DPS Telecom

"Your Partners in Network Alarm Monitoring"

SiteMON IP G2

USER MANUAL

Visit our website at www.dpstelecom.com for the latest PDF manual and FAQs.

May 21, 2012 **D-OC-UM109.21100** **Firmware Version 2..0B**

Revision History

May 21, 2012	Updated specifications to include camera resolution
February 8, 2012	Added Firmware upgrade section
Sept. 21, 2010	Added Part Num. to Shipping List
Apr. 22, 2010	Added info on new camera settings (digital pan and adv settings)
Oct. 7, 2009	Initial release of D-OC-UM09A.07100.

Notice

The material in this manual is for information purposes and is subject to change without notice. DPS Telecom shall not be liable for errors contained herein or consequential damages in connection with the furnishing, performance, or use of this manual.

Contents

Visit our website at www.dpstelecom.com for the latest PDF manual and FAQs

1 SiteMon IP Overview

The SiteMON IP G2 is part RTU, part camera - offering everything you need to take remote site security to the next level.

The SiteMON IP G2 — Achieve *Visual* Remote Site Visibility
With the SiteMON IP G2, you don't have to wonder what's happening at your sites. You can see for yourself.

Added security for co-location sites can now be provided using the SiteMON IP G2. The SiteMON IP G2 reports directly to your T/Mon or PC and delivers high-quality image viewing of your remote site. This provides a great advantage for co-location sites where chances for interference with your equipment are particularly high.

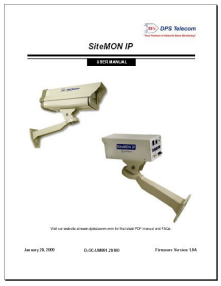
With multiple vendors co-locating equipment at each site, and each vendor having its own support staff, opportunities for interference with your equipment increase, malicious or not. Simply put, the more people with access to your equipment, the more security issues arise. No longer will network managers be forced to sit and wonder what is happening at their remote sites - hoping everything is fine. Now they'll be able to view live images from their sites and equipment with T/GFX, or cache them on a local PC for viewing later. The SiteMON IP G2 is also valuable for walking technicians through repairs from the comfort of your central office.

With the SiteMON IP G2, you can:
- Capture images 6X faster than the previous model
- NEW! Digital pan for viewing live images
- Mount the camera at harsh weather sites with the wide-temp chassis design
- Enhance security both inside and out with the option for an exterior camera casing
- View live images in T/GFX or cache them on your PC for playback later
- New! Store up to 63 images locally or 10,000 using T/Mon's image receiver job
- Detect fault conditions (like motion sensors and doors) with 2 local alarm inputs
- Operate devices remotely (like turning on lights and unlock doors) with 2 local relay outputs
- Visually confirm who has arrived on-site before granting them access
- Track changing environmental conditions with internal and external temperature sensors
- Power peripherals (like motion sensors) with 12 or 24VDC power
- Use the integrated web browser to change configuration settings and monitor from any PC on the network

2 Shipping List

While unpacking the SiteMON IP G2, please make sure that all of the following items are included. If some parts are missing, or if you ever need to order new parts, please refer to the part numbers listed and call DPS Telecom at **(800) 622-3314**.

SiteMON IP G2
D-PK-CAMRA



SiteMON IP G2 User Manual D-OC-UM109.21100

SiteMON IP G2 Resource CD
(includes manuals, MIBs, and software)

One Ethernet Cable 14 ft.
D-PR-923-10A-14

One 1/2-Amp GMT Fuse

One Large Power Connector Plug

Two 3 Pin Analog Connector
2-820-00813-02

DB9M-RJ11 Cable
D-PR-1011-10A-06

One Small Power Connector Plug for Sensor Output

Camera Mounting Arm

One 4 Pin Connector

Optional Items

Two 1/2-Amp GMT Accessory Fuses

External Temperature Sensor
D-PR-984-10A-10

Outdoor Enclosure for SiteMON IP G2

3 Specifications

Discrete Alarm Inputs:	2
Temperature Sensors:	2 (1 internal, 1 external)
Control Relays:	2 Form C
Maximum Voltage:	60 VDC/120 VAC
Maximum Current:	1 Amp, AC/DC
Protocols:	SNMP, TELNET, DCP, HTTP
Interfaces:	1 RJ45 10BaseT Ethernet port 1 RJ11 Craft port connector 1 stereo jack connector (for external temperature sensor) 1 4-pin connector for alarm inputs 1 2-pin connector for 12V or 24V power output for sensors 2 3-pin connectors for controls
Camera Resolution:	3 megapixel
Local Image Capacity:	63 Images
Dimensions:	6.959" D x 3.122" W x 2.750" H (without outdoor enclosure) 13" D x 5.5" W x 4.250" H (with outdoor enclosure)
Weight:	1.168 lbs. (Without mounting arm or enclosure) 3.824 lbs. (With mounting arm and enclosure)
Mounting:	Wall mounted
Power Input:	–48VDC (–40 to –70 VDC), AC power options also available
Power Output:	12 VDC (standard) or 24VDC power output for peripherals
Current Draw:	100 mA (at -48V) 500 mA (Using heater)
Fuse:	1/2 amp GMT
Visual Interface:	6 LEDs
Operating Temp:	-22 to 149 F (-30 to 65 C)
Operating Humidity:	0%–95% noncondensing
RoHS:	5 of 6

4 Hardware Installation

4.1 Tools Needed

To install the SiteMON IP G2, you'll need the following tools:

Phillips No. 2 Screwdriver

Small Standard No. 2 Screwdriver

PC (for initial configuration via TTY interface)

4.2 Mounting

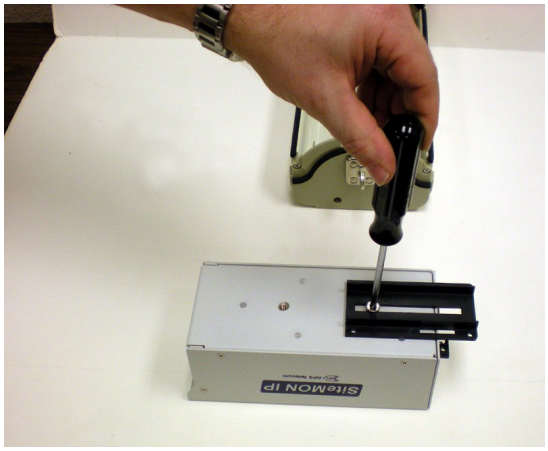
Use the provided screws to wall mount the SiteMON IP G2. Both screws are used to mount the arm to the wall.

The SiteMON IP G2 is wall-mounted.

4.3 Installing the Outdoor Enclosure

The optional metal enclosure is a hard casing used for mounting the SiteMON IP G2 outdoors. To install the camera inside the enclosure, perform the following steps:

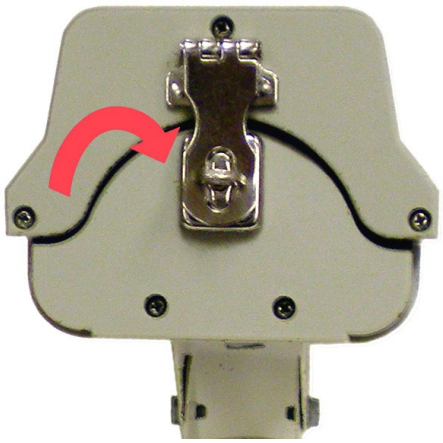
1. Remove (unsnap) the black bracket from the inside of the enclosure.
2. Using a Phillips No.2 screwdriver and the large screw provided, attach the black bracket to the underside of the camera.



The SiteMON IP G2 inside the enclosure.

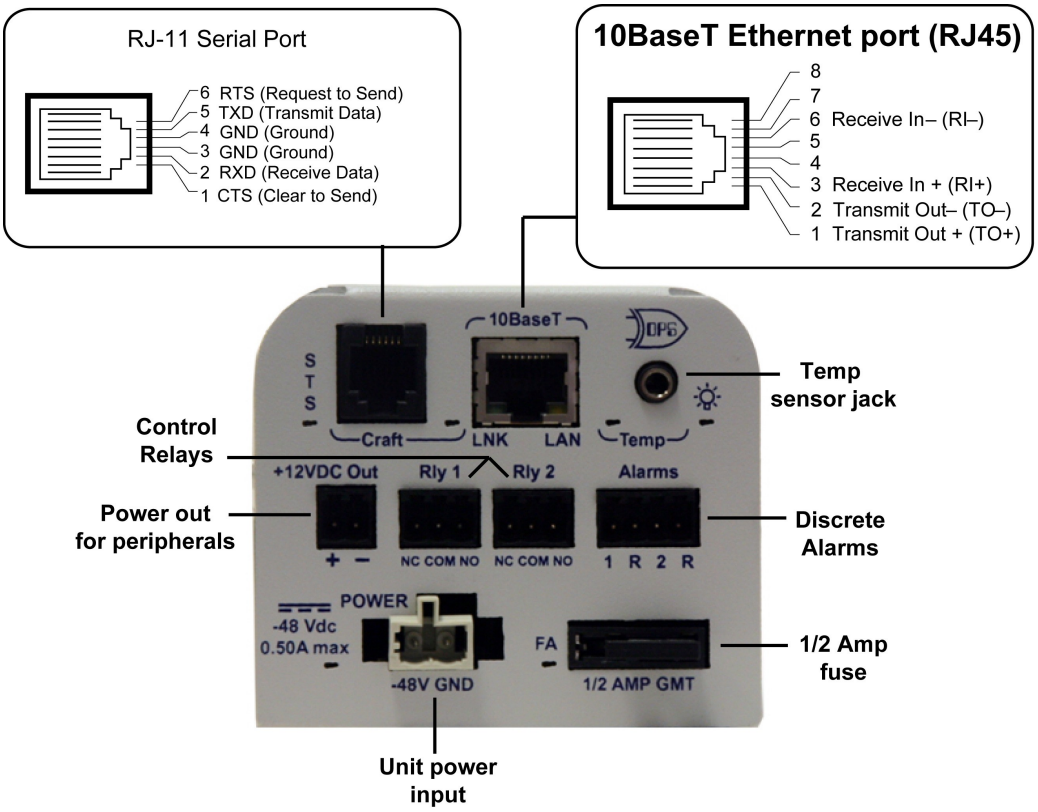
3. Snap the camera inside the enclosure and slide it along the track to the desired position.
4. Secure the SiteMON in place by screwing in the 2 small screws provided.
5. Turn the metal lock on the back of the enclosure to close the lid. You may also attach a padlock to prevent others from opening the enclosure.

The SiteMON IP G2 inside the enclosure.



The SiteMON IP G2 inside the enclosure.

5 SiteMON IP G2 Back Panel



5.1 Power Connection

The SiteMON IP G2 has one screw terminal barrier plug power connectors, located on the back panel of the camera.

Before you connect a power supply to the SiteMON IP G2, test the voltage of your power supply:

- Connect the black common lead of a voltmeter to the ground terminal of the battery, and connect the red lead of the voltmeter to the battery's –48 VDC terminal. The voltmeter should read **between –43 and –53 VDC**. If the reading is outside this range, test the power supply.

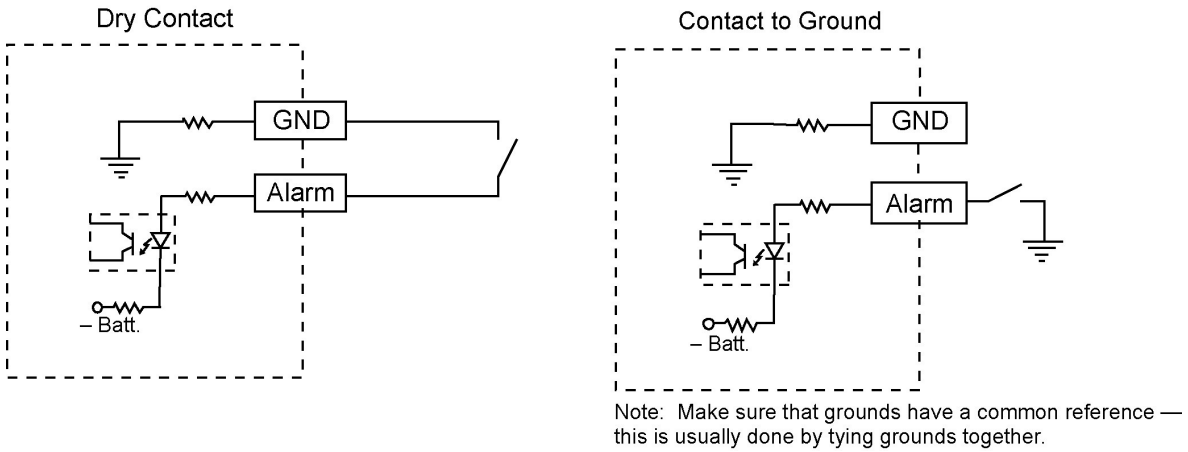
To connect the SiteMON IP G2 to a power supply, follow these steps:

1. Remove the fuse from the back of the camera. **Do not reinsert the fuse until all connections to the unit have been made.**
2. Remove the power connector plug. Note that the plug can be inserted into the power connector only one way — this ensures that the barrier plug can only be reinserted with the correct polarity. Note that the **–48V terminal is on the left** and the **GND terminal is on the right**.
3. Insert a **battery ground** into the power connector plug's **right terminal** and tighten the screw; then insert a **–48 VDC** line to the plug's **left terminal** and tighten its screw.
4. Push the power connector plug firmly back into the power connector. If the power feed is connected correctly, the LED by the connector will light **GREEN**. If the polarity of the power feed is reversed, the LED will not illuminate.
5. Reinsert the fuse to power the SiteMON IP G2. The back panel LEDs will flash **RED** and **GREEN**.

5.2 LAN Connection

The SiteMON IP G2 has one 10BaseT Ethernet port. The 10BaseT port requires a standard RJ45 Ethernet cable. If the IP connection is OK, the LNK LED on the back of the camera will light **solid green** when the cable is connected.

5.3 Discrete Alarms



Discrete alarm points can connect as a dry contact or a contact to ground

The SiteMON IP G2 features 2 discrete alarm inputs — also called digital inputs or contact closures. Discrete alarms are either activated or inactive, so they're typically used to monitor on/off conditions like power outages, equipment failures, door alarms and so on.

The SiteMON IP G2's discrete alarm points are single-lead signals referenced to ground. The ground side of each alarm point is internally wired to ground, so alarm points can connect either as a dry contact or a contact to ground.

In a **dry contact alarm**, the alarm lead brings a contact to the ground lead, activating the alarm. In a **contact to ground alarm**, a single wire brings a contact to an external ground, activating the alarm. *See the diagram above*. You can reverse the polarity of each individual discrete alarm point, so that the alarm is activated when the contact is open.

5.4 Control Relay Outputs

SiteMON IP G2's two control relay outputs are designed to control external devices. You can use both controls to turn on lights, unlock doors, etc. The two 3-pin connectors on the back of the camera are used to terminate the controls.

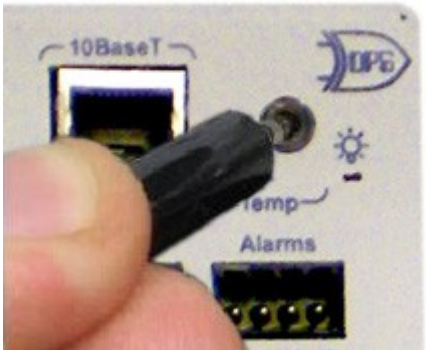
5.5 +12 or +24VDC Sensor Power Supply

The SiteMON IP G2 features a power circuit used to provide fused +12V sensor power. You can use this power supply to operate auxiliary devices, such as motion sensors. The two-pin connector for the sensor power supply is a barrier plug connector similar to the main power connector.

To power an external sensor, follow these steps:

1. Remove the 1/2 amp fuse from the back panel of the SiteMON IP G2. **Do not reinsert the fuse until all power connections to the external sensor have been made.**
2. Remove the power connector plug from the sensor power supply. Note that the plug can be inserted into the power connector only one way — this ensures that the barrier plug can only be reinserted with the correct polarity. Note that the **positive terminal is on the left** and the **negative terminal is on the right**.
3. Connect the appropriate leads to each of the plug's screw terminals and tighten the screws.
4. Push the power connector plug firmly back into the sensor power supply connector.
5. Reinsert the fuse to power the external sensor.

5.6 Internal and External Temperature Sensors



Stereo jack input on the back of the SiteMON IP G2

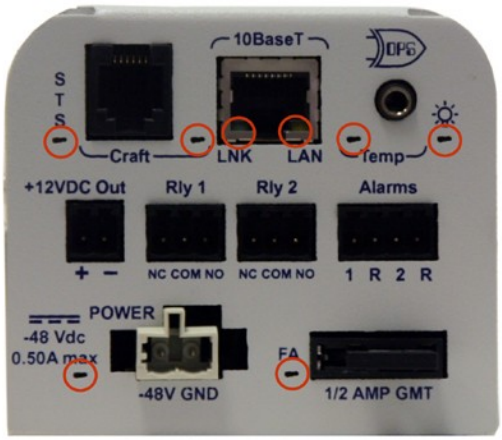
The external temperature sensor

The SiteMON IP G2 features both an internal and external temperature sensor. The external sensor is used to monitor the ambient temperature. Both of the temperature sensors measures a range of 32° F to 140° F (0° C to 60° C) within an accuracy of ± 1°.

The external temperature sensor probe provides external temperature readings by plugging the sensor into the Temp port (stereo jack connector) on the back of the camera. *External temperature sensor sold separately.*

6 SiteMON IP's LEDs

The front of the SiteMON IP G2 shows the Status LED



The back of the SiteMON IP G2 shows the Status, Craft, LAN, Temp, Power, and Fuse Alarm LEDs.

The SiteMON IP G2's LEDs indicate communication and alarm reporting status. LED status messages are described below in Table A.

	LED	Status	Description
Front Panel	Camera	Blink Green	Status OK
		Blink Red	Capturing trigger images
Back Panel	STS	Blink Green	Application is running on the SiteMON.
Craft Port	Craft	Blink Green	Transmit over craft port
		Blink Red	Receive over craft port
10BaseT LAN	LAN	Blink Green	Transmit and receive activity over Ethernet port.
	LNK	Solid Green	Ethernet link OK.
Temperature Sensors	Temp	Solid Red	Indicates a temperature alarm.
		Flashing Red	BootLoader is running (only on power up).
		Off	No temperature alarms present.
Light bulb icon	Power	Solid Green	Power is connected to the SiteMON.
		Off	Power is disconnected from the SiteMON.
Fuse Alarm	FA	Solid Red	Fuse failure.

Front panel LED Status message descriptions

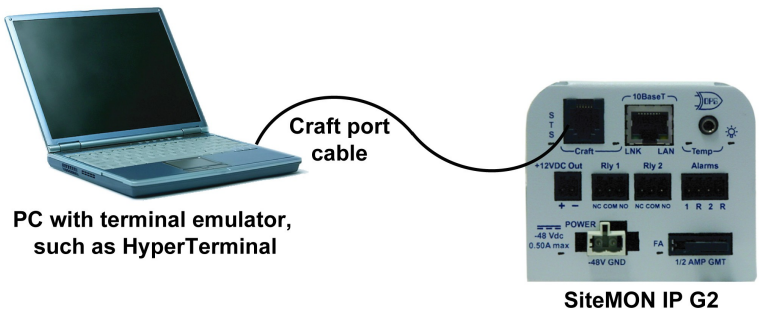
7 Configuring the SiteMON IP

The SiteMON IP G2 must be provisioned with log-on username and passwords, alarm descriptions, port parameters, control descriptions, and other system information. You can provision the SiteMON IP G2 using either the TTY interface and integrated Web Browser.

To access the SiteMON IP G2 via LAN, you must first make a temporary connection to the SiteMON IP G2 and assign it an IP address on your network. For more information, see the next section "Connecting to the SiteMON IP G2."

8 Connecting to the SiteMON IP

8.1 ... via Craft Port



The simplest way to connect to the SiteMON IP G2 is over a physical cable connection between your PC's COM port and the camera's craft port.

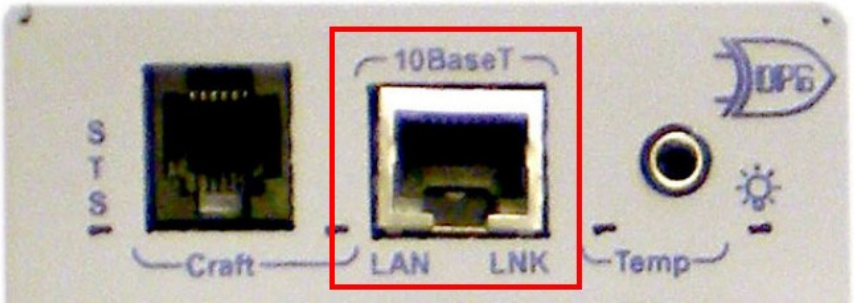
Note: You must be connected via craft port to use the TTY interface. You only need a connection to the unit to read or write configuration to its NVRAM. Use the craft port cable provided with the camera to make a craft port connection.

Select the following COM port options:
• Bits per second: **115200**
• Data bits: **8**
• Parity: **None**
• Stop bits: **1**
• Flow control: **None**

Press Enter to begin the TTY session. The default username is "admin" and the password is "dpstelecom". Note: The factory-default username and password is all lowercase.

You can perform basic configuration via the craft port - but if you like, you can connect via the craft port just to configure the SiteMON's IP address, and then do the rest of your configuration via a LAN connection.

8.2 ... via LAN



SiteMON IP G2's 10BaseT Ethernet port

You can also connect to the SiteMON IP G2 over a LAN connection. This is a very convenient way to provision multiple cameras at multiple locations.

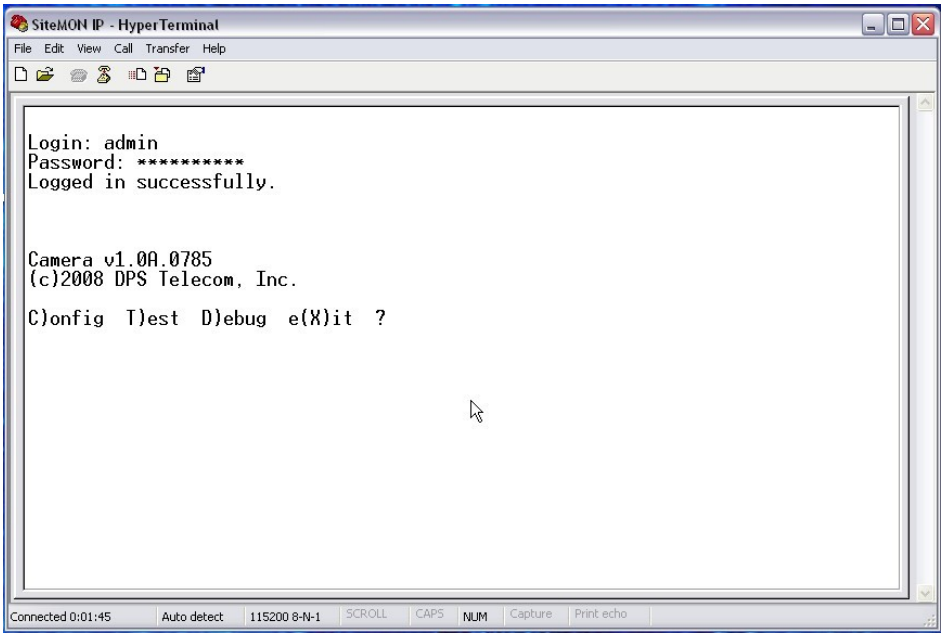
To connect to the NetGuardian via LAN, all you need is the unit's IP address (Default IP address is 192.168.1.100).

If you have physical access to the SiteMON IP G2, the easiest thing to do is connect to the camera through the craft port and then assign it an IP address. Then you can complete the rest of the unit configuration over a remote LAN connection. For instructions, see the previous section, "Connecting to the SiteMON IP G2 via Craft Port."

If you DON'T have physical access to the SiteMON IP G2, you can make a LAN connection to the unit by temporarily changing your PC's IP address and subnet mask to match the camera's factory default IP settings. Follow these steps:

1. Look up your PC's current IP address and subnet mask, and write this information down.
2. Reset your PC's IP address to **192.168.1.200**.
3. Reset your PC's subnet mask to **255.255.0.0**. You may have to reboot your PC to apply your changes.
4. Once the IP address and subnet mask of your computer coincide with the SiteMON IP G2's, you can access the camera via a Telnet session or via Web browser by using the default IP address of **192.168.1.100**.
5. Provision the SiteMON IP G2 with the appropriate information, then change your computer's IP address and subnet mask back to their original settings.

9 TTY Interface



The TTY interface initial configuration screen

The TTY interface is the camera's built-in provision tool for basic configuration. Use the TTY interface to configure the ethernet port settings.

To use the TTY interface with the SiteMON, all you need is any PC with terminal emulation software (i.e. Hyperterminal) and a connection to the SiteMON IP G2. This can be a direct connection to the camera's back craft port or a remote connection via Telnet.

Some initial software configuration must be performed before you can use a remote connection to the SiteMON IP G2. For Telnet, connect to the camera's IP address at port 2002 to access the configuration menus after initial LAN setup. **Telnet sessions are established at port 2002, not the standard Telnet port** as an added security measure.

NOTE: The TTY default username is "admin" and the password is "dpstelecom".

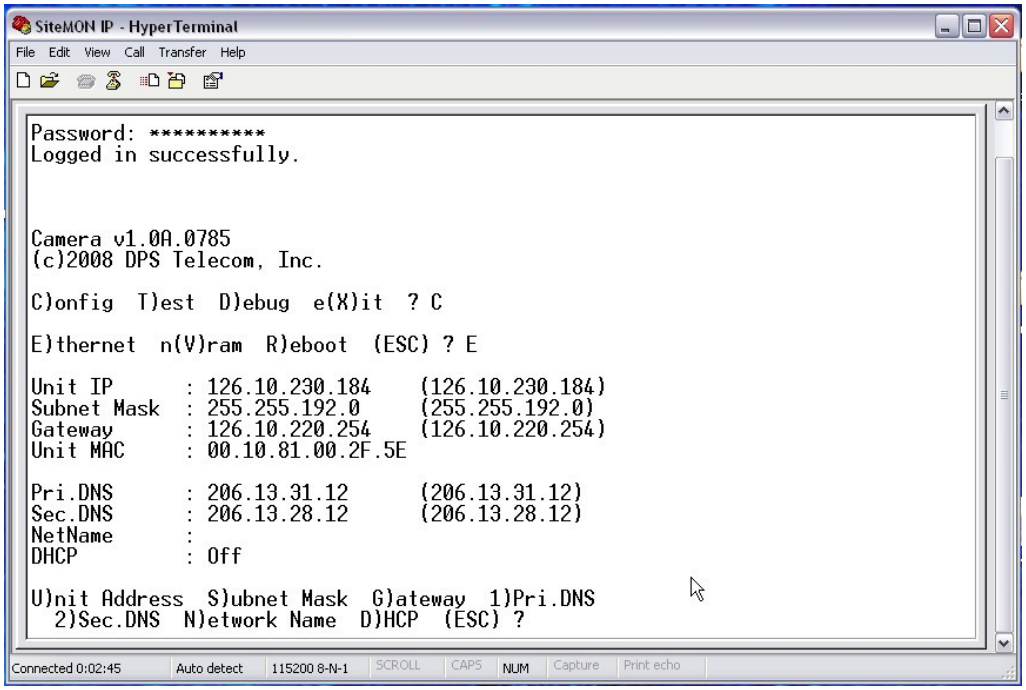
9.1 Menu Shortcut Keys

The letters before or enclosed in parentheses ( ) are menu shortcut keys. Press the shortcut key to access that option. Pressing the ESC key will always bring you back to the previous level. Entries are not case sensitive.

9.2 Unit Configuration

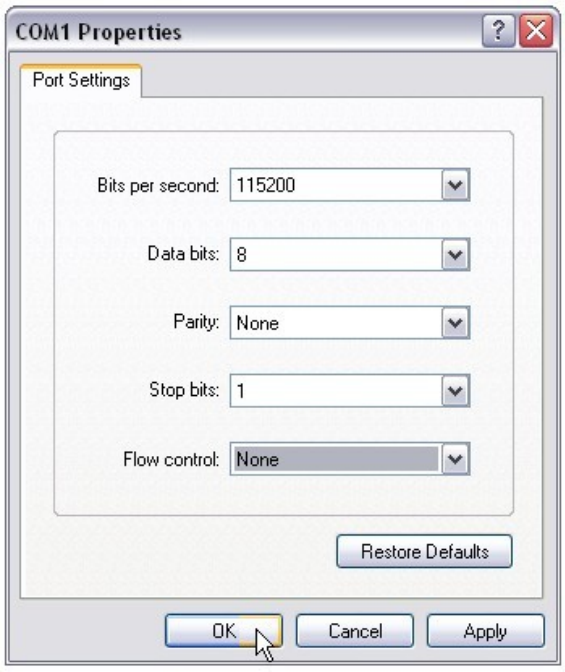
9.2.1 Ethernet Port Setup

The SiteMON IP G2 must be assigned an IP address before you will be able to connect via LAN using a Telnet client or a Web browser. To connect via LAN, the minimum configuration requires setup of the IP address and subnet mask. Follow the instructions below to configure SiteMON's IP address, subnet mask, default gateway, DNS servers, and DCHP option.



Configure the Ethernet port parameters

1. Connect using Hyperterminal @ 115200, 8, N, 1.



2. Hit enter and the SiteMON IP G2 will respond with "Username."
   Note: If you receive no password prompt then check the port you are using on your PC and make sure you are using the provided cable.
3. Type the default username "admin" and press Enter.
4. Enter in the default password "dpstelecom," then press Enter. **Note**: DPS strongly recommends changing these defaults. The factory default username and password are all lowercase. User-defined username and passwords are case-sensitive.
5. The camera's main menu will appear.
6. Type C for the C)onfig menu.
7. Type E for E)thernet port settings.
8. Configure the unit address, subnet mask, and default gateway.
9. ESC to the main menu.
10. When asked if you would like to save changes, type Y (yes).
11. R)eboot to save the new configuration to the SiteMON IP G2.
12. Now you can connect to the camera via LAN and use the Web Browser to complete the configuration.

10 SiteMON IP Web Browser

The SiteMON IP G2 features a built-in Web Browser Interface that allows you to manage alarms, configure the camera's alarms, and view live images through the Internet / Intranet. You can quickly set up alarm point descriptions, view alarm status, issue controls, and more. The SiteMON IP G2 supports Internet Explorer versions 4.0 and above, Netscape Navigator versions 4.7 and above, as well as most commonly used browsers.

10.1 Unit Configuration

10.1.1 Logging on to the SiteMON IP

For Web Interface functionality, the unit must first be configured with some basic network information. If this step has not been done, refer to the hardware portion of this user manual for initial software configuration setup. NOTE: The maximum number of users allowed to simultaneously access the SiteMON IP G2 via Web is four.

1. To connect to the SiteMON IP G2 from your Web browser, you must know its IP address or domain name if it has been registered with your internal DNS. Enter it in the address bar of your Web browser. It may be helpful to bookmark the logon page to simplify access.
2. After connecting to the unit's IP address, enter your username and password, then click Submit. **Note:** The factory default username is "*admin*" and the password is "*dpstelecom*".
3. In the left frame there is a blue **Monitor** menu button and an **Edit** menu button. Most of the software configuration will occur in the **Edit** menu. The following sections provide detailed information regarding these functions.

Enter your password to enter the SiteMON IP G2 Web Browser Interface

10.1.2 Entering System Settings

Use the following steps to define your SiteMON IP G2 system information. Username and password entries are case-sensitive.

1. From the **Edit** menu choose **System.**
2. Enter the designated username and password for your SiteMON IP G2.*
3. Enter the location or address of the SiteMON IP G2.
4. Set the contact by entering the telephone number or other contact information for the person or group responsible for this SiteMON IP G2.
6. Click **Save** to save your system information settings.

Configure the system information by selecting the System screen from the Edit menu

Field	Description
Name	User-definable field used to name this SiteMON IP G2.
Location	User-definable field used to designate a location for this SiteMON IP G2.
Contact	Contact telephone number for the person responsible for this SiteMON IP G2.
User	Used to change the username for logging onto the unit
Password	Used to change the password for logging onto the unit
DCP Unit ID	User definable ID number for this SiteMON IP G2 (DCP Address).
DCP Port	Enter the DCP Port for this SiteMON IP G2. (Over UDP)

10.1.3 Changing the Logon Password

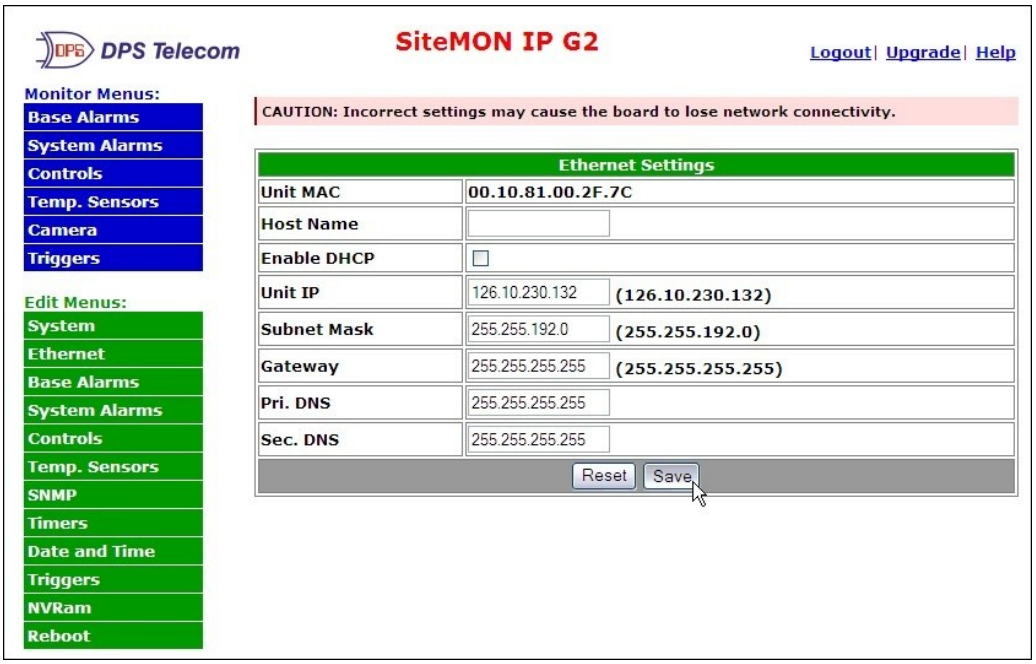
The password can be configured from the **Edit** menu > **System** screen. The minimum password length is four characters; however, DPS recommends setting the minimum password length to at least five characters. **Note:** The factory default username and password is *dpstelecom*. DPS Telecom strongly recommends that the default password be changed.

Use the following steps to change the logon password:

1. From the **Edit** menu select **System**.
3. Enter your new password in the **Password** field.
4. Click the **Save** button.

10.1.4 Configuring Ethernet Settings

The **Edit** menu > **Ethernet** screen allows you to define and configure ethernet settings.



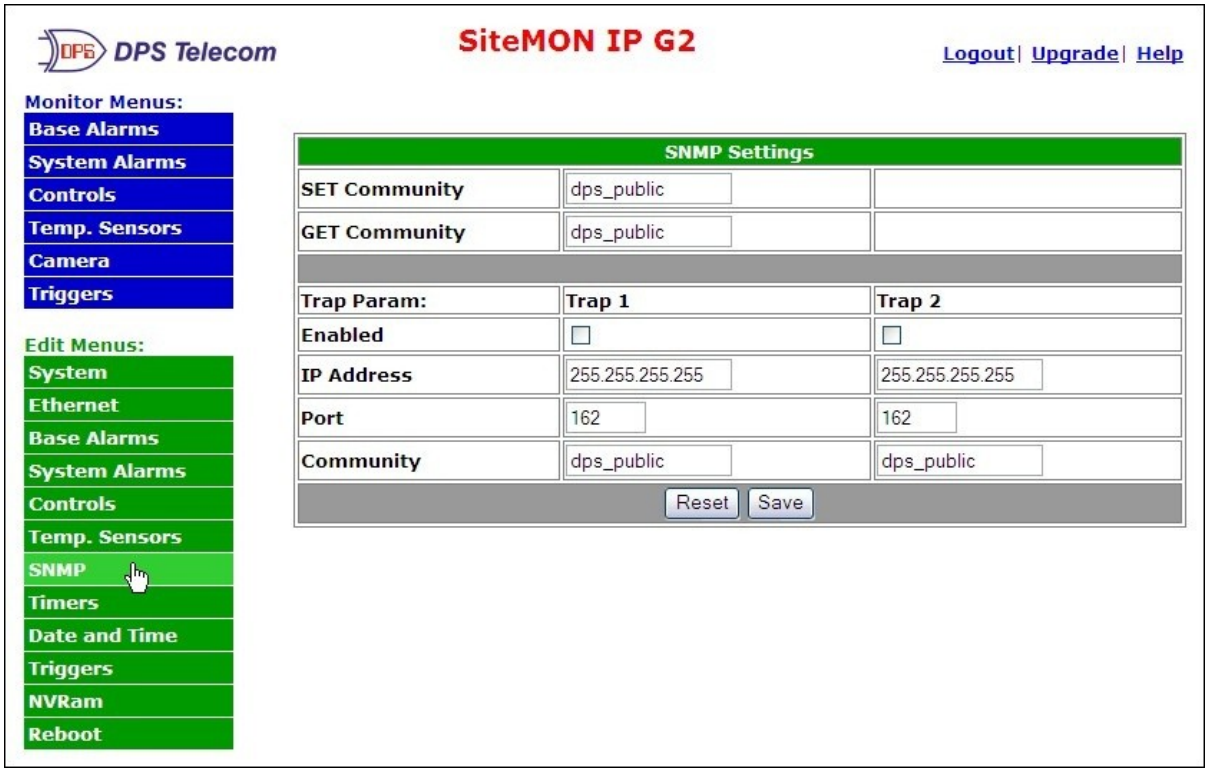
Configuring ethernet settings

Field	Description
Unit MAC	Hardware address of the NetGuardian (not editable, for reference only)
Host Name	Used typically with DHCP to add a Host Name entry to DHCP server
Enable DHCP	Used to the Dynamic Host Connection Protocol on/off
Unit IP	IP address of the NetGuardian
Subnet Mask	A road sign to the SiteMON IP G2 telling it whether your packets should stay on your local network or be forwarded somewhere else on a wide area network
Gateway	An important parameter if you are on a network that is connected to a wide area network. It tells the NetGuardian which machine is the gateway out of your local network. Set to 255.255.255.255 if not using.
Pri. DNS	Primary IP address of the domain name server. Set to 255.255.255.255 if not using.
Sec. DNS	Secondary IP address of the domain name server. Set to 255.255.255.255 if not using.

10.1.5 Setting Up SNMP

Use the following steps to define your SiteMON IP G2 system information:

1. From the **Edit** menu choose **SNMP.**
2. Enter the community name for SNMP SET requests in the **SET Community** field.
3. Enter the community name for SNMP GET requests in the **GET Community** field.
4. Click the check boxes to enable **Traps 1 and 2**.
5. Define the **IP Address** of your trap manager. Set to 255.255.255.255 if not using.
6. Define the UDP **Port** set by the SNMP manager to receive traps; usually 162.
7. Enter the **Community** name for SNMP TRAPs.
8. Click **Save** after entering your system information settings.



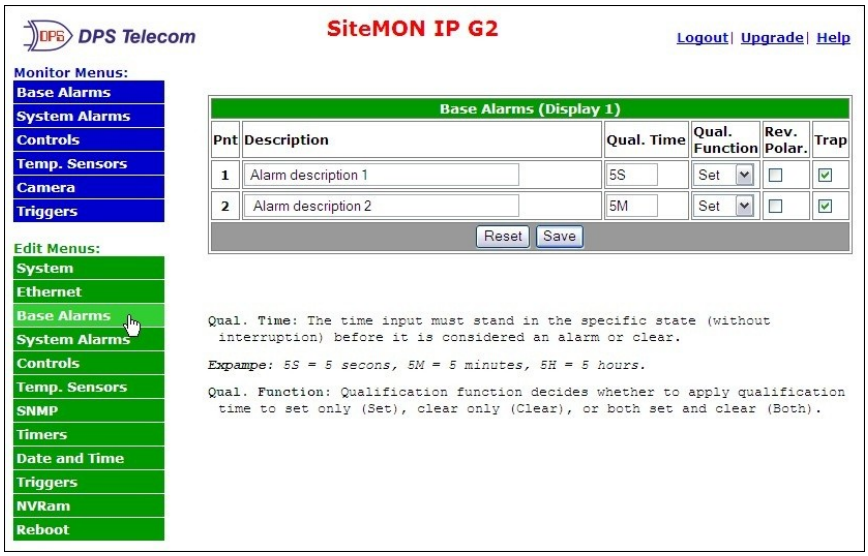
SNMP menu.

SNMP Global Settings	
G)et	Community name for SNMP requests.
S)et	Community name for SNMP SET requests.
Field	**Description**
Enabled	Used to enable SNMP TRAP destinations 1 and 2
IP Address	Defines the SNMP trap manager's IP address. Set to 255.255.255.255 if not using.
Port	The SNMP port is the UDP port set by the SNMP manager to receive traps, usually set to 162.
Community	Community name for SNMP TRAPs.

Fields in the Edit > SNMP settings

10.1.6 Configuring Base Discrete Alarms

Both of the SiteMON IP G2's discrete alarms are configured from the **Edit** menu > **Base Alarms** screen. Descriptions of the alarm point, polarity (normal or reversed), whether to use an SNMP Trap or not.



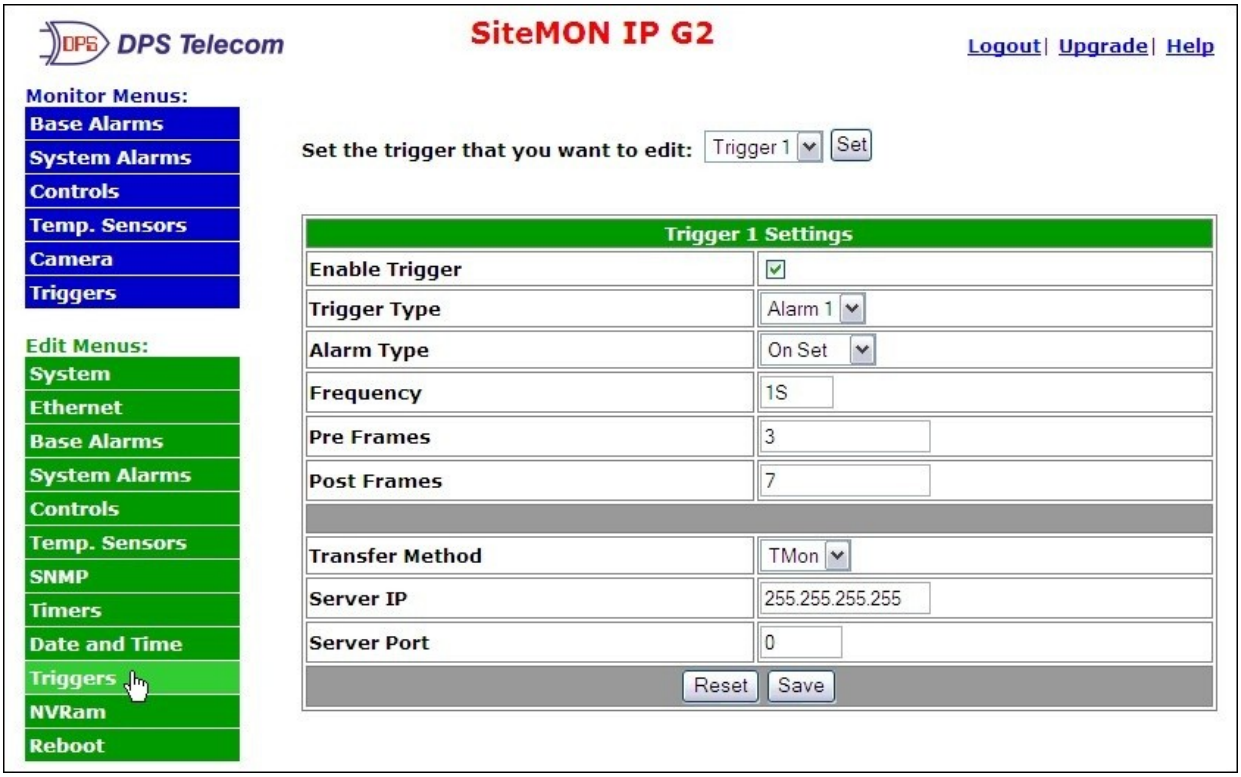
Configure the 4 discrete alarms from the Base Alarms screen.

Use the following steps to configure base discrete alarm settings:

1. From the **Edit** menu select the **Base Alarms** link.
2. Enter a description for each discrete input alarm being used in the **Description** field.
3. In the **Qual. Time** column, enter the length of time that must pass (without interruption) in order for the condition to be considered an alarm or clear. (***Example***: Entering **5S** means *five seconds*, **5M** equals *five minutes*, and **5H** equals *five hours*.)
4. Click the drop down arrow in the **Qual. Function** to choose whether you want to apply the Qualification Time to the alarm Set, Clear, or Both.
5. Use the **Rev. Polar** check box to reverse the polarity. Left un-checked means a contact closure is an alarm. If the box is checked and polarity is reversed, the alarm is clear when closed. (Normally closed contact.)
6. Select the **Trap** check box to send an SNMP trap for that alarm point in the event of an alarm condition. Leave the box blank if you do not wish the SiteMON IP G2 to send an SNMP trap.
7. Click **Submit Data** to save base alarm configuration settings.

10.1.7 Defining Triggers

From the **Edit > Triggers** menu, you can define when and how images are captured by the SiteMON IP G2 based on trigger events sent to T/Mon for viewing and playback.



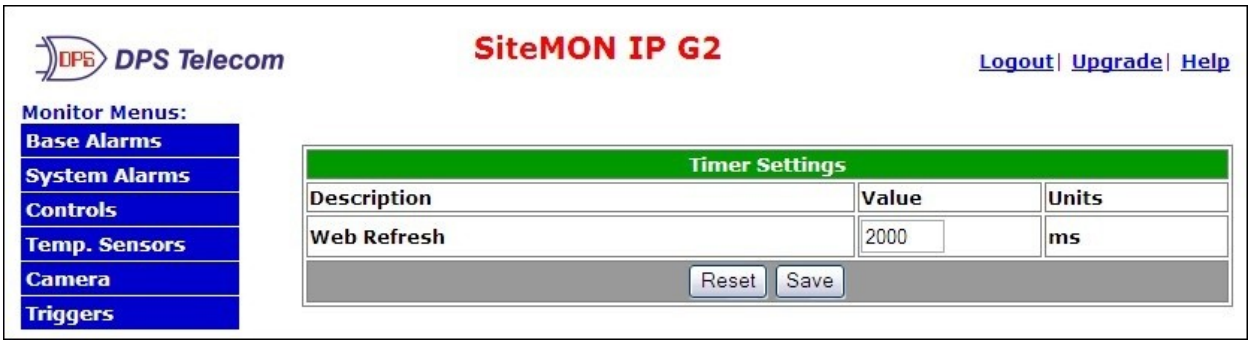
Define triggers and how the SiteMON IP G2 captures images in the Edit > Triggers menu.

Trigger (1, 2, or 3) Settings	
Enable Trigger	Click the checkbox to enable this trigger (1, 2, or 3)
Trigger Type	Choose between alarms 1 or 2, or create a trigger based on a defined time interval.
Alarm Type	From the drop-down, define this trigger based on an alarm set, clear, or both.
Frequency	If the trigger type is Time, choose how often the SiteMON IP G2 should capture images. If the trigger type is Alarm, then this field indicates the time between the Pre and Post frame images, or 0 for no delay.
Pre Frames	Enter the number of frames (images) the camera should capture **before** a trigger event.
Post Frames	Enter the number of frames (images) the camera should capture **after** a trigger event.
Transfer Method	Images can currently be transferred to the T/Mon only.
Server IP	Enter the IP address of the T/Mon where the images will be sent.
Server Port	Enter T/Mon's port as defined on the image receiver job.

Trigger fields

10.1.8 Setting Web Timer

The Web Refresh timer is user-definable, and allows to choose the intervals to automatically refreshing the SiteMON IP G2 Web Browser. Enter the amount of time (in milli-seconds) in the **Value** field and click **Save**.



10.1.9 Setting the Date and Time

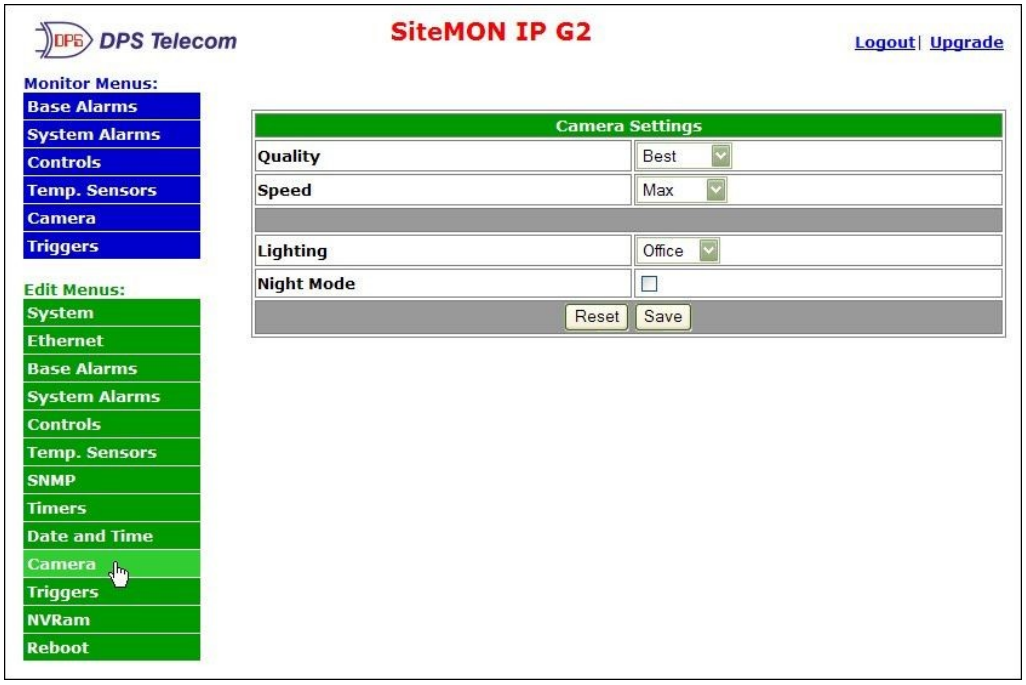
Using Network Time Protocol (NTP), the SiteMON IP G2 time stamps images as they are captured. The camera also uses NTP to sync up the date and time showing in the web browser.

Use Network Time Protocol (NTP) sync the camera's date and time for accurate time stamping.

Automatic Time Adjustment	
Date	Select the current Month, Day, and Year from the drop-down menus.
Time	Select the current time from the drop-down menus.
Enable NTP	Check this box to allow NTP to automatically adjust the date and time
NTP Server Address or Host Name	Enter the address of the NTP server. *If using DNS*: Make sure DNS servers are defined under the Ethernet settings.
Time Zone	Choose your time zone from the drop down menu.
Adjust Clock for Daylight Savings Time	
Enable DST	Check this box to allow the clock to be adjusted for Daylight Savings
Start Day	Enter the day Daylight Savings begins.
End Day	Enter the day Daylight Savings ends.

10.1.10 Adjusting the Camera Settings

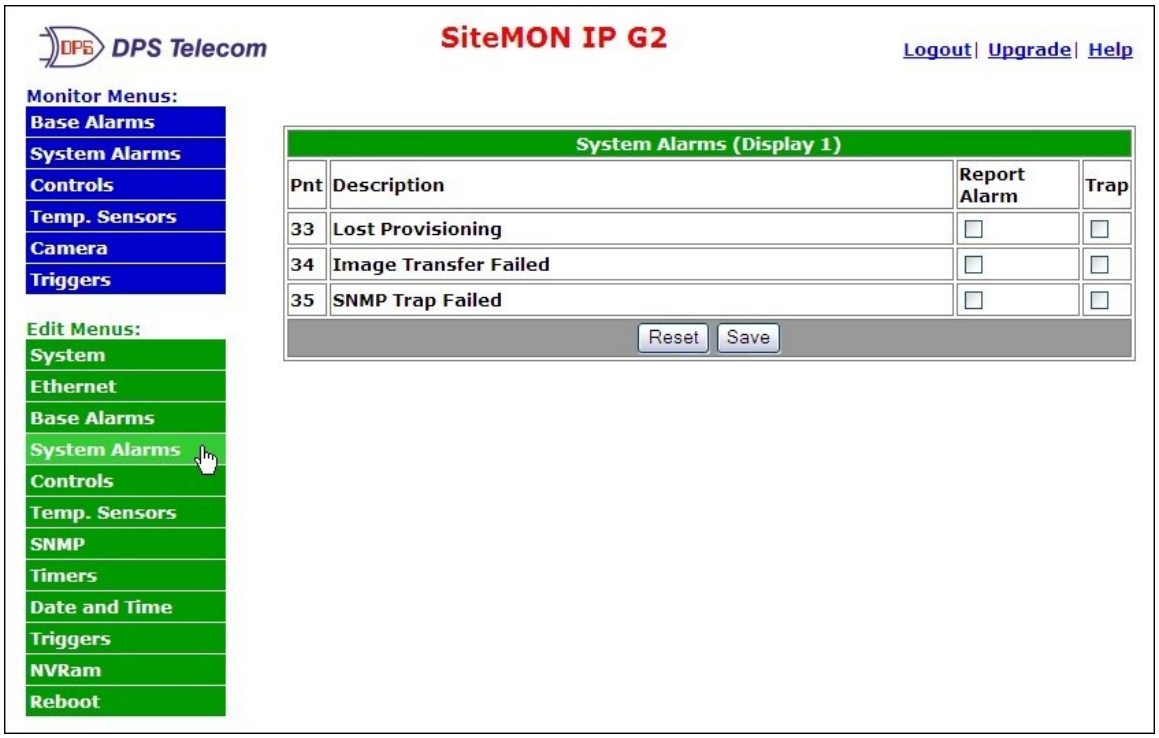
From the Edit > Camera menu, you can make adjustments to the quality and transfer speed of the SiteMON's images.



Camera Settings	
Quality	Select Best, Good or Average from the drop-down menu. This setting affects the clarity of the images being taken by the SiteMON.
Speed	Select Max, Fast, Medium, or Slow from the drop down menu. This setting affects the transfer rate of the images being captured (frames per second). A slower speed is recommended for low light areas.
Lighting	Select Auto, Sunny, Office, or Home from the drop-down menu. This setting depends on the location you have chosen to mount the SiteMON IP and affects how well light is displayed.
Night Mode	Check the Night Mode box if your camera is to be mounted in a dimly lit area. You may also want to slow the transfer rate speed to brighten a dim image.

10.1.11 Setting System Alarm Notifications

The **System Alarms** screen allows you to individually report the alarm, choose to set an SNMP trap or call based on each system alarm. See Appendix A for system alarm point descriptions.



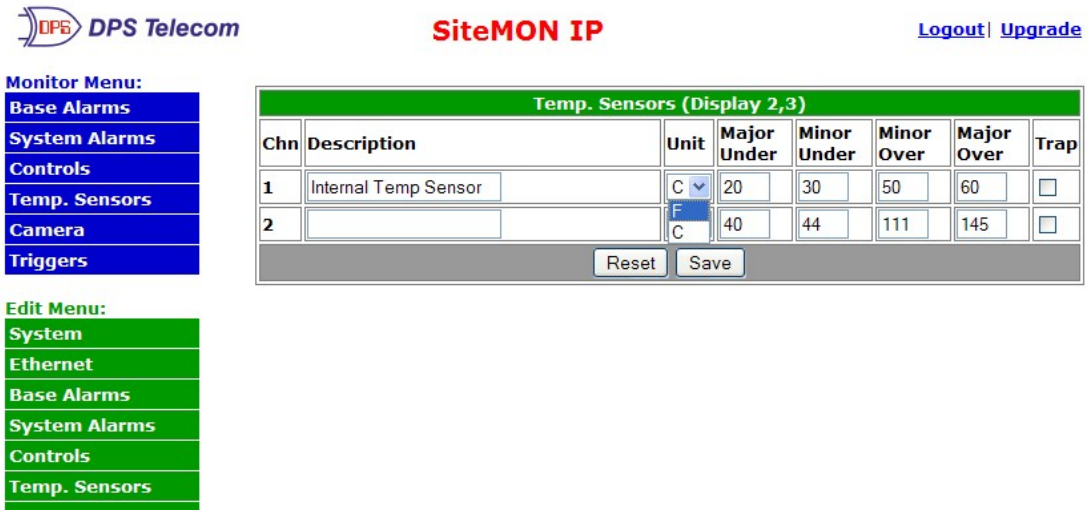
Enter system alarm settings in the Edit > System Alarms menu.

Use the following steps to configure your system alarm notification settings:

1. From the **Edit** menu select the **System Alarms** link.
2. Check the Report Alarm box to enable this internal alarm.
3. Check the **Trap** box to send an SNMP trap for that alarm point. Checking the box will enable that alarm point to send a SNMP trap, while leaving the box blank means no SNMP trap will be sent.
4. Click **Save** to save the configuration settings.

10.1.12 Temperature Sensors

Both of the SiteMON IP G2's analog channels (used for monitoring temperature) must be individually configured. There are four alarm trip points (thresholds) in ascending order: major under, minor under, minor over, and major over. You can choose the values for each of the thresholds on all channels. As with the other alarms, you can designate whether or not to send an SNMP trap when a threshold is crossed. The thresholds must be set from *Under* to *Over* in either ascending or descending potential (or current) order. Thus the settings of –10, –5, 5 and 10 corresponding respectively to major under, minor under, minor over and major over is valid.



The analog settings for monitoring temperature can be viewed and changed from the Temp. Sensors screen

1. From the **Edit** menu click on the **Temp. Sensors** link.
2. In the **Description** field enter a description for each analog channel being utilized. If the description field is left blank, the channel will be disabled.
3. Under the **Unit** column, Fahrenheit is designated at the default units, but can be changed to Celsius using the pull down options as shown in the image above. The references units will be converted to degrees Fahrenheit for each analog channel for monitoring internal and external temperature.
4. Enter the values for each alarm level in the **Major Under, Minor Under, Major Over**, and **Minor Under** columns to set the thresholds.
5. Select the **Trap** check box to send an SNMP trap for that alarm point in the event of an alarm condition. Leave the box blank if you do not wish the SiteMON IP G2 to send an SNMP trap.
6. Click the **Save** button to save the configuration settings.

The SiteMON IP G2's internal and external temperature sensors monitor the ambient temperature. The sensors measures a range of 32° F to 140° F (0° C to 60° C) within an accuracy of ± 1°. The external temperature sensor provides external temperature readings by plugging the optional probe into the ttemperature port on the back of the camera.

10.1.13 Configuring the Control Relays

The SiteMON IP G2's relay can be identified and configured using the *Edit* menu > *Controls* screen. A description can be entered for this relay. You can also designate whether or not to send SNMP Traps when a relay is actuated. The Control section breaks out to **NO/C/NC**= Normally Open/Common/Normally Closed.

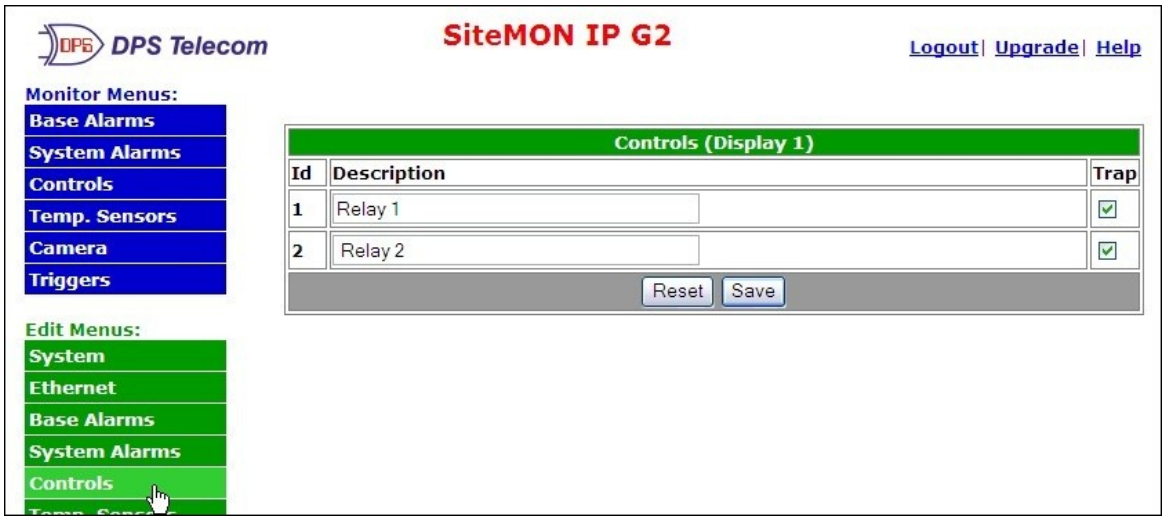


Fig. 29 *Control relay configuration*

1. From the **Edit** menu, select the **Controls** link.
2. In the **Description** field enter a description for control.
3. Check the **Trap** box to send an SNMP trap for the control. Selecting the box will set that point to send a SNMP trap, leaving the box blank will set that point to not send an SNMP trap.
4. Click **Save** to save the configuration settings.

10.1.14 Saving Changes or Resetting Factory Defaults

Your SiteMON IP G2 comes equipped with Non-Volatile RAM (NVRAM), which enables the retention of data in the event of power loss. This section allows you to write and initialize the NVRAM.

1. From the *Edit* menu select *NVRAM.*
2. Select *Write* to cause the current data in RAM to be written to NVRAM and then verified.
3. Select *Initialize* to reload factory defaults into NVRAM.

DO NOT SELECT THIS OPTION UNLESS YOU WANT TO RE-ENTER ALL OF YOUR CONFIGURATION INFORMATION AGAIN.

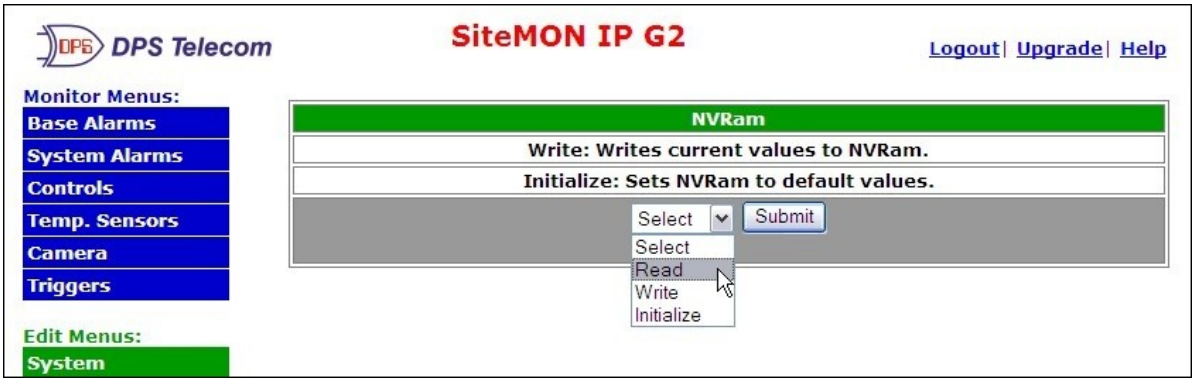


Fig. 30 *NVRAM enables the SiteMON IP G2 to retain data even through a power loss*

10.1.15 Rebooting the SiteMON IP

Click on the **Reboot** link from the **Edit** menu to reboot the SiteMON IP G2 after writing all changes to NVRAM. Any changes to port settings require a reboot to take effect.

This dialog box will appear when clicking the Edit > Reboot button. Click Ok to confirm reboot.

10.2 Web Monitoring

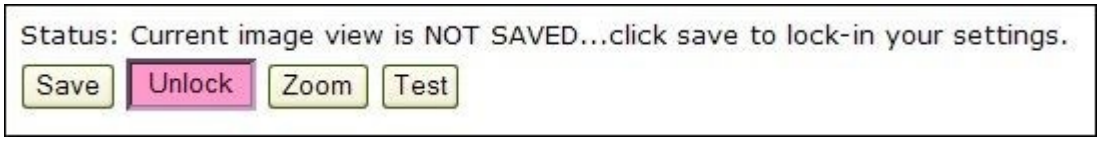
The Web browser allows you to do full-system monitoring for your SiteMON IP G2, which includes the alarms, relays, temperature sensors and system status. To connect to the SiteMON IP G2 from your Web browser, you must know it's IP address or domain name if it has been registered with your internal DNS.

1. Enter it in the address bar of your Web browser (it may be helpful to bookmark the logon page to simplify access).
2. Enter your username and password and click *Submit* (Factory default username is ***"admin"*** and password is ***"dpstelecom".***

10.2.1 Viewing Live Images

Clicking on the **Camera** menu allows you to view live images from the SiteMON IP G2. This allows you to perform a visual status check into that remote site. Using the digital pan feature on the SiteMON, click inside the image to pan right, left, up and down.

Live images can be viewed from the Monitor > Camera menu.



View Image buttons	
Save	After zooming in and/or using the digital pan, click Save to have the camera hold this viewing angle and store it to non-volatile memory. Your settings will remain after reboot.
Lock/Unlock	After zooming in and/or using the digital pan, click Unlock to go back to the original (default) viewing angle. Click Lock to go back to the held viewing angle.
Zoom	Zooms in on the center of the image. Click Unlock to zoom back out to the original angle.
Test	Performs a quick diagnostic check to make sure you can see the different colors on the spectrum, showing that the processor is able to get clean images from the sensor. Click the Test button again to exit color-bar test mode.

10.2.2 Viewing Triggered Images

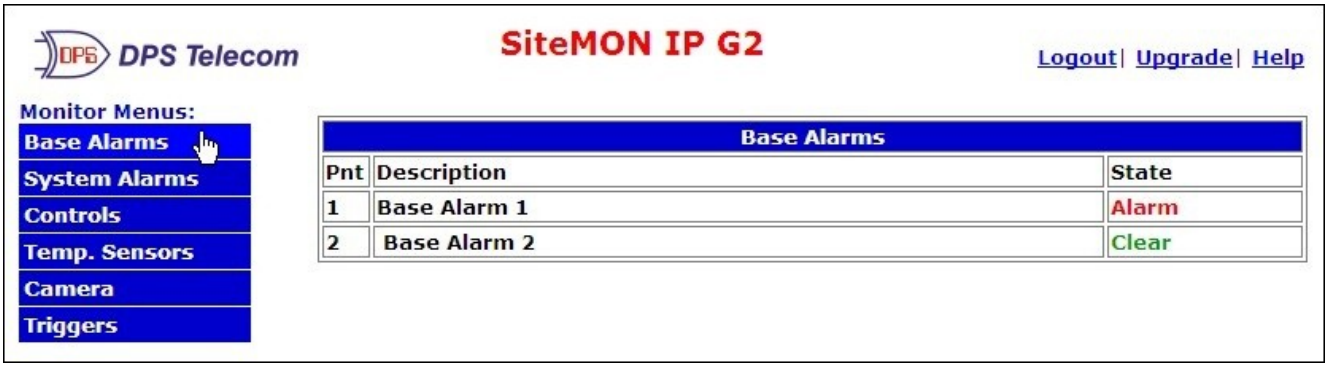
In the **Monitor > Triggers** menu, you can playback triggered images, as well as those taken before and after. Click the Frame button to step through the images frame by frame.

To free up some of the camera's internal memory, click **Delete** to erase a frame. The unit can store up to 63 images locally. If the unit already has 63 stored images and attempts to capture another, it will automatically delete the oldest saved image to make room for the newest triggered image.

View the captured images from different triggers in the Trigger menu.

10.2.3 Monitoring Base Alarms

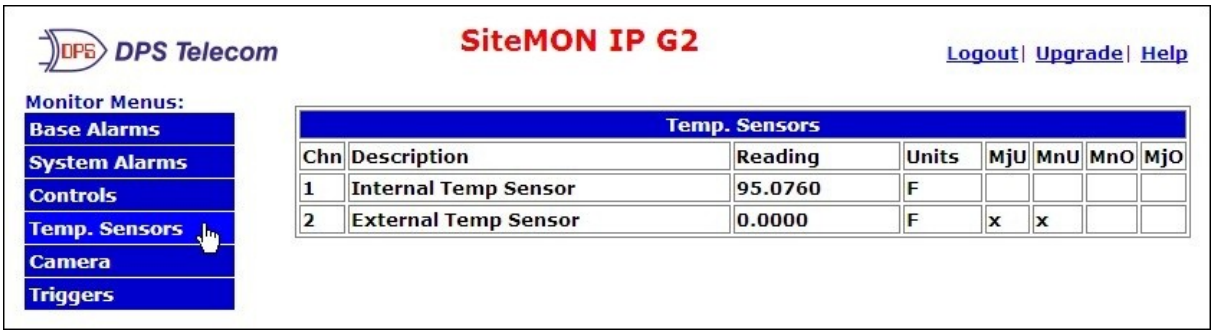
This selection provides the status of the system alarms by indicating if an alarm has been triggered. Under the **State** column, the status will appear in red if an alarm has been activated. The status will be displayed in green when the alarm condition is not present.



Click on Base Alarms in the Monitor menu to see if any base alarms have been triggered.

10.2.4 Monitoring Temperature

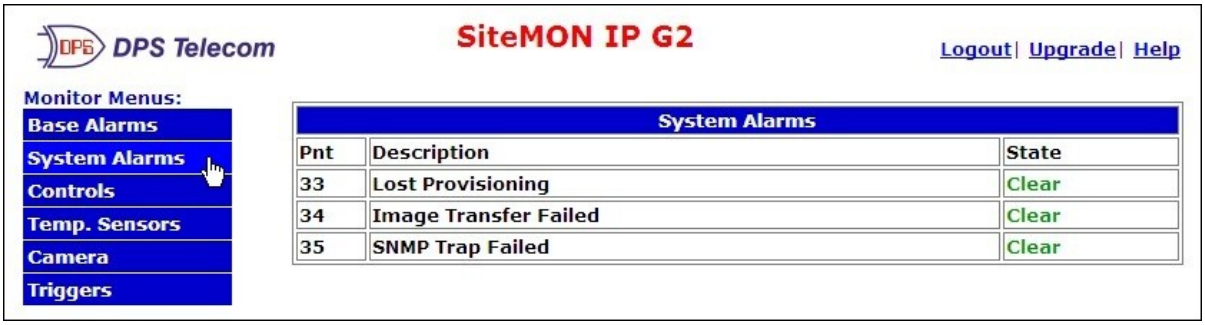
The **Monitor** menu > **Temp. Sensors** screen provides a description of each analog channel, the current reading, the units being read, and alarm conditions (major under, minor under, major over, minor over) according to your analog settings.



Click on Temp Sensors in the Monitor menu to view the current internal/external temp readings.

10.2.5 Monitoring System Alarms

This selection provides the status of the system alarms by indicating if an alarm has been triggered. Under the **State** column, the status will appear in red if an alarm has been activated. The status will be displayed in green when the alarm condition is not present. Refer to **Appendix A** for system alarm trap numbers.



View the status of System Alarms from the Monitor > System Alarms menu.

10.2.6 Operating Controls

Use the following rules to operate controls:

1. Select **Controls** from the **Monitor** menu.
2. Under the **State** field, you can see the current condition of the control.
3. To issue the control, choose a command (Opr - operate, Rls - release, or Mom - momentary)

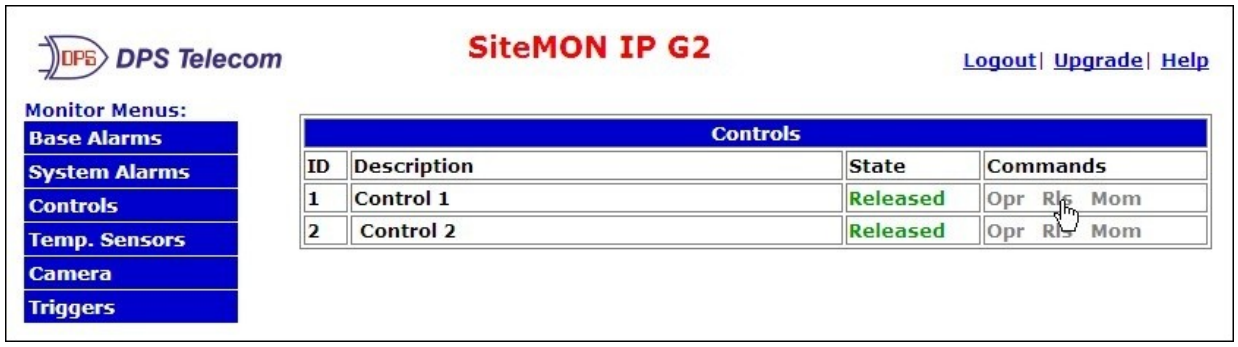


Fig.37 *Operate the control relay by clicking on one of the actions in the Commands field.*

10.2.7 Firmware Upgrade

To access the **Firmware Load** screen, click on the **Edit** > **System** menu. At the top of this screen, click the firmware version link (ex. SiteMON v2.1C.0221) located above the **System Settings** section.

Fig. 13.1 *- The clickable link to upgrade firmware from the Edit > System menu*

At the **Firmware Load** screen, simply browse for the .MPB file you've downloaded from www.dpstele.com and click **Load**.

Fig. 13.2 - *Browse to .MPB file and load*

Then click the **Web** version link at the bottom of the web page as seen in the image below and then upload the .BIN file.

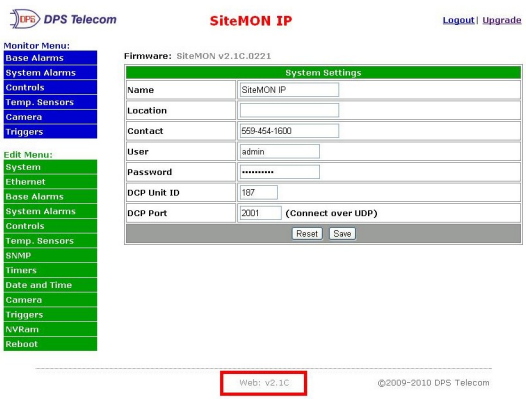


Fig. 13.3 - *Location of the Web version link*

11 Reference Section

11.1 Display Mapping

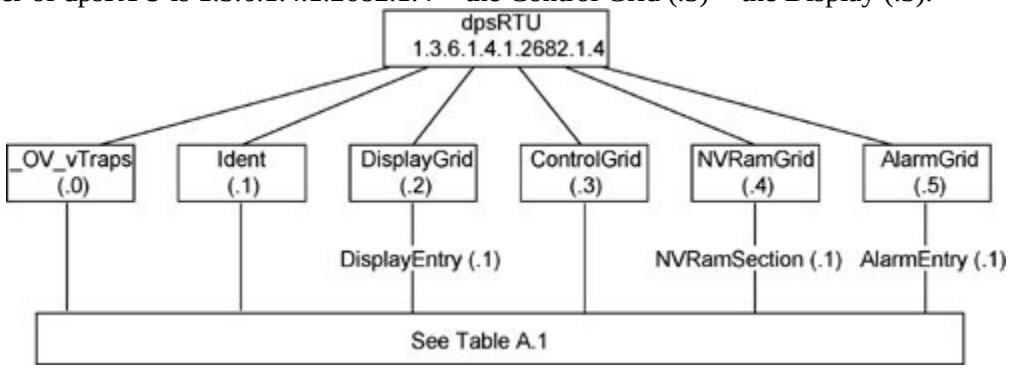
	Description	Port	Address	Point
Display 1	Discrete Alarms	99	1	1-2
	Unused	99	1	3-16
	Control Relays	99	1	17-18
	Unused	99	1	19-32
	System Alarms	99	1	33-64
Display 2	Internal Temp Alarms	99	2	1-4
	Internal Temp Value	99	2	5-64
Display 3	External Temp Alarms	99	3	1-4
	External Temp Value	99	3	5-64

11.1.1 SiteMON IP Alarm Map Details

	Description	Port	Address	Point
Display 1	Discrete Alarms	99	1	1-2
	Unused	99	1	3-16
	Control Relays	99	1	17-18
	Unused	99	1	19-32
	System Alarms	99	1	33-64
Display 2	Analog 1 Minor Under	99	2	1
	Analog 1 Minor Over	99	2	2
	Analog 1 Major Under	99	2	3
	Analog 1 Major Over	99	2	4
Display 3	Analog 2 Minor Under	99	3	1
	Analog 2 Minor Over	99	3	2
	Analog 2 Major Under	99	3	3
	Analog 2 Major Over	99	3	4

11.2 SNMP Manager Functions

The SNMP Manager allows the user to view alarm status, set date/time, issue controls, and perform a resync. The display and tables below outline the MIB object identifiers. Table B.1 begins with dpsRTU; however, the MIB object identifier tree has several levels above it. The full English name is as follows: root.iso.org.dod.internet.private.enterprises.dps-Inc.dpsAlarmControl.dpsRTU. Therefore, dpsRTU's full object identifier is 1.3.6.1.4.1.2682.1.4. Each level beyond dpsRTU adds another object identifying number. For example, the object identifier of the Display portion of the Control Grid is 1.3.6.1.4.1.2682.1.4.3.3 because the object identifier of dpsRTU is 1.3.6.1.4.1.2682.1.4 + the Control Grid (.3) + the Display (.3).



Tbl. B1 (O.)_OV_Traps points
_OV_vTraps (1.3.6.1.4.1.2682.1.4.0)
PointSet (.20)
PointClr (.21)
SumPSet (.101)
SumPClr (.102)
ComFailed (.103)
ComRestored (.014)
P0001Set (.10001) through P0064Set (.10064)
P0001Clr (.20001) through P0064Clr (.20064)

Tbl. B2 (.1) Identity points
Ident (1.3.6.1.4.1.2682.1.4.1)
Manufacturer (.1)
Model (.2)
Firmware Version (.3)
DateTime (.4)
ResyncReq (.5)*
* Must be set to "1" to perform the resync request which will resend TRAPs for any standing alarm.

Tbl. B3 (.2) DisplayGrid points
DisplayEntry (1.3.6.1.4.1.2682.1.4.2.1)
Port (.1)
Address (.2)
Display (.3)
DispDesc (.4)*
PntMap (.5)*

Tbl. B3 (.3) ControlGrid points
ControlGrid (1.3.6.1.4.1.2682.1.4.3)
Port (.1)
Address (.2)
Display (.3)
Point (.4)
Action (.5)

Tbl. B5 (.5) AlarmEntry points
AlarmEntry (1.3.6.4.1.2682.1.4.5.1)
Aport (.1)
AAddress (.2)
ADisplay (.3)
APoint (.4)
APntDesc (.5)*
AState (.6)
* For specific alarm points, see Table B6

Hot Tip! The SiteMON IP G2 82IP G2 OID has changed from 1.3.6.1.4.1.2682.1.2 to 1.3.6.1.4.1.2682.1.4 Updated MIB files are available on the Resource CD or upon request.

11.3 SNMP Granular Trap Packets

Tables 14.3.A and 14.3.B provide a list of the info contained in the SNMP Trap packets sent by the SiteMON IP G2

SNMP Trap managers can use one of two methods to get alarm information:
1. Granular traps (not necessary to define point descriptions for the SiteMON IP G2)

OR

2. The SNMP manager reads the description from the Trap.

UDP Header	Description
1238	Source port
162	Destination port
303	Length
0xBAB0	Checksum

Table G *UDP Headers and descriptions*

SNMP Header	Description
0	Version
Public	Request
Trap	Request
1.3.6.1.4.1.2682.1.4	Enterprise
126.10.230.181	Agent address
Enterprise Specific	Generic Trap
8001	Specific Trap
617077	Time stamp
1.3.7.1.2.1.1.1.0	Object
NetGuardian v1.0K	Value
1.3.6.1.2.1.1.6.0	Object
1-800-622-3314	Value
1.3.6.1.4.1.2682.1.4.4.1.0	Object
01-02-1995 05:08:27.760	Value
1.3.6.1.4.1.2682.1.4.5.1.1.99.1.1.1	Object
99	Value
1.3.6.1.4.1.2682.1.4.5.1.2.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.3.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.4.99.1.1.1	Object
1	Value
1.3.6.1.4.1.2682.1.4.5.1.5.99.1.1.1	Object
Rectifier Failure	Value
1.3.6.1.4.1.2682.1.4.5.1.6.99.1.1.1	Object
Alarm	Value

Table H. *SNMP Headers and descriptions*

12 Frequently Asked Questions

Here are answers to some common questions from SiteMON IP G2 users. The latest FAQs can be found on the SiteMON IP G2 support web page, **http://www.dpstelecom.com.**

If you have a question about the SiteMON IP G2, please call us at **(559) 454-1600** or e-mail us at **support@dpstele.com**

12.1 General FAQs

Q. How do I telnet to the SiteMON IP G2?

A. You must use **Port 2002** to connect to the SiteMON IP G2. Configure your Telnet client to connect using TCP/IP (**not** "Telnet," or any other port options). For connection information, enter the IP address of the SiteMON IP G2 and Port 2002. For example, to connect to the SiteMON IP G2 using the standard Windows Telnet client, click Start, click Run, and type "telnet <SiteMON IP G2 IP address> 2002."

Q. How do I connect my SiteMON IP G2 to the LAN?

A. To connect your SiteMON IP G2 to your LAN, you need to configure the unit IP address, the subnet mask and the default gateway. A sample configuration could look like this:
Unit Address: 192.168.1.100
subnet mask: 255.255.255.0
Default Gateway: 192.168.1.1
Save your changes by writing to NVRAM and reboot. Any change to the unit's IP configuration requires a reboot.

Q. When I connect to the SiteMON IP G2 through the craft port on the front panel it either doesn't work right or it doesn't work at all. What's going on?

A. Make sure your using the right COM port settings. Your COM port settings should read:
Bits per second: 115200 (115200 baud)
Data bits: 8
Parity: None
Stop bits: 1
Flow control: None
Important! Flow control **must** be set to **none**. Flow control normally defaults to hardware in most terminal programs, and this will not work correctly with the SiteMON IP G2.

Q. The LAN link LED is green on my SiteMON IP G2, but I can't poll it from my T/Mon.

A. Some routers will not forward packets to an IP address until the MAC address of the destination device has been registered on the router's Address Resolution Protocol (ARP) table. Enter the IP address of your gateway and your T/Mon system to the ARP table.

Q. What do the terms "port," "address," "display" and "alarm point" mean?

A. These terms refer to numbers that designate the location of a network alarm, from the most general (a port to which several devices are connected) to the most specific (an individual alarm sensor).
Port: A number designating a serial port through which a monitoring device collects data.
Address: A number designating a device connected to a port.
Display: A number designating a logical group of 64 alarm points.
Alarm Point: A number designating a contact closure that is activated when an alarm condition occurs. For example, an alarm point might represent a low oil sensor in a generator or an open/close sensor in a door.
These terms originally referred only to physical things: actual ports, devices, and contact closures. For the sake of consistency, port-address-display-alarm point terminology has been extended to include purely logical elements: for example, the SiteMON IP G2 reports internal alarms on Port 99, Address 1.

Q. What characteristics of an alarm point can be configured through software? For instance, can point 4 be used to sense an active-low signal, or point 5 to sense a level or an edge?

A. The unit's standard configuration is for all alarm points to be level-sensed. You **cannot** use configuration software to convert alarm points to TTL (edge-sensed) operation. TTL alarm points are a hardware option that must be specified when you order your SiteMON IP G2. Ordering TTL points for your SiteMON IP G2 does not add to the cost of the unit What you can do with the configuration software is change any alarm point from "Normal" to "Reversed" operation. Switching to Reversed operation has different effects, depending on the kind of input connected to the alarm point:

- **If the alarm input generates an active-high signal,** switching to Reversed operation means the SiteMON IP G2 will declare an alarm in the absence of the active-high signal, creating the practical equivalent of an active-low alarm.
- **If the alarm input generates an active-low signal,** switching to Reversed operation means the SiteMON IP G2 will declare an alarm in the absence of the active-low signal, creating the practical equivalent of an active-high alarm.
- **If the alarm input is normally open,** switching to Reversed operation converts it to a normally closed alarm point.
- **If the alarm input is normally closed,** switching to Reversed operation converts it to a normally open alarm point.

12.2 SNMP FAQs

Q. Which version of SNMP is supported by the SNMP agent on the NetGuardian?
A. SNMP v1.

Q. How do I configure the SiteMON IP G2 to send traps to an SNMP manager? Is there a separate MIB for the SiteMON IP G2? How many SNMP managers can the agent send traps to? And how do I set the IP address of the SNMP manager and the community string to be used when sending traps?
A. The SiteMON IP G2 begins sending traps as soon as the SNMP managers are defined. The SiteMON IP G2 MIB is included on the SiteMON IP G2 Resource CD. The MIB should be compiled on your SNMP manager. (**Note:** MIB versions may change in the future.) The unit supports a main SNMP manager, which is configured by entering its IP address in the Trap Address field of Ethernet Port Setup. You can also configure up to eight secondary SNMP managers, which is configured by selecting the secondary SNMP managers as pager recipients. Community strings are configured globally for all SNMP managers. To configure the community strings, choose System from the Edit menu, and enter appropriate values in the Get, Set, and Trap fields.

Q. Does the SiteMON IP G2 support MIB-2 and/or any other standard MIBs?
A. The SiteMON IP G2 supports the bulk of MIB-2.

Q. Does the SiteMON IP G2 SNMP agent support both SiteMON IP G2 and T/MonXM variables?
A. The SiteMON IP G2 SNMP agent manages an embedded MIB that supports only the SiteMON IP G2's RTU variables. The T/MonXM variables are included in the distributed MIB only to provide SNMP managers with a single MIB for all DPS Telecom products.

Q. How many traps are triggered when a single point is set or cleared? The MIB defines traps like "major alarm set/cleared," "RTU point set," and a lot of granular traps, which could imply that more than one trap is sent when a change of state occurs on one point.
A. Generally, a single change of state generates a single trap, but there are two exception to this rule. Exception 1: the first alarm in an "all clear" condition generates an additional "summary point set" trap. Exception 2: the final clear alarm that triggers an "all clear" condition generates an additional "summary point clear" trap.

Q. What does "point map" mean?
A. A point map is a single MIB leaf that presents the current status of a 64-alarm-point display in an ASCII-readable form, where a "." represents a clear and an "x" represents an alarm.

Q. The SiteMON IP G2 manual talks about control relay outputs. How do I control these from my SNMP manager?
A. The control relays are operated by issuing the appropriate set commands, which are contained in the DPS Telecom MIB.

Q. How can I associate descriptive information with a point for the RTU granular traps?
A. The SiteMON IP G2 alarm point descriptions are individually defined using the Web Browser or TTY interfaces.

Q. My SNMP traps aren't getting through. What should I try?
A. Try these three steps:

1. Make sure that the Trap Address (IP address of the SNMP manager) is defined. (If you changed the Trap Address, make sure you saved the change to NVRAM and rebooted.)
2. Make sure all alarm points are configured to send SNMP traps.
3. Make sure the SiteMON IP G2 and the SNMP manager are both on the network. Use the unit's ping command to ping the SNMP manager.

13 Technical Support

DPS Telecom products are backed by our courteous, friendly Technical Support representatives, who will give you the best in fast and accurate customer service. To help us help you better, please take the following steps before calling Technical Support:

1. Check the DPS Telecom website.
You will find answers to many common questions on the DPS Telecom website, at **http://www.dpstelecom.com/support/**. Look here first for a fast solution to your problem.

2. Prepare relevant information.
Having important information about your DPS Telecom product in hand when you call will greatly reduce the time it takes to answer your questions. If you do not have all of the information when you call, our Technical Support representatives can assist you in gathering it. Please write the information down for easy access. Please have your user manual and hardware serial number ready.

3. Have access to troubled equipment.
Please be at or near your equipment when you call DPS Telecom Technical Support. This will help us solve your problem more efficiently.

4. Call during Customer Support hours.
Customer support hours are Monday through Friday, from 7 A.M. to 6 P.M., Pacific time. The DPS Telecom Technical Support phone number is **(559) 454-1600**.

Emergency Assistance: *Emergency assistance is available 24 hours a day, 7 days a week. For emergency assistance after hours, allow the phone to ring until it is answered with a paging message. You will be asked to enter your phone number. An on-call technical support representative will return your call as soon as possible.*

14 End User License Agreement

All Software and firmware used in, for, or in connection with the Product, parts, subsystems, or derivatives thereof, in whatever form, including, without limitation, source code, object code and microcode, including any computer programs and any documentation relating to or describing such Software is furnished to the End User only under a non-exclusive perpetual license solely for End User's use with the Product.

The Software may not be copied or modified, in whole or in part, for any purpose whatsoever. The Software may not be reverse engineered, compiled, or disassembled. No title to or ownership of the Software or any of its parts is transferred to the End User. Title to all patents, copyrights, trade secrets, and any other applicable rights shall remain with the DPS Telecom.

DPS Telecom's warranty and limitation on its liability for the Software is as described in the warranty information provided to End User in the Product Manual.

End User shall indemnify DPS Telecom and hold it harmless for and against any and all claims, damages, losses, costs, expenses, obligations, liabilities, fees and costs and all amounts paid in settlement of any claim, action or suit which may be asserted against DPS Telecom which arise out of or are related to the non-fulfillment of any covenant or obligation of End User in connection with this Agreement.

This Agreement shall be construed and enforced in accordance with the laws of the State of California, without regard to choice of law principles and excluding the provisions of the UN Convention on Contracts for the International Sale of Goods. Any dispute arising out of the Agreement shall be commenced and maintained only in Fresno County, California. In the event suit is brought or an attorney is retained by any party to this Agreement to seek interpretation or construction of any term or provision of this Agreement, to enforce the terms of this Agreement, to collect any money due, or to obtain any money damages or equitable relief for breach, the prevailing party shall be entitled to recover, in addition to any other available remedy, reimbursement for reasonable attorneys' fees, court costs, costs of investigation, and other related expenses.

*"**D**ependable, **P**owerful **S**olutions*
that allow users to monitor larger,
more complicated networks with a
smaller, less trained staff"

DPS Telecom

"Your Partners in Network Alarm Management"

www.dpstelecom.com