greater than the duration of the impulse signal.

Range: 0 to 255 seconds / Default 0 seconds

3.3.2. Local Output

An input event can be mapped to change the state of a local output independently of whether the channel is enabled to generate network event status messages or not. An input signal can be configured to turn on a local output in the presence of an input signal or turn off in the absence of an input signal.

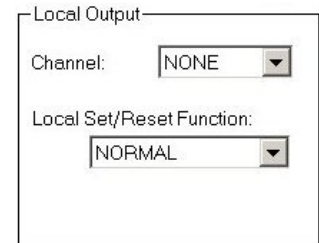


Figure 24 - Input to Local Output Mapping

Channel: The input event may be configured to affect the status of a local output (turn it on or off). The *Local Output* drop down box shows the total number of outputs that can be controlled in this configuration. To use this feature, scroll and select the desired output channel. As the module makes no checks for double assignments, you must make your own determination if you want multiple inputs to affect a common output.

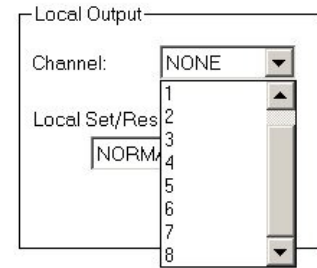


Figure 25 - Local Output Channel Selection

Local Set/Reset Function: Multiple inputs may directly set and reset local outputs via this function. An input channel may be configured to set (turn on) or reset (turn off) a 'common' local output channel. Thus one input channel may be configured to set and another input channel configured to reset a common output.

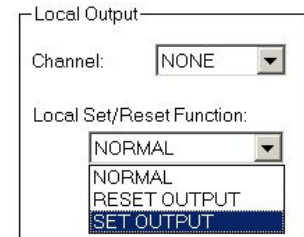


Figure 26 - Output Channel Selection

If the specified output is to be set (turn on) by this input channels signal then select *SET OUTPUT*. If the specified output is to be reset (turn off) by this input channels signal then select *RESET OUTPUT*. There is no restriction on the number of input signals that can set or reset a local output channel. For example two input channel signals may set a common output and one may reset the common output. Any combination may be used allowing for incredible flexibility.

The input channel signal must be present for at least 200milliseconds to activate the set/reset function.

For normal channel operation without set/reset, set this control to *NORMAL*.

Default: NORMAL.

3.3.3. OK / Cancel

Click OK to keep the configuration changes.



Note: Variables are not written into the siteRSM's configuration memory until the Write button (located on the Tool Bar) is clicked.

To discard any changes, click the Cancel button.

3.4. Configuring Analog Input Channels

Each of the siteRSM modules has 8 analog input channels that can be configured to transmit a channel status event when the channel voltage exceeds a high threshold set point and when a channel voltage falls below a low threshold set point.

From the drop down menu select *Configuration / Analog Inputs*. This menu option is only available when OffLine Edit mode is activated or after configuration has been read from the module.

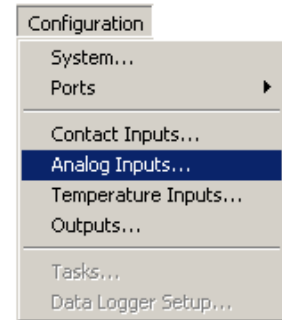


Figure 27 - Analog Input Selection

The Analog Input Configuration window will pop up when selected (typical screen shown below) which allows the inputs to be configured.

 A screenshot of the 'Analog Input Configuration, Station: 001' window. The window contains several configuration fields:

- Analog Input:** A dropdown menu showing '1'.
- Enable input events:** An unchecked checkbox.
- Range:** A dropdown menu showing '0-5.00V'.
- User X:** A dropdown menu showing '2 X'.
- Sensor:** A dropdown menu showing 'Normal'.
- High Set Point:** A section containing 'Voltage: 5.00' and 'Local output: NONE'.
- Low Set Point:** A section containing 'Voltage: 0.00' and 'Local output: NONE'.
- Input Qualification:** A section containing 'Input channel qualifier: NONE'.
- Hold Time:** A section containing 'Input Hold And Output Delay Time: 1'.

 A yellow warning box on the right side of the window states: 'Analog inputs require the proper configuration of hardware jumpers to match the 0-5.00V, 0-25.0V, and USER ranges as selected.' At the bottom right are 'OK' and 'Cancel' buttons.

Figure 28 - Analog Input Channel Configuration

3.4.1. Analog Input Configuration

Analog Input: The desired analog input for configuration is selected via the Analog Input up/down arrows.

Enable Input Events: It is recommended that all channel parameters be set before enabling an input. Once a channel is configured for the application, it is enabled by checking this box. When the analog level present on the input crosses the predetermined High or Low Set Points, an enabled channel will report this status change event to the TASC siteVIEW Enterprise Central Database immediately after the validated event occurs. If a channel is not enabled, the status of the channel will still be updated if polled by the siteVIEW Enterprise software.

Range: The siteRSM module has three fixed input voltage ranges to choose from and is selected via the drop down box. Each range selection will present a slightly different set of configuration options.

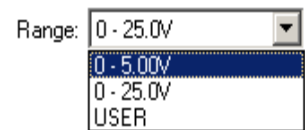


Figure 29 - Analog Input Range Selection



Note: All analog inputs require the proper configuration of hardware jumpers to set the 0-5.00V, 0-25.0V and USER ranges. Please refer to the siteRSM User Manual for details.

User X: This field is only available once the USER Range has been selected. An analog input can be configured to monitor a wide range of analog inputs using the USER range. Once selected, available multipliers are:

- 2X (0 to 10V DC)
- 4X (0 to 20V DC)
- 10X (0 to 50V DC)
- 20X (0 to 100V DC)

The hardware must match the configuration to net the desired result. Please refer to the siteRSM User Manual for further details on conditioning the input for specific user ranges.

Sensor: This field is currently only available once the 0-5.00V Range has been selected. TASC Systems designs and produces sensors that are easy to use and calibrated with the siteRSM. Once selected, the Analog Input can interpret the data appropriately to display the correct corresponding value. When a particular sensor is selected, a relevant set of fields will become visible.

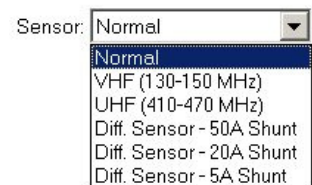


Figure 30 - Analog Input Sensor Selection

If a desired sensor is not listed, then NORMAL must be chosen and the data must be interpreted externally.

3.4.1.1. VHF (130-150MHz) and UHF (410-470MHz) Sensor Selections

The analog inputs may be configured to work with the TASC Bi-directional Power Sensor (BPS) to read forward and reflected power for the VHF (130MHz-150MHz) or UHF (410-470 MHz) frequency bands. Please refer to the TASC BPS User Manual for a detailed description and installation instructions.

Offset: When these sensors are selected, this field will become available.



Figure 31 - BPS Sensor Offset Field

The *Offset* field allows for a negative or positive variable to be applied to the *Adjusted* reading in the High and Low Set Point values.

Range: -7.75dBm to +8dBm / Default 0dBm

Adjusted: This field becomes available only when a specific calibrated sensor is selected. The interpreted value of the analog 0-5V DC input as calibrated will be displayed as the set point is being adjusted. The example in Figure 32 shows the 2.12V as being interpreted as 60.0dBm.



Figure 32 - Adjusted Field within the Set Points

3.4.1.2. Diff. Sensor – 50A, 30A, 20A, and 5A Shunt Sensor Selections

The analog inputs may be configured to work with the TASC Differential Sensor with a variety of shunt values. The shunt is intended to be placed in-line with a power source so that the Differential sensor may make current measurements. Please refer to the TASC Differential Sensor User Manual for a detailed description and installation instructions.

Offset: When these sensors are selected, this field will become available.



Figure 33 - Diff. Sensor Offset Field

The *Offset* field allows for a negative or positive variable to be applied to the *Adjusted* reading in the High and Low Set Point values.

50A/30A Range: -7.75A to +8A / Default 0A

20A Range: -3.1A to +3.2A / Default 0A

5A Range: -0.775A to +0.8A / Default 0A

Adjusted: This field becomes available only when a specific calibrated sensor is selected. The interpreted value of the analog 0-5V DC input as calibrated will be displayed as the set point is being adjusted. The example in Figure 34 shows the 4.30V as being interpreted as 18.00A.

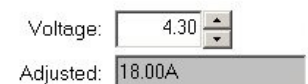


Figure 34 - Adjusted Field within the Set Points

3.4.1.3. AC Voltage Sensor Selection

The analog inputs may be configured to work with an AC Voltage sensor. The sensor is intended to be placed in parallel with the AC power on site. Please refer to the TASC AC Voltage Sensor User Manual for a detailed description and installation instructions

Offset: When the sensor is selected, this field will become available.

The *Offset* field allows for a negative or positive variable to be applied to the *Adjusted* reading in the High and Low Set Point values.

Range: -3.1VAC to +3.2VAC / Default 0VAC

Adjusted: This field becomes available only when a specific calibrated sensor is selected. The interpreted value of the analog 0-5V DC input as calibrated will be displayed as the set point is being adjusted. The example in Figure 36 shows the 3.81V as being interpreted as 120.0VAC.

Figure 35 – AC Voltage Sensor Offset Field

Figure 36 - Adjusted Field within the Set Points

3.4.2. High & Low Set Points

Voltage: The *High Set Point* and *Low Set Point* voltage values are directly entered in the format xx.xx, or selected via the up/down arrows. If the value entered is outside the currently selected input range, SCCU will prompt to re-enter the correct value.

When the Analog input voltage crosses above the *High Set Point*, the siteRSM will recognize this to be an event. When the input voltage returns back below the *High Set Point*, another event will be generated. Similarly, when the input voltage crosses below the *Low Set Point*, the siteRSM will recognize this to be an event. When the input voltage returns back above the *Low Set Point*, another event will be generated.

Local Output: Each of the set points may be configured to switch a local output independent of the system event message function. The *Local Output* drop down box shows the total number of outputs that can be controlled in this configuration. If you wish to use this feature, scroll and select the desired output channel.

3.4.3. Input Qualification

Each Analog input can be qualified by a Digital input. The Analog input will only respond to status changes and recognize the change as a valid event when the selected Digital Input is active.

3.4.4. Input Hold and Output Delay Time

The Analog input channel control incorporates an input and output hold timer. The delay is from the time that the event is initially recognized and validated. It also provides a delay to activate the Local output if assigned to the input. The output delay counts down after the event has been validated.

Range: 1 to 255 seconds / Default 1 second

3.4.5. OK / Cancel

Click OK to keep the configuration changes.



Note: Variables are not written into the siteRSM's configuration memory until the Write button is clicked.

To discard any changes, click the Cancel button.

3.5. Configuring Temperature Input Channels

The siteRSM has a built-in eight channel temperature bus supporting the TASC Temperature Sensor. Each of the temperature channels can be configured to transmit a status event when the channel temperature exceeds a high threshold set point and when a channel temperature falls below a low threshold set point.

From the drop down menu select *Configuration / Temperature Inputs*. This menu option is only available when OffLine Edit mode is activated or after configuration has been Read from the siteRSM.

The Temperature Input Configuration window will pop up when selected (typical screen shown below).

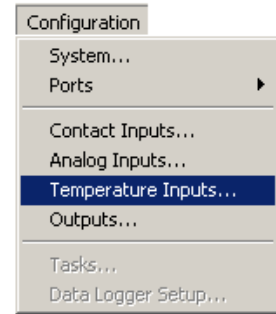


Figure 37 - Temperature Channel Configuration

Figure 38 - Temperature Sensor Channel Selection

Temp Input: The desired temperature channel is selected via the Temp Input up/down arrows. Please refer to the siteRSM User Manual for further detail on installing and configuring the TASC Temperature Sensor.

Enable Input Events: It is recommended that all channel parameters be set before enabling an input. Once a channel is configured for the application, it is enabled by checking this box. When the temperature crosses the predetermined High or Low Set Points, an enabled channel will report this status change event to the TASC siteVIEW Enterprise Central Database immediately after the validated event occurs. If a channel is not enabled, the status of the channel will still be updated if polled by the siteVIEW Enterprise software.

3.5.1. High & Low Set Points

Temperature: The *High Set Point* and *Low Set Point* voltage values are directly entered in the format xxx.x or selected via the up/down arrows. If the value entered is outside the currently selected input range, SCCU will prompt to re-enter the correct value. The optional temperature sensors have a range of -55°C to $+125^{\circ}\text{C}$.

When the temperature crosses above the *High Set Point*, the siteRSM will recognize this to be an event. When the temperature returns back below the *High Set Point*, another event will be generated. Similarly, when the temperature crosses below the *Low Set Point*, the siteRSM will recognize this to be an event. When the temperature returns back above the *Low Set Point*, another event will be generated.

Local Output: Each of the set points may be configured to switch a local output independent of the system event message function. The *Local Output* drop down box shows the total number of outputs that can be controlled in this configuration. If you wish to use this feature, scroll and select the desired output channel.

3.5.2. Input Qualification

Each temperature input can be qualified by a Digital input. The Analog input will only respond to status changes and recognize the change as a valid event when the selected Digital Input is active.

3.5.3. Input Hold and Output Delay Time

The temperature channel incorporates an input and output hold timer. The delay is from the time that the event is initially recognized and validated. It also provides a delay to activate the Local output if assigned to the input. The output delay counts down after the temperature event has been validated.

Range: 1 to 255 seconds / Default 1 second

3.5.4. OK / Cancel

Click OK to keep the configuration changes.



Note: Variables are not written into the siteRSM's configuration memory until the Write button (located on the Tool Bar) is clicked.

To discard any changes, click the Cancel button.

3.6. Configuring Outputs

Each of the siteRSM modules has 8 Digital Output channels that can be configured to turn ON and OFF remotely or automatically.

From the main menu select *Configuration / Outputs*. This menu option is only available when OffLine mode is activated or after configuration has been Read from the siteRSM. This allows the output channel to be set up.

The Output Configuration window will pop up when selected (typical screen shown below).

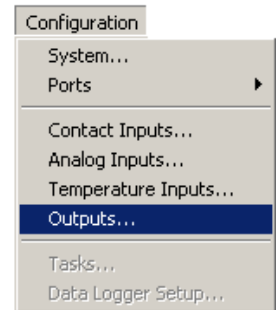


Figure 39 - Output Channel Selection

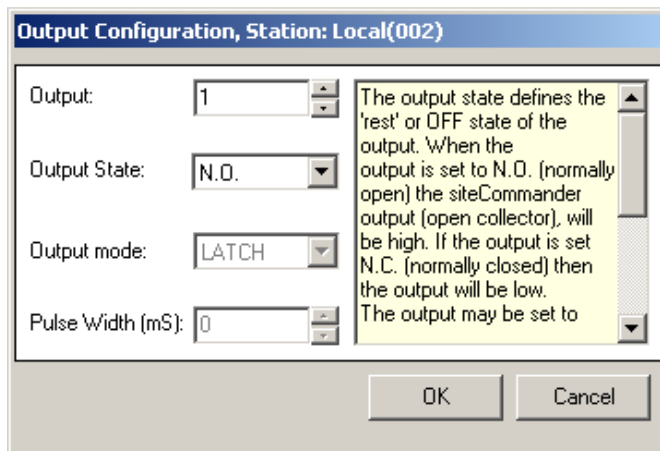


Figure 40 - Temperature Sensor Channel Selection

Output: The desired Output channel for configuration is selected via the *Output* up/down arrows.

Output State: This is the physical 'rest' or OFF state for the channel. Each output channel may be configured to be N.C. (normally closed – output level is low), or N.O. (normally open – output level is open circuit).



Note: The output is an “open-drain FET” style driver and is designed to pull down some external circuit such as a relay, load resistor or other device to common electrical ground.

The 'rest' or OFF state will also be adopted when the module powers up. The logical state of an output is determined after the configuration memory is read during power up. Irrespective of the output state setting, the internal logical state of the output is set to the OFF state after power up.

The Output State is completely independent to that configured for an input channel. Combined with channel mapping, Output State configuration allows for signal inversion and greater flexibility.

Output Mode: Factory set to LATCH operation. Not user accessible.

Pulse Width: Factory set to 0 milliseconds. Not user accessible.

3.6.1. OK / Cancel

Click OK to keep the configuration changes.



Note: Variables are not written into the siteRSM's configuration memory until the Write button (located on the Tool Bar) is clicked.

To discard any changes, click the Cancel button.

3.7. Saving a Configuration to Disk

A siteRSM configuration can be saved to disk for later recall, backup, and replicating.



To save a configuration to disk, click on the *File Save* icon on the Tool bar. You will see a familiar Save As window. Enter the filename and path where you want to save your configuration file to.

siteRSM configuration files have the CCF file type. The File Save window is also available when in OffLine edit mode.

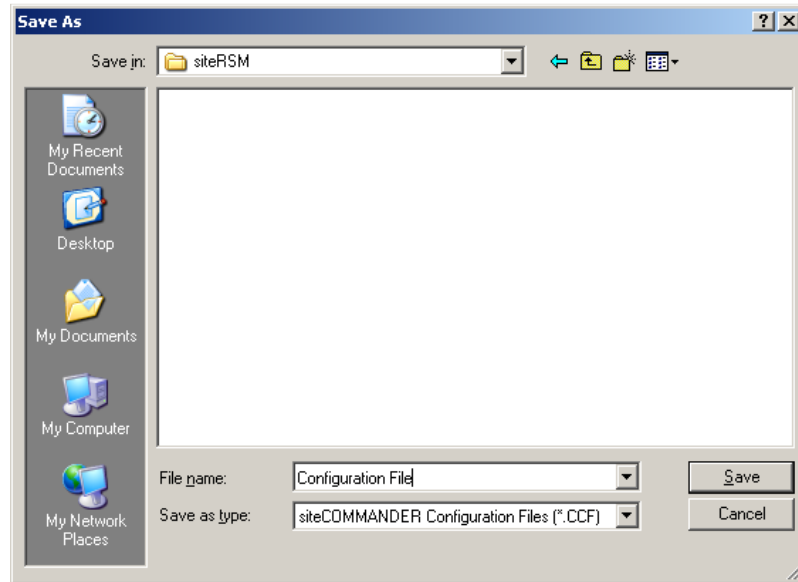


Figure 41 - File Name and Path Selection

3.8. Loading a Configuration from Disk



To load a configuration from disk, click on the *File Open* icon from the Tool Bar. A familiar Open window will pop up. Select the filename and path where the configuration file is stored.

siteRSM configuration files have the CCF file type.

The configuration tab strip is shown at the bottom of the SCCU window once the file has been loaded. The toolbar items File Save, Print and Upload buttons are also enabled after an initial File Open. At this time the configuration may be edited and saved back with the same or as a different filename, or be uploaded into a module, by clicking on the Upload button.



Figure 42 - Configuration Tab Strip



Note: Do not edit or modify the CCF files that are saved/stored. Doing so may corrupt the data and SCCU will not be able to read it.

4. SETTING UP AND TESTING A NETWORK

Once all siteRSM modules are configured, it is advisable to test out the initial 'network' on the bench before field deployment. The SCCU will be used to 'tune' and test the system.



Note: Do not attempt to configure or test a station using the primary transmission path without first configuring all modules via local serial cable connection. If you have not pre-configured all the modules in the network then stop now and do so.

Do not attempt to configure or test a station using the primary transmission path without first configuring all modules via local serial cable connection. If you have not pre-configured all the modules in the network then stop now and do so.

Ensure that each of the modules has a unique address. If using analog radio via serial interface, equip each of the radios with a suitable dummy load or antenna. Also ensure there is an adequate level of RF signal at each of the radios.

4.1. View Status Window

SCCU provides a simple status monitor for checking the current contact input, analog, temperature and output channel conditions as an aid when configuring the module. To access the monitor, click *Current Status* from the Menu Bar under *View*.

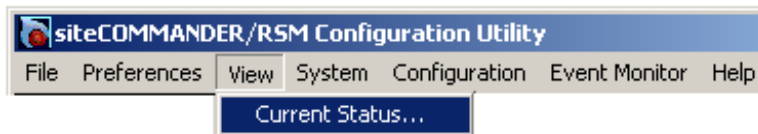


Figure 43 - SCCU Menu Selection

4.1.1. Digital Input Status

The Status window shows the logical input status of groups of eight channels at any one time. When the window opens the Input channel status is shown. A typical input channel status window is shown below.

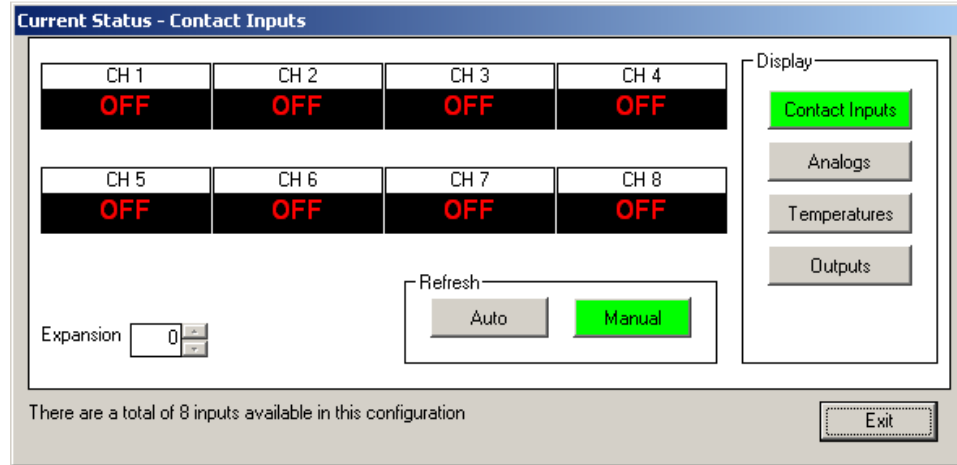


Figure 44 - Current Status Digital Input Window



Note: This is the logical state of the inputs – these may not represent the physical state of the inputs, which will be dependent on the N.O. / N.C. input state setting configured by the user. Refer to Section 3.3.

Expansion: Use the up/down arrows to change the current status view for optional Digital Input expansion boards. For more information please reference the Digital Input Expansion Board Installation Guide.

Refresh: Manual refresh allows for the user to poll the status of the inputs as needed. Auto refresh performs an automatic poll once per second.

4.1.2. Analog Input Status

To show the current Analog Input channel values, click on the *Analogs* button.

The button will change to green when activated, providing instant feedback as to what function is being displayed. A typical analog channel status window is shown below.

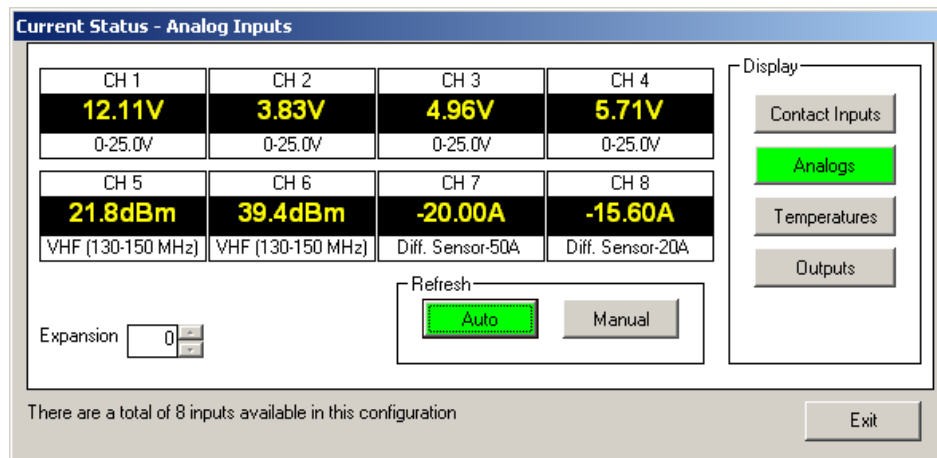


Figure 45 - Current Status Analog Channels Window

SCCU automatically adjusts the analog reading for the particular channel based on the analog range that has been configured for the channel and stored in the siteRSM memory.

If you have changed the range control in the analog setup window and not yet written the new configuration back to the siteRSM the new setup will not yet be shown in this Analog Input channel status.



Note: The ranges selected are not activated until the new configuration is written back to the siteRSM module. Refer to Section 3.4

Expansion: Use the up/down arrows to change the current status view for optional Analog Input expansion boards. For more information please reference the Analog Input Expansion Board Installation Guide.

Refresh: Manual refresh allows for the user to poll the status of the inputs as needed. Auto refresh performs an automatic poll once per second.

4.1.3. Temperature Input Channel Status

To show the current temperature channel values, click on the *Temperatures* button.

The button will change to green when activated, providing instant feedback as to what function is being displayed. The siteRSM supports up to eight temperature sensors on the temperature bus. Sensor channels that aren't present are represented by dashes (---) in the display. A typical temperature channel status window is shown below.

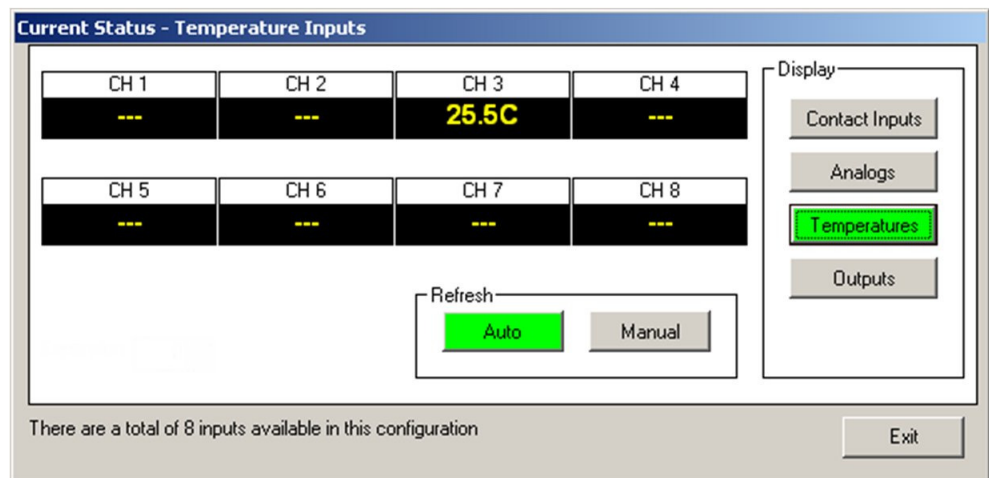


Figure 46 - Current Status Temperature Inputs Window

Refresh: Manual refresh allows for the user to poll the status of the inputs as needed. Auto refresh performs an automatic poll once per second.

4.1.4. Output Channel Status

To show the current logical state of the output channels, click on the *Outputs* button.

The button will change to green when activated, providing instant feedback as to what function is being displayed. A typical output channel status window is shown below.

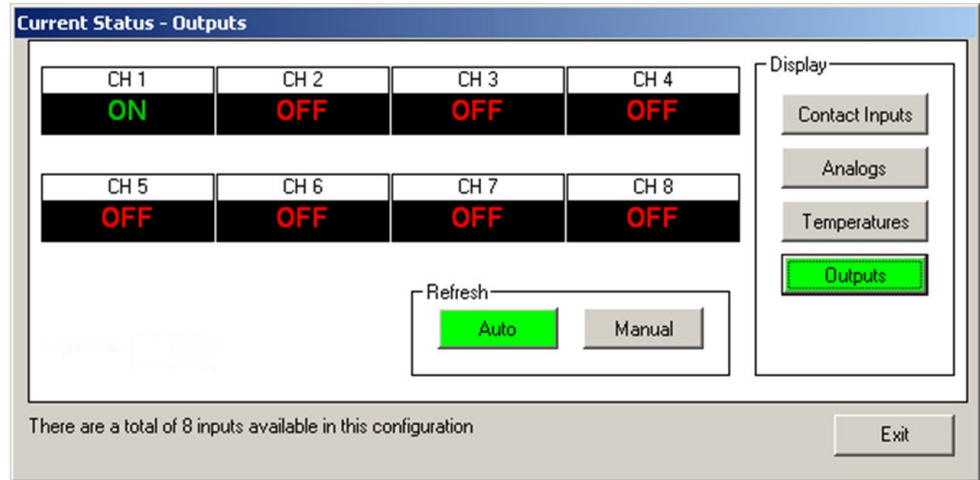


Figure 47 - Output Status Window & Refresh

Refresh: Manual refresh allows for the user to poll the statuses of the output as needed. Auto refresh performs a poll once per second.

To change the state of an output channel, click once in the Status window for the desired Output as shown below.

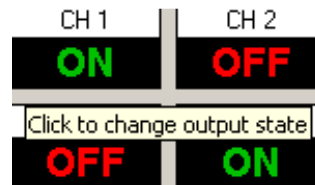


Figure 48 - Typical Output Channel Status Window

4.2. Preparing an OffLine Configuration



An 'OffLine' configuration may also be prepared without being physically connected to the siteRSM module.

The OffLine configuration mode is useful for getting familiar with the many unique features of the siteRSM system without physically having a unit. To do this, click on the 'OffLine' edit icon in the Tool Bar.

A popup window will appear asking which hardware platform to be configured.



Figure 49 - Typical Output Channel Status Window

OffLine Device Type: Select siteRSM

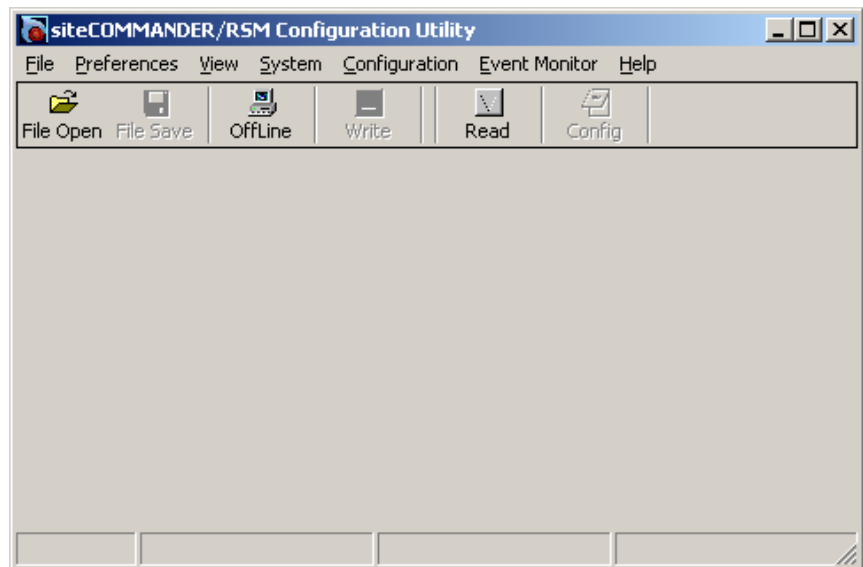


Figure 50 - OffLine Configuration Window

When the OffLine mode is selected, the menu item Configuration is no longer grayed out.



Note: Since there may be no physical hardware connected to SCCU in OffLine mode, SCCU does not limit access to features and functionality. When creating a configuration file for future uploading, ensure that the configuration matches the hardware prior to uploading into a device.

All configurable items are assessable as if connected locally to a device. Refer to Section 3 of this manual for detailed description of each configurable item.

To get back online, select *Read* from the Tool Bar once connected to a physical device.

4.3. Making Changes in a Live Network

When changing configurations, due consideration must be given to avoid erratic operation when changing parameters. Whether the re-configuration is being carried out remotely or via cable connection at the site, changes in configuration will invoke a system shutdown and auto restart. This may make the site unavailable for a few seconds.

4.4. Resetting the Non-Volatile RAM (NVR)

If required, a module's configuration may be reset to that when shipped. The menu option in SCCU, *System / Reset System* NVR may be used to reset the module's NVR. The user is prompted to confirm this action.

The action can only be carried out when physically connected to the local serial port. This function is ignored if attempted over the air, as it would be possible to reconfigure the module address during operation and likely result in the module or station being unreachable.

The NVR may also be reset via switch SW1-4. Refer to the siteRSM User Manual for the module hardware description.

If the Reset NVR switch (SW1-4) is in the 'reset' position (ON) during power up, all NVR variables will reset to that of the factory settings. All LED indicators (green, amber & red) will flash together indicating that the variables have been reset.

The switch must be placed into the 'OFF' position to continue and restore normal operation. Do not remove power at this time.



Note: All indicators will continue to flash until the switch (SW1-4) is placed back into the 'OFF' position. No communication with siteRSM will be possible until this is done. This is to prevent the technician from inadvertently leaving the switch in the 'ON' position.

4.5. Upgrading the Application Firmware

The siteRSM operating firmware (application) may be upgraded in the field. From time to time new features and amendments may be issued. This section describes the process of performing an application upgrade to the siteRSM operating firmware. Operating firmware cannot be upgraded remotely via an IP link or radio and must be carried out via direct cable connection between the PC and the siteRSM.

siteRSM firmware files have the following file naming convention:

tascscsl_X-X-X-X_production.rom

X-X-X-X denotes the software version number.

Be sure that all switches in the Configuration 'DIP' type switch pack SW1, are in the OFF position before starting the upgrade. Refer to the siteRSM User Manual for the module hardware description.

It is also a good idea to first save the module's configuration memory using the SCCU utility *File / Save* option.

Connect a serial cable between the PC serial port and Serial Port 1 on the siteRSM module. Launch SCCU. Click on *System / Flash Upload* from the Menu Bar.

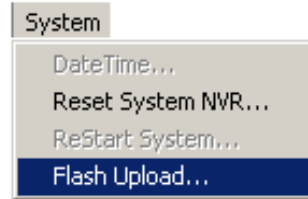


Figure 51 - System Flash Upload Menu

The SCCU Utility will prompt to confirm that you wish to carry out this action.

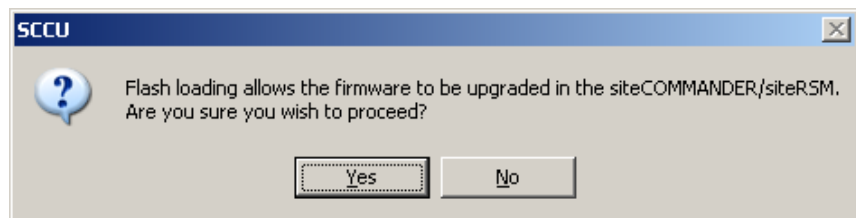


Figure 52 - Firmware Upload Acknowledgement

Select Yes to continue. The file open window is shown. Select the required firmware flash file.

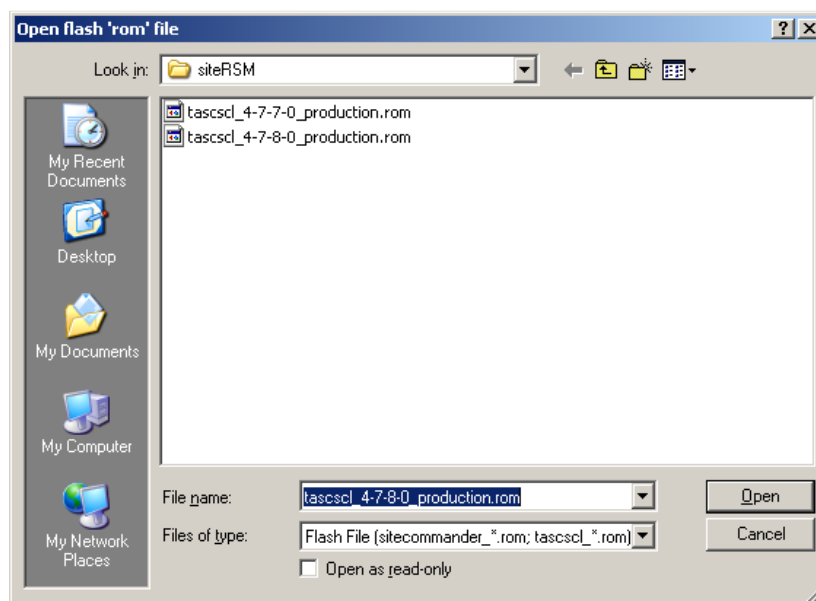


Figure 53 - Open Flash ROM File Window

The flash load may be also aborted at this point by clicking on *CANCEL*.

The file is read and during flash loading a progress window will appear. During the flash upload both the red and green module LED indicators will flash together.

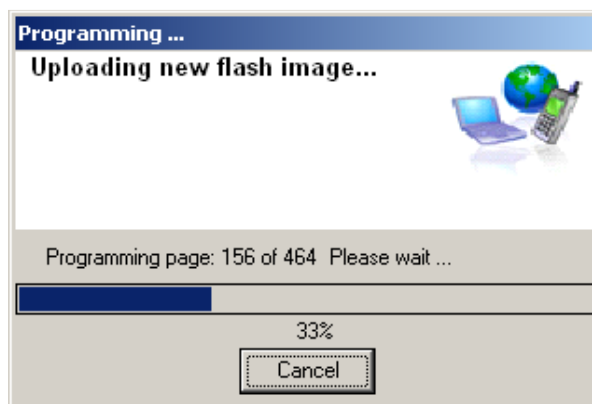


Figure 54 - Flash Loading Progress Bar Window

4.5.1. Errors During Flash Loading

Errors during uploading are normally due to the incorrect file being used or the file contains errors.

Incorrect file header

If the following message shows after selecting the file, then the file is not a siteRSM flash file. Locate and choose the correct file for the siteRSM product.

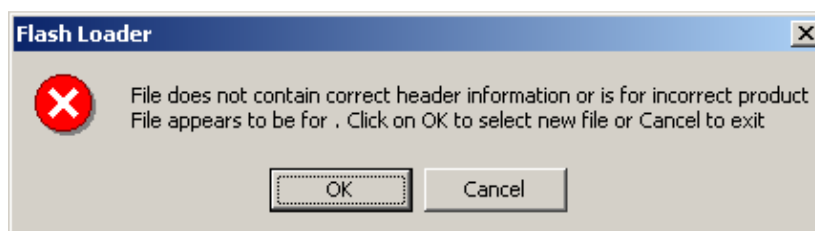


Figure 55 - Sample of Incorrect Flash File

Bad Checksum

The file may be damaged. If you do not have a back up file, contact TASC Systems Inc. for a replacement file.

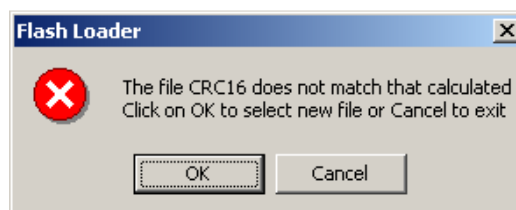


Figure 56 - Sample of Damaged File Message