

RAMOS Optima

User Manual



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1. Introduction

1.1. What is RAMOS Optima?

RAMOS Optima is an intelligent device for monitoring environmental variables, power, physical threats and security. The unit is IP based and include a web interface for configuration. TCP/IP stack, Web server, full SNMP and E-mail support are included.

Ramos intelligent sensors can be connected via the RJ45 connections (excluding our RMS-U-DST), or you can add dry contact connection for monitoring UPS, security systems and air conditioning status.

1.2. How to use this manual

This manual aims to provide the user with a step by step guide on how to get your unit set up and functioning. It introduces the primary features of the unit by the way of tutorials. You can either go through the whole procedure from start to finish, or, if you wish, use each tutorial as a standalone lesson. The start of each lesson gives an “entry point profile” which details how to get to the start point of the lesson and assumes previous knowledge through completion of previous tutorials.

Quick Tip:

Throughout this manual you will find “Quick Tips” in each section that will relate to the information you are reviewing. Also, in section #7 you find a “Quick Facts” and “FAQ” section that covers common questions and problems you may encounter. However, if you need any further assistance please don't hesitate to contact our support team on ramos@conteg.com

1.3. RAMOS Optima



1 – Power LED
2 – Activity/Link LED
3 – 16 LED's indicating online and network activity

4 – Intelligent sensor ports
5 – Standard 10 Base-T Ethernet
6 – 7,5V DC input jack socket

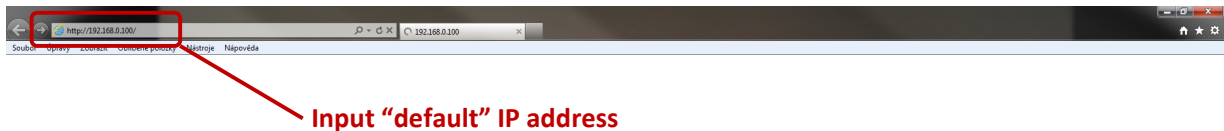
2. Installation

2.1. Assigning an IP address

These units are plug and play devices that will easily connect to your existing network setup. Every unit ships with a default IP address. This is **192.168.0.100**. The first steps you will need to undertake to install your unit will be to assign it an IP address to match your current network configuration. Before starting this, ensure you have the following items:

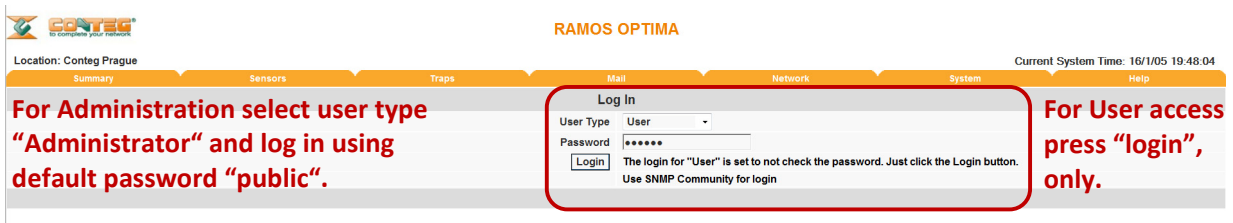
- RJ45 CAT5 crossover cable with RJ45 male connection
- A PC with Ethernet card or LAN socket.
- Power socket for the unit to connect to

- Connect the unit via the CAT5 crossover cable to the Ethernet / LAN port on your computer.
- Open your web browser and go to the default IP address <http://192.168.0.100>

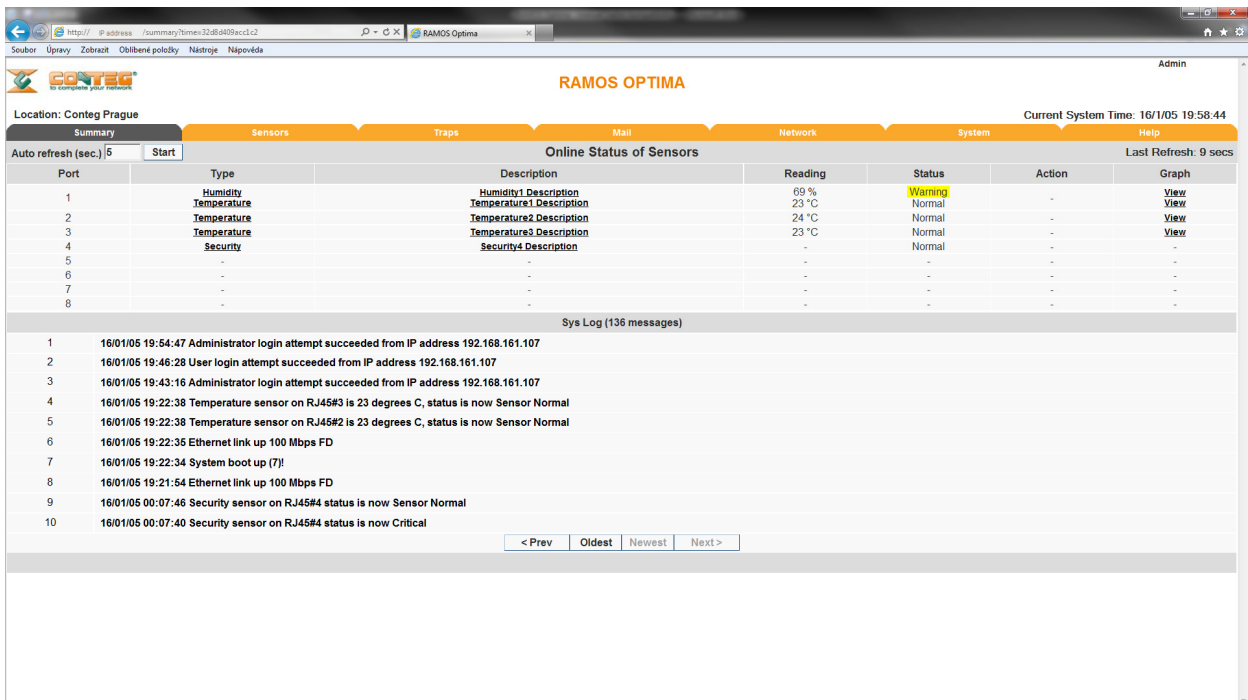


In some cases your computer might not be able to connect to this default IP address. In this situation you need to set up your computer's routing table to allow access to this.

- Now you are presented with the following login screen.



After logging in you are taken to the main summary page.



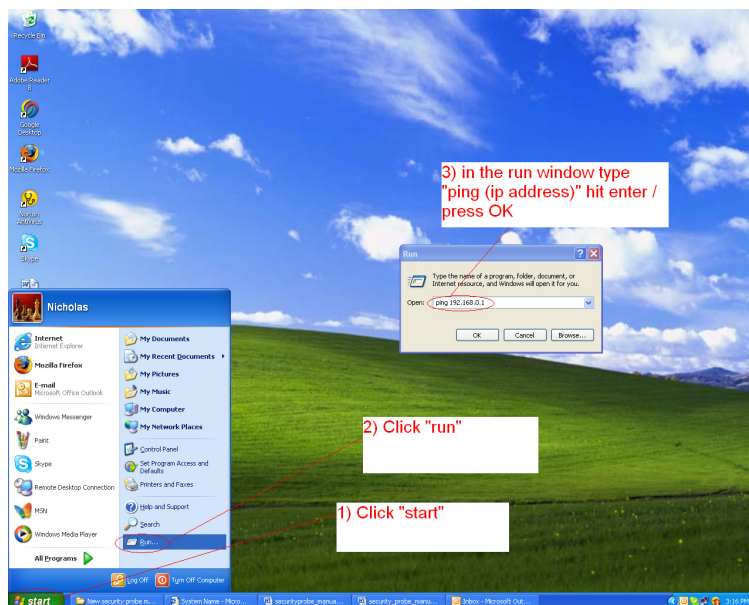
d) From summary page select the "Network" tab. After inputting your new IP address click "save"

Traps	Mail	Network	System
Network Settings			
IP Address	192.168.168.168		
Subnet Mask	255.255.255.0		
Default Gateway	192.168.168.250		
Domain Name Server	192.168.0.1		
Use DHCP	Do Not Use DHCP		
Ethernet MAC ID	00-0B-DC-00-42-1B		
Ethernet Duplex Mode	100 Mbps Full Duplex		
[Save] [Reset]			
System Date & Time Settings			
RTC Battery Status	Good		
Time Zone	(UTC) Coordinated Universal Time		
Date and Time Settings	[] (dd/mm/yy hh:mm:ss ex. 16/01/05 21:03:22)		
Use NTP	Do not use NTP		
NTP Server 1	[]		
NTP Server 2	[]		
[Save] [Reset]			

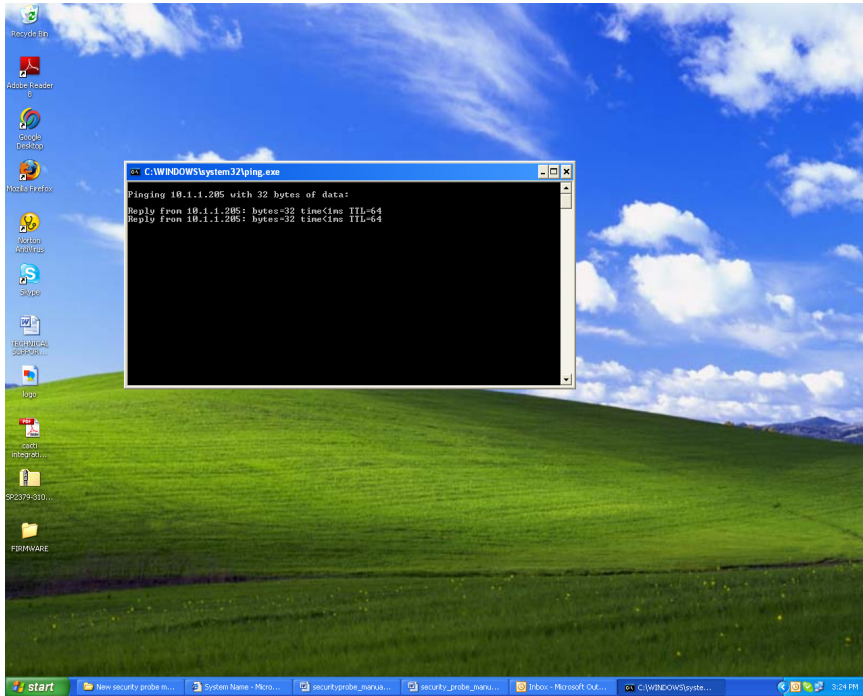
2.2. Testing your new IP address

We now need to test that your new IP address has been assigned successfully. We will do this via the "ping" command.

a) Click start/run.....



- b) Now you will get an MS DOS command prompt which shows the ping results. If this is unsuccessful you will receive a “request timed out” message.



Having connection problems? Please note:

The units default connection speed is 10MB w/Half Duplex, so if you are having trouble connecting to the unit then you do have the option to set the unit to full duplex mode by using the follows SNMP set command

```
snmpset -v1 -c public 192.168.0.100 .1.3.6.1.4.1.3854.1.2.2.1.72.0 s "1yyy"
```

To set back to halfduplex -->

```
snmpset -v1 -c public 192.168.0.100 .1.3.6.1.4.1.3854.1.2.2.1.72.0 s "0yyy"
```

Where 'public' is admin password. Where '192.168.0.100' is the RAMOS Optima’s IP address. The duplex mode is shown on Network Settings page.

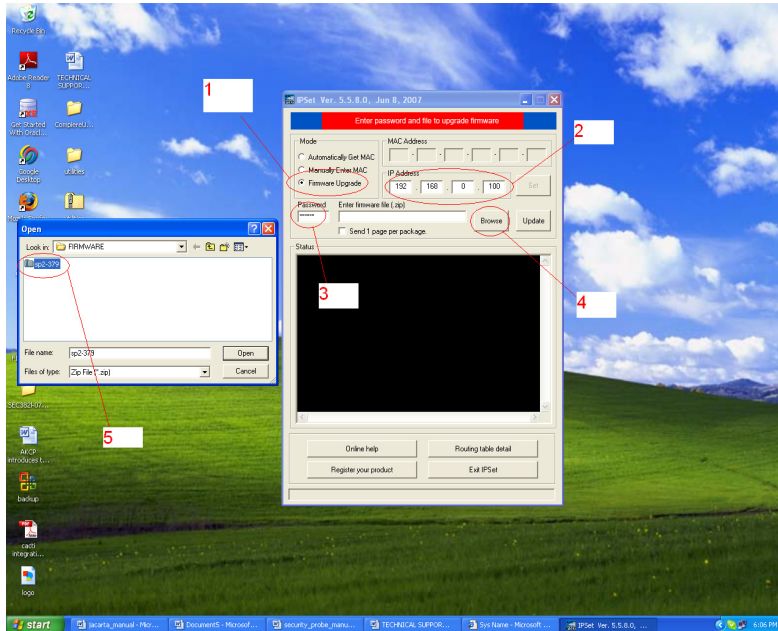
Quick Tip:

If you are still having trouble connecting to your RAMOS Optima, or opening your unit’s web interface, please see the FAQ in section #7 at the end of the manual for more help.

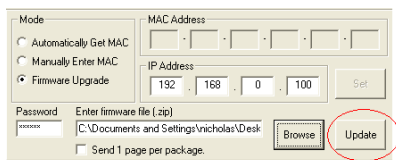
2.3. Upgrading the firmware

As we are constantly releasing new firmware with added capabilities it is recommended to you to upgrade the latest firmware. To do this you need to go to our website.

- a) When you download your firmware it comes in a zip package. Extract this to your desktop into a folder named firmware. When you open this folder you can find Firmware file, readme file and IPSet application. This IPSet utility will upload the firmware to your unit. Double click the program to boot it.
- b) When IPSet loads a screen similar to this:



- 1 = Select firmware upgrade
- 2 = Type in the IP address of your unit
- 3 = Type in your administrator password
- 4 = Click browse, a new window will pop up
- 5 = Select the zipped firmware file, click open.



Click "update"

6 = When complete the message "upgrade complete" will be displayed

7 = Problems updating firmware that is very old to the latest release.



You may experience a problem when trying to update your RAMOS Optima to the latest firmware if the firmware on your base unit has not been updated for a very long period of time.

If you try to update your unit and receive this error below in the IPSet utility, then you will need to update your unit in one or two steps, depending on how old the firmware version you are running on the unit.

Please download either of these older versions of firmware depending on if you have a RAMOS Optima unit, then update the latest version that is on our web site.

3. Setting up a sensor and Downloading Sensor Data

For the purposes of this manual and tutorials we will cover setting up a dual temp / humidity sensor. The first part of the tutorial will cover the basic installation and settings for the sensor. The second part will explain how to go about setting up various notifications such as SNMP traps.

3.1. Basic setup

- Plug in your sensor to the RJ45 port 1 (sensor 1). The unit will automatically detect the presence of the sensor and configure it.
- Now return to the web browser and input the IP address of your unit. Then log in as administrator.
- You will now see the summary page looking similar to this:

The screenshot shows the RAMOS OPTIMA web interface. The top navigation bar includes 'Summary', 'Sensors', 'Traps', 'Mail', 'Network', 'System', and 'Help'. The 'Sensors' tab is active, displaying a table titled 'Online Status of Sensors'. The table has columns for Port, Type, Description, Reading, Status, Action, and Graph. Two rows are highlighted with red boxes: Port 1 (Humidity) and Port 2 (Temperature). Below the table is a 'Sys Log (136 messages)' section with a list of system events. Two red arrows point from the highlighted sensor rows to the log entries for those sensors. The log entry for Port 1 is: '16/01/05 19:22:38 Temperature sensor on RJ45#3 is 23 degrees C, status is now Sensor Normal'. The log entry for Port 2 is: '16/01/05 19:22:38 Temperature sensor on RJ45#2 is 23 degrees C, status is now Sensor Normal'. The interface also shows 'Location: Conteg Prague' and 'Current System Time: 16/1/05 19:58:44'.

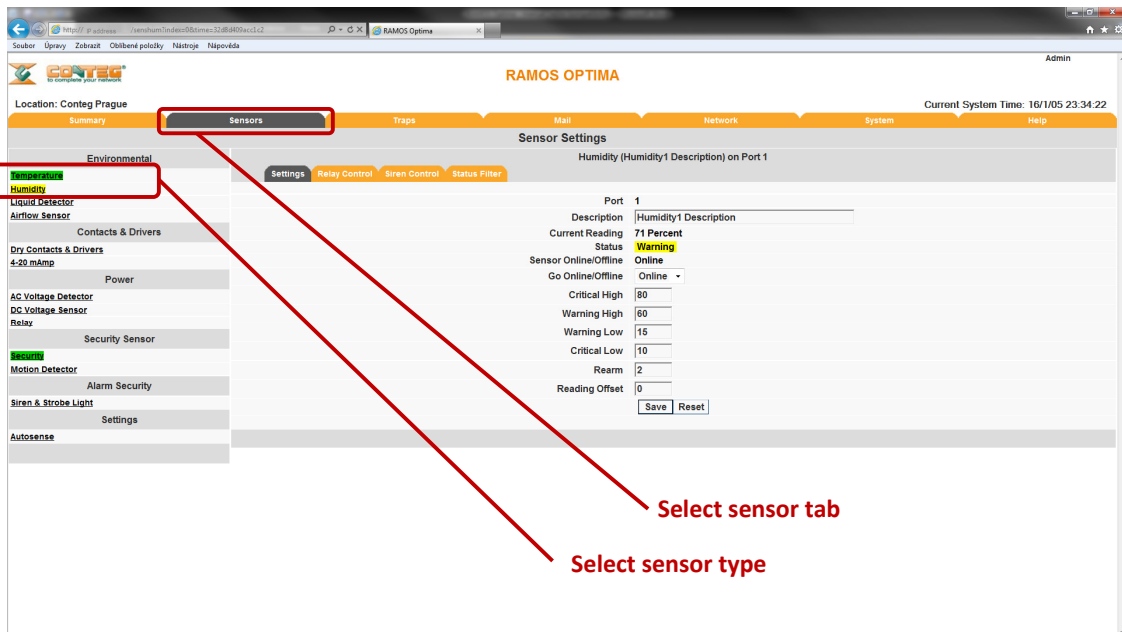
Port	Type	Description	Reading	Status	Action	Graph
1	Humidity	Humidity1 Description	69 %	Warning	-	View
2	Temperature	Temperature1 Description	23 °C	Normal	-	View
3	Temperature	Temperature2 Description	24 °C	Normal	-	View
4	Temperature	Temperature3 Description	23 °C	Normal	-	View
5	Security	Security4 Description	-	Normal	-	-
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	-	-	-	-	-	-

One wire temperature and humidity sensor on intelligent port no. 1

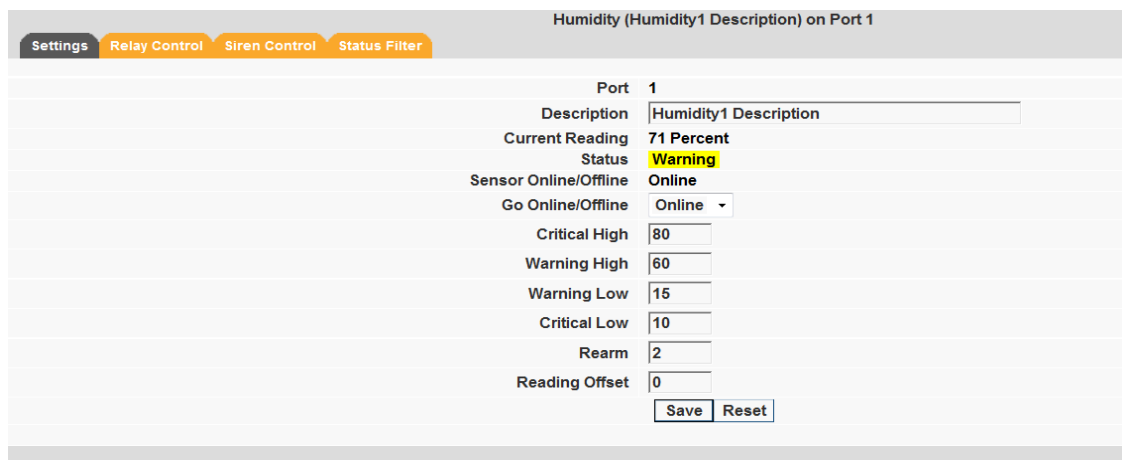
Temperature sensor on intelligent port no. 2 (one RMS-I-ST is part of the package)

You will see the temp/humidity sensor displayed in the summary page.

- From this page select the "Sensors" tab. This will bring you to the following page:



In this example we have selected the humidity sensor from the sensor menu on the left. The sensors highlighted in yellow indicate that they are currently connected to the unit. In this case you can see there is a temp and humidity sensor connected (RMS-I-STH). Temperature is highlighted in green in the menu. Humidity is highlighted in yellow, because it is now in warning status.



e) This window is used for configuring the sensors parameters. These parameters are explained below:

Description: The name of the sensor. Use a meaningful name such as “humidity sensor office1”

Go Online/Offline: This takes the sensor on or offline without unplugging it from the unit

Critical high: The %age humidity level at which it is critically high

Warning high: the %age humidity level at which it is high

Warning low: the %age humidity level at which it is low

Critical low: the %age humidity level at which it is critically low

Rearm: Used to prevent the sensor from flickering between two states. For example, if the “High Warning” threshold for the temperature sensor is set to 80 degrees and the sensor was to vary between 79 and 80 you could be faced with a very large number of emails, traps, and events logged. The Rearm parameter prevents this by forcing the temperature to drop by the Rearm before changing the state back to normal. In this example if Rearm is set to 2 then, the sensor would have to drop from 80 down to 77 before the status would change from

Reading offset: will adjust the reading by your offset amount.

In our example we have set the parameters as indicated in the screenshot above. Once you have done this click on “save”.

For information on setting up other sensor types please refer to the manual for your specific sensor. This will give you guidance in setting up the parameters specific to your sensor.

Humidity (Humidity1 Description) on Port 1

Settings Relay Control Siren Control **Status Filter**

Select “Status Filter” tab

Send Trap Alert For This Sensor Port Yes ▾

Send Mail Alert For This Sensor Port Yes ▾

Send Trap when Status “Normal” Yes ▾

Send Email when Status “Normal” Yes ▾

Continuous time sensor is in a normal state to report (secs) 0 0 secs

Continuous time sensor is in a warning/error state to report (secs) 0 0 secs

Helpfull Suggestion:
One way to eliminate false warnings in an unstable temperature environment, is to add time in the continuous time to report feature here

Minimum time between each Trap/Email 0 minutes

Day of week Filter Disable ▾

NO ALERT	DAY	TIME
<input type="checkbox"/>	Mon	00:00 - 00:00
<input type="checkbox"/>	Tue	00:00 - 00:00
<input type="checkbox"/>	Wed	00:00 - 00:00
<input type="checkbox"/>	Thu	00:00 - 00:00
<input type="checkbox"/>	Fri	00:00 - 00:00
<input type="checkbox"/>	Sat	00:00 - 00:00
<input type="checkbox"/>	Sun	00:00 - 00:00

Save Reset

Sensor Status Filters: By clicking on the “Status Filters” button shown in the image, you can then adjust the continuous time the sensor is in a warning, error, or normal state before the unit sends the alerts. This feature was added to eliminate false warnings.

3.2. Downloading Sensor Data

The RAMOS Optima’s hardware has data logger memory where it stores the sensor data.

It can save 8,640 points per sensor. So, if you set your collection time period for 15 minutes you can save data up to roughly 3 months of data on the unit. When the memory is full, the oldest data will be overwritten.

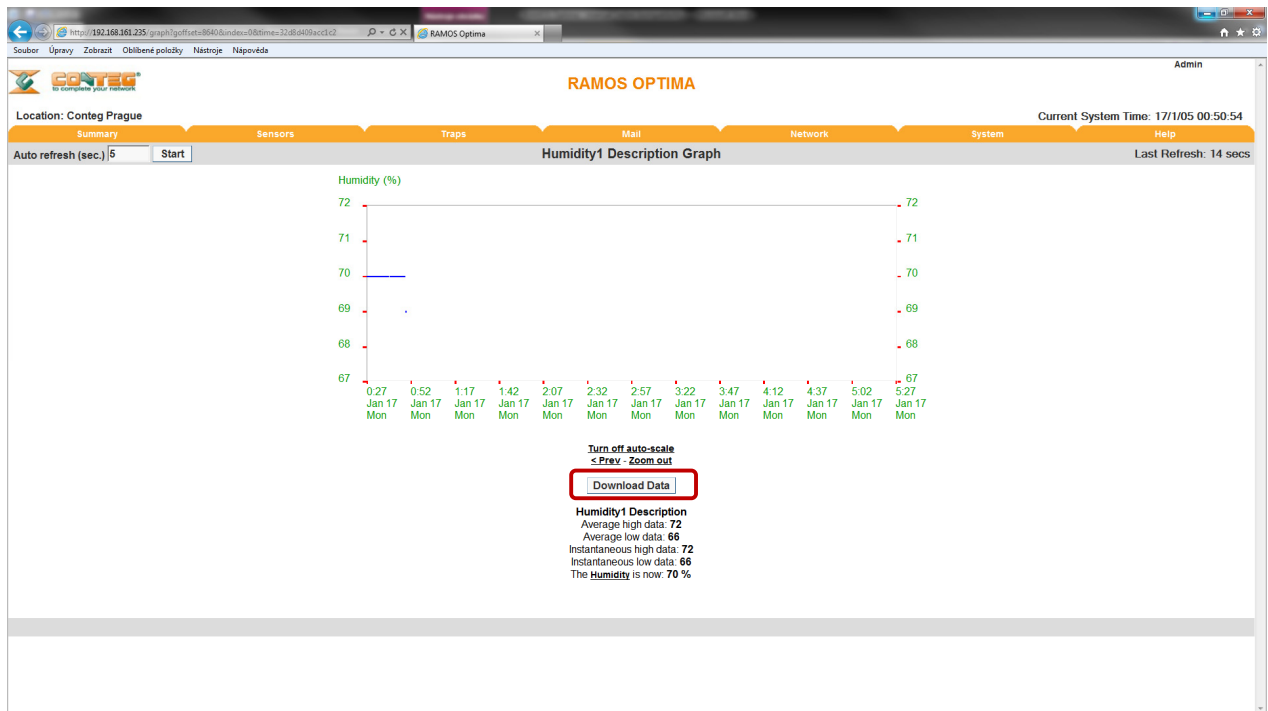
There are a couple ways to get the download the sensor data from the RAMOS Optima. The first is using the dataCollect or dataDownload utilities. You can download either utility from attached CD.

Make sure when running these utilities your network firewall is not blocking the port these run on.

The first is called dataDownload, which is a command line program that will download all the sensor readings stored on the RAMOS Optima. This downloaded data is stored in a text file and can then be easily imported into a spread sheet program, such as MS Excel.

After running this utility, the data will be stored in a directory called datadownload located on your C: drive of your PC and this will have the data for each port in it.

Or you can use our dataCollect utility that allows you to poll the sensor data directly from a PC on the same LAN as your RAMOS Optima in real-time. You can collect an unlimited number of readings and you can collect data from multiple RAMOS Optima simultaneously.



Directly from device is possible to download data from graph page. On Summary tab click on "View" text in graph column for specific sensor.

3.3. Using Remote Syslog to download sensor data

Another way to get and log all the data in real time from the unit is use the remote syslog on the unit.

You can use the remote system log feature to push out the sys log in real time to a remote server, or PC, then this information can be imported into a data base or other program.

There are two types of third party remote syslog utilities that we recommend. One is "rsyslog" and the other "Kiwi" remote syslog.

Rsyslog is in two versions for MS-Windows and GNU/Linux.

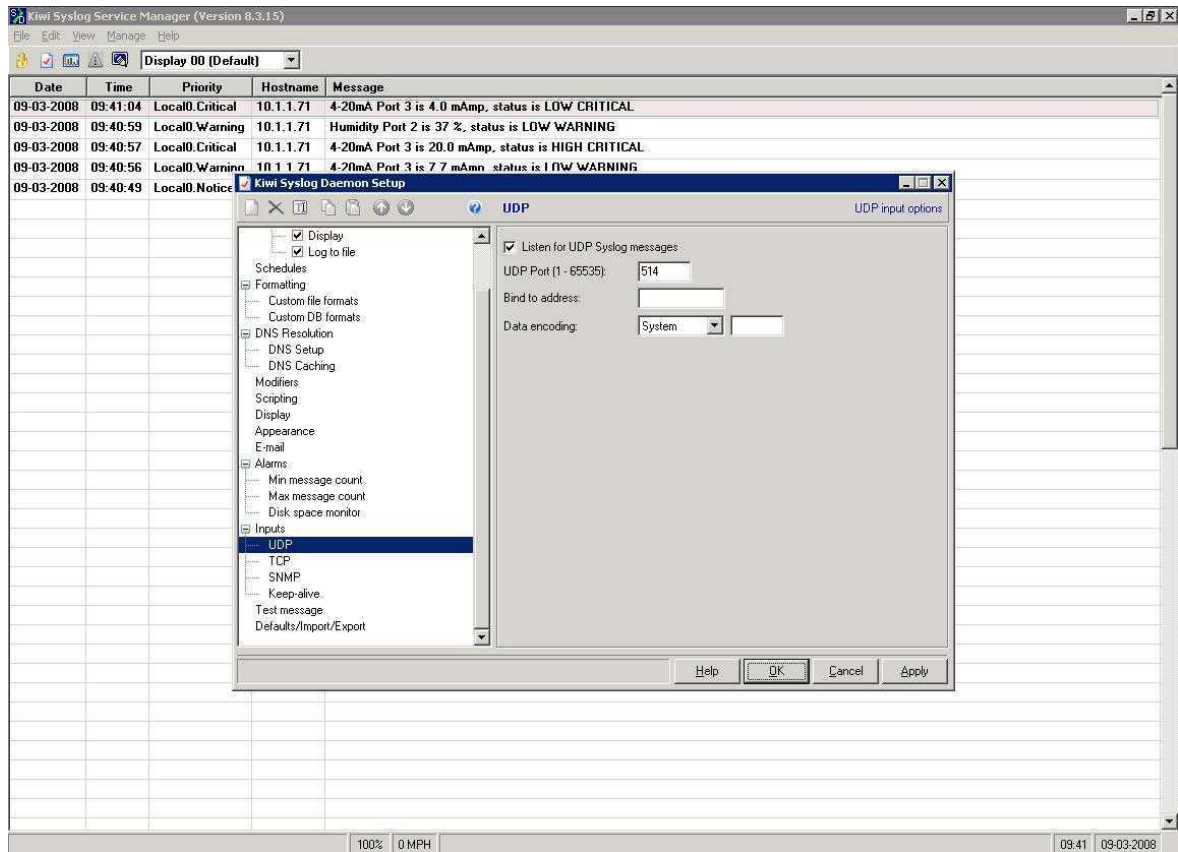
Kiwi is for MS-Windows version only.

Either can be downloaded from these links below:

<http://www.rsyslog.com>

<http://www.kiwisyslog.com/kiwi-syslog-daemon-download/>

You can install and open the Kiwi Syslog program and set the UDP in the Input settings like in the screen shot shown on the next page:



Now you would set the Remote Syslog in the RAMOS Optima. The Remote Syslog IP Address is the IP address of the PC that has the Kiwi Remote syslog program running on it. The Remote Syslog Port is the same port on the Remote syslog program.

It should be showing you the syslog in real time and any entry that is logged in the unit should show on your server. You can also export the data to a text file.

4. Notifications

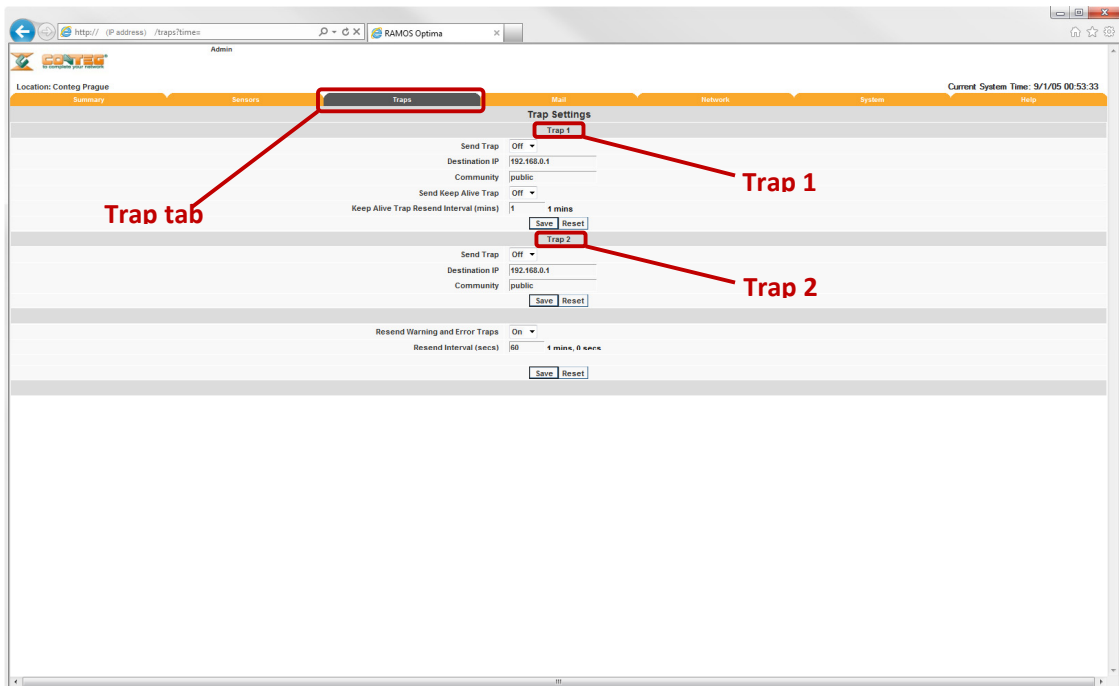
4.1. Setting up a trap

The RAMOS Optima can send an SNMP trap message to two different hosts. Whenever the status changes for a sensor that is online, a trap message can be sent.

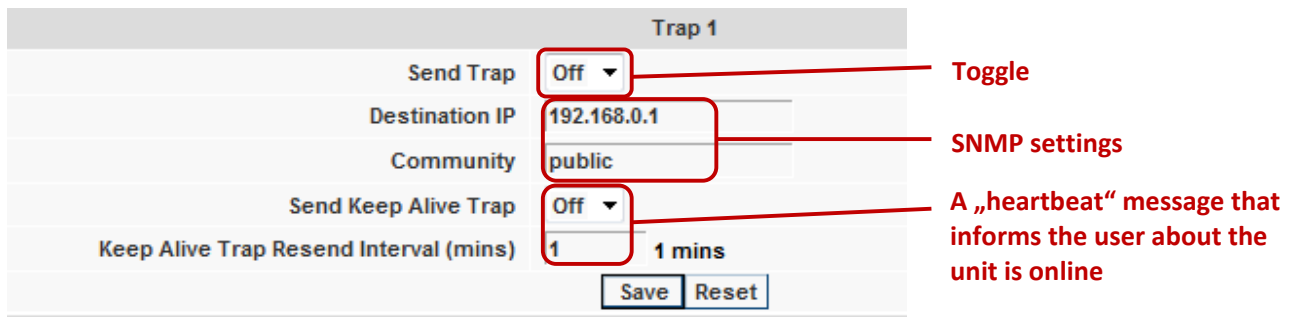
To get to the entry point of this tutorial, complete the following:

- 1) log into the web interface as administrator
- 2) from summary page select the Traps tab

a) After going to the “traps” tab you can see the two traps (“Trap 1”, “Trap 2”)



b) The traps have various fields you need to set. These are explained below.



Send Trap: toggles whether the SNMP trap is on or off

Destination IP: The destination IP address that the trap message will be sent too.

Community: This is the Community of the host that will receive this trap. This is often set to *public*

Send Keep Alive Trap: Will send a trap message at your pre-set time interval. This is useful for informing the user as to whether the unit is still online, or for if you require collection of data at regular intervals regardless of the sensors status.

Keep Alive Resend Intervals: The time interval in which you want the keep alive traps to be sent.

A different trap message is sent for each sensor type such as temperature, humidity, and switch. The trap messages include 6 var bind fields that include the current sensor status (Normal, Critical High, Warning High, Critical Low, Warning Low, and sensor Error), the current sensor value, the level exceeded, the sensor index, the sensor name, and the sensor description.

4.2. Setting up E-mail notifications

As well as, or instead of, using SNMP traps you can also be notified of a sensors change in status by an e-mail report.

To get to the entry points of this tutorial do the following:

- 1) point your browser to the IP address of your unit
- 2) Log in as administrator
- 3) Click the “Mail” tab from the summary page.

- a) Click on the “mail” tab and this brings you to a new page. From here you can setup the various e-mail parameters.

The screenshot shows the 'Mail' configuration page in a web browser. The page has a navigation bar with tabs for 'Summary', 'Sensors', 'Traps', 'Mail', 'Network', 'System', and 'Help'. The 'Mail' tab is selected. The main content area is titled 'Mail Settings' and contains several sections for configuration. A red box highlights the 'E-mail settings' section, which includes fields for 'Send Mail' (On), 'SMTP Server', 'SMTP Port' (25), 'SMTP Authentication' (Disable), 'SMTP Server Login Name', 'SMTP Server Password', 'Email Subject', 'Timeout' (15 seconds), 'Resend Intervals (secs)' (60), and 'Maximum Times to Resend' (0). Below this is the 'Email Address Configuration' section with fields for 'Mail From', 'Mail Recipient', 'Mail Cc1', 'Mail Cc2', 'Mail Cc3', 'Mail Cc4', and 'Mail Cc5'. There are also sections for 'Send Keep Alive Email' and 'Keep Alive Email Settings' with similar fields. At the bottom, there is a 'Test Mail' button and a 'Status of most recent Mail' section showing 'No Status' and 'Last Error Message'.

- b) You can now set up the individual Email options from the fields shown below.

Mail Settings	
Send Mail	Off ▾
SMTP Server	<input type="text"/>
SMTP Port	25
SMTP Authentication	Disable ▾
SMTP Server Login Name	<input type="text"/>
SMTP Server Password	<input type="password"/>
Email Subject	<input type="text"/>
Timeout	15 seconds
Resend Intervals (secs)	60 1 mins, 0 secs
Maximum Times to Resend	<input checked="" type="radio"/> 0 <input type="radio"/> Unlimited
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

Send Mail: This toggles whether the send Email option is on or off.

SMTP Server: The address of your SMTP server

SMTP Authentication: check this option if your SMTP server requires authentication

SMTP Server Login Name: The user name to login to your SMTP server

SMTP Server Password: The password used to login to your SMPT server

E-mail subject: The subject you wish to have for the e-mail. E.g. "RAMOS Optima notification"

Timeout: You can increase the timeout for SMTP servers that have poor connectivity. It is best to leave this number as low as possible while still allowing for communication with the SMTP server to continue.

Resend Intervals: The time between which the e-mails will be sent

Maximum Times to Resend: Set the number of times you wish for the notification e-mails to be resent.

Keep Alive Email Settings	
Send Keep Alive Email	Off ▾
Keep Alive Email Resend Interval (mins)	1 1 mins
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

Send Keep Alive Email: This option will tell the unit to send a heartbeat e-mail. This is useful to tell if the unit is still online or not. It is also used when you require collection of data at regular intervals.

Keep Alive Email Resend Interval: The amount of time between which the keep alive emails are sent.

After setting your parameters click the save button.

- c) Below this you will see there is another section. This is for configuring who the e-mails are to be sent to.

Email Address Configuration	
Mail From	<input type="text"/>
Mail Recipient	<input type="text"/>
Mail Cc1	<input type="text"/>
Mail Cc2	<input type="text"/>
Mail Cc3	<input type="text"/>
Mail Cc4	<input type="text"/>
Mail Cc5	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

Mail From: The email address which you would like the e-mail to appear from. Due to anti-spam features of some SMTP servers this address must be authorized on the SMTP server otherwise the server may deny the email.

Mail Recipient: - The email address of the person you wish for the email to be sent to.

Mail Cc1-5: Up to five additional e-mail addresses may be added.

When you have filled in your required fields remember to click "Save".

d) At the bottom of the page you have two further options.

Mail Status	
Status of most recent Mail	No Status
Last Error Message	
<input type="button" value="Test Mail"/>	

Status of most recent Mail: This can be either "No Status" "Success" or "Failure"

Last Error Message: This is a debugging aid. If the email is not successfully sent, you may find the reason for the problem here.

Test Email: Useful when you first set up the SMTP settings to ensure they are working, or anytime thereafter. Before a test mail can be generated ensure the previous fields described have been completed.

Quick Tip:

If you are having problems connecting to your SMTP email server, then please find some trouble shooting tips in the FAQ section #7 at the end of this manual.

5. System settings

5.1. Network settings

The networks settings page allows you to change network settings for your unit such as the IP address etc.

To get to the entry point of this tutorial, complete the following:

- 1) Point your web browser to the IP address of your unit
- 2) Log in as administrator
- 3) From the settings page, select the network tab.

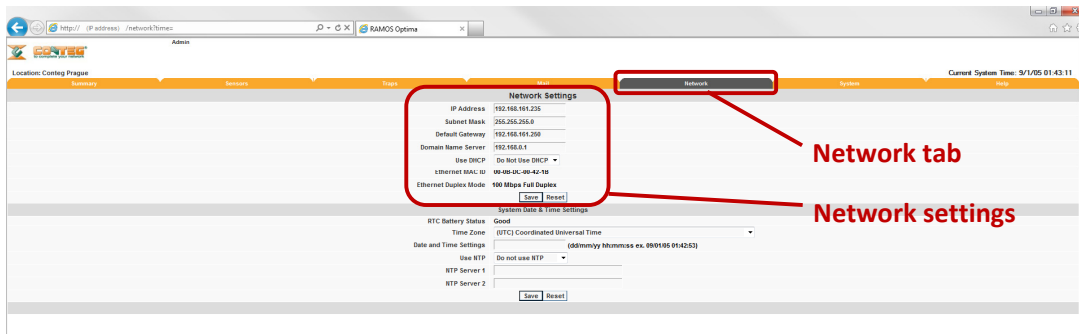
Quick Tip:

You can change your default HTTP port on the unit using this SNMP set command:

```
snmpset -m all -v1 -c <community> <ipaddress> .1.3.6.1.4.1.3854.1.2.2.1.91.0 u <port>
```

You can still use port 80 for web access as well.

- a) After clicking the “Network” tab you will be taken to this page:



- b) Once on this page you can setup the network settings as indicated below:

Network Settings	
IP Address	192.168.161.235
Subnet Mask	255.255.255.0
Default Gateway	192.168.161.250
Domain Name Server	192.168.0.1
Use DHCP	Do Not Use DHCP
Ethernet MAC ID	00-0B-DC-00-42-1B
Ethernet Duplex Mode	100 Mbps Full Duplex
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

IP Address: Use this to change the IP address of your unit

Subnet Mask: Use this to assign the subnet mask of your unit

Default Gateway: Assign the default gateway of your device

Domain Name Server: IP address of your DNS. Used if you wish to use a DNS address for your unit instead of accessing via the IP address.

Use DHCP: The unit can use DHCP to assign its IP address, or it can use a statically assigned IP address. To use DHCP choose “Use DHCP” from the list box and press set. To stop using DHCP choose “Do Not Use DHCP” from the list box and press set. Statically assigning an IP address also turns off DHCP. You can force the RAMOS Optima to voluntarily give up its IP lease and request a new IP lease by choosing Use DHCP from the list box and pressing “set”.

Ethernet MAC ID: This is the MAC address of your unit. This is a read only field

Ethernet Duplex Mode: The duplex mode and speed of your unit. This is a read only field also.

Ensure you apply your new settings by clicking on the “save” button.

c) Below this, there are some further settings for the time and date.

System Date & Time Settings	
RTC Battery Status	Good
Time Zone	(UTC) Coordinated Universal Time
Date and Time Settings	(dd/mm/yy hh:mm:ss ex. 09/01/05 01:42:53)
Use NTP	Do not use NTP
NTP Server 1	
NTP Server 2	
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

RTC Battery Status: This field displays the status of the Real Time Clock battery on the unit. If the status displays “Bad”, you must replace the battery; otherwise, when the RAMOS Optima does not have mains power, the clock will stop running. Therefore, you must re-configure the system time settings on every reboot.

Date and Time Setting: Enter the new date and time in this field. The date and time use the following format: **date/month/year (dd/mm/yy)** and **hour:minute:second (hh:mm:ss)**

Time Zone: Select time zone that is corresponding to your location from this list box.

Use NTP: An NTP (Network Time Protocol) is used to synch your unit clock over a network. There are many options in this list box. The details for each one are as follows:

- **Do Not Use NTP** - select this option to turn off the time synchronization feature.
- **One Time** - the time is synchronized once the Save button is pressed.
- **On System Start Up** - the time is synchronized once the RAMOS Optima is turned on or reboot.

- **Once a Month/Week/Day/Hour** - the time is automatically synchronized every month, week, day, or an hour, respectively.

NTP Server 1 and 2: Set the IP address of the NTP servers to be used. The NTP will synchronize the time with the server that has a smaller number of the stratum.

5.2. System tab

From the systems tab you can input various settings for the unit. These settings are mostly optional.

To get to the entry point of this tutorial, complete the following:

- 1) Point your browser to the units IP address
- 2) Log in as administrator using your admin password
- 3) From the summary page click on the “System” tab

a) When you arrive at the settings page you will see the following screen:

The screenshot shows the RAMOS OPTIMA web interface with the following sections highlighted:

- System tab**: The 'System' tab in the top navigation bar.
- System settings**: The 'System Settings' section containing fields for System Description, System Name, System Location, System Contact, Data Collection Period, Display Logo, Send EmailTrap on boot up, and Delay Time for EmailTrap on boot up.
- Password settings**: The 'Password Settings' section containing Password checking and Use the same password for web interface and SNMP.
- SNMP settings**: The 'SNMP Community Settings' section containing New SNMP get Community, Confirm New SNMP get Community, New SNMP set Community, and Confirm New SNMP set Community.
- Web password settings**: The 'Web Interface Password Settings' section containing New User Password, Confirm New User Password, New Admin Password, and Confirm New Admin Password.
- Syslog settings**: The 'Syslog' section containing Clear Syslog, Sensor Details in Syslog, Remote Syslog, Remote Syslog IP Address, and Remote Syslog Port.
- Cloud settings**: The 'Cloud Monitoring' section containing Monitor Sensor Data, Authentication Token, and Monitoring Interval.

b) The first section is entitled “System Settings”

System Settings	
System Description	RAMOS OPTIMA SP8459 260612
System Name	RAMOS Optima
System Location	Conteg Prague
System Contact	Conteg
Data Collection Period	1 minutes
Display Logo	On
Send Email/Trap on boot up	Off
Delay Time for Email/Trap on boot up	0 sec
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

Date of the released firmware version (DDMMYY)

Last three digits are the version of the firmware

System Description: This is an MIB II value set when the microcode for the unit was installed. It includes the build time and version of the microcode. This is a read only field.

System Name / Location / Contact: These are used to identify the system. They are accessed via standard SNMP utilities. The SNMP utilities use these to get information about the unit.

Data Collection Period: this controls how often data is collected for use in the graph function.

Display Logo: Turn off displaying the logo by using this option. This option can be turned off to allow the web pages to be loaded faster.

Send Email / Trap on boot up: Use this option to send an Email and SNMP trap each time the system boots up.

Delay Time for Email / Trap on boot up: The time in seconds to delay before sending the boot up Email or trap.

c) The next section is used for setting a user password, or changing the admin password.

Note: To allow the User to login without having to enter a password use “public” in the SNMP get.

The User web interface login password is the same as the SNMPget community and the Admin is the same as the SNMPset\get community string. You set your web interface login passwords in the SNMP community settings by enabling the “Password checking” above then entering your passwords into these fields.

Password Settings	
Password checking	Disable ▾
Use the same password for web interface and SNMP	Yes ▾
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

Password Checking: toggle whether the password is required or not

Use the same password for the web interface and SNMP: Ties the SNMP communities to the web interface login passwords.

SNMP Community Settings	
New SNMP get Community	<input type="text"/>
Confirm New SNMP get Community	<input type="text"/>
New SNMP set Community	<input type="text"/>
Confirm New SNMP set Community	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Reset"/>	
Web Interface Password Settings	
New User Password	<input type="text"/>
Confirm New User Password	<input type="text"/>
New Admin Password	<input type="text"/>
Confirm New Admin Password	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

The Firmware allows you to separate the SNMP communities from the web interface login passwords

New User Password: Type in the password for the user account

Note: To allow the User to login without having to enter a password use “public” in the User password.

Confirm New User Password: Confirm the new password for the user account

New Admin Password: Type in the password you wish for the admin account

Confirm New Admin Password: Confirm the new password for the admin account

d) Next you have the options for resetting the SNMP trap settings

SNMP	
SNMP Port	<input type="button" value="Reset To Default"/>
SNMP Trap Port	<input type="button" value="Reset To Default"/>

SNMP Port: Use this option to reset the SNMP port setting to its default

SNMP Trap Port: Use this option to reset the SNMP Trap Port to its default setting

Quick Tip:

Your SNMP port default is 161 and the SNMP TRAP port default is 162. You can set your SNMP ports with the following commands:

```
snmpset -m all -v 1 -c <community> <ipaddress> .1.3.6.1.4.1.3854.1.2.2.1.99.0 u <new snmp port>
```

```
snmpset -m all -v 1 c <community> <ipaddress> .1.3.6.1.4.1.3854.1.2.2.1.100.0 u <new snmp trap port>
```

e) Finally you have the option for setting up the system log parameters.

Syslog	
Clear Syslog	<input type="button" value="Clear"/>
Sensor Details in Syslog	Sensor Type and Port ▼
Remote Syslog	Off ▼
Remote Syslog IP Address	<input type="text" value="192.168.0.1"/>
Remote Syslog Port	<input type="text" value="514"/>
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

Clear Syslog: Used to clear the system log of the messages for the unit

Remote Syslog: You can set up the unit to send its syslog message in a standard format acceptable to a remote syslog server. For example, the Logalot system from Somix.

Remote Syslog IP Address, Remote Syslog Port: You can set the IP address and port of the remote syslog server to which the unit will send the log messages.

Quick Tip:

One way to export your sensor data in real time to a remote location is with the “Remote Syslog” feature. If you want to use the “Remote Syslog” feature for this, please find more detailed information on how to set this up in the FAQ section #7 at the end of this manual.

6. Making your unit visible to the internet

So far the manual has simply covered the basic set up. The setup we have just created will allow you to access your unit on a Local Area Network (LAN). We have setup SNMP traps so that your SNMP software, such as Whatsup Gold, or HP Openview can collate information from your unit.

However, what if you wish to be able to remotely access your unit from anywhere in the world? This is possible; however, the following steps are only an outline guide. Your exact setup and configuration will often depend on your network equipment and setup. You are going to need access to your router, if you are using one and knowledge of whether your IP address is static or dynamic.

6.1. Simple setup

- a) Let's imagine that your unit is connected to a router on your network, and the following IP addresses are assigned.

Your unit's IP address is the default 192.168.0.100.

Your computer's IP address is 192.168.0.200

Your router's IP address is 192.168.0.300

- b) To find out your routers external IP address, go to <http://www.seemyipaddress.com/>

Let's imagine your routers external IP address is 278.67.04.09

- c) You now need to setup port forwarding on your router. This varies depending on your routers model. Generally, you need to point your browser to your routers IP address (in this case 192.168.0.300). This will then allow you to log into your routers administration interface. You can find how to go about doing this for your router on www.portforward.com For an example of how to do this for a commonly used router follow this link: http://www.portforward.com/english/routers/port_forwarding/Linksys/WRT54G/HTTP.htm

You need to setup your routers HTTP forwarding to port 80. This will then mean when you access your router using the external IP address you will be forwarded to your unit's internal IP address.

- d) To test this, open your web browser, and go to your external IP address (in our example 278.67.04.09). If you are using a dynamic IP address, it is the best to check it again before doing this as it may have changed since the start of this tutorial.
- e) To make this easier you could use a dynamic DNS (Dynamic Name Server). This means you no longer need to remember IP addresses. You will instead register a domain name (for example myRAMOSOptima.homeip.com). This will then automatically point your routers external IP address (e.g. 278.67.04.09). This will require you to register the domain name and open an account with a DNS server provider. We recommend www.dyndns.com as they allow up to 5 free domain names to be registered.
- f) If you have set everything up correctly you will now be able to access your unit from anywhere in the world by simply pointing your web browser to your DNS address.

6.2. Setting up your PC's routing table

*To set up the routing table, open a DOS window (start, run type *command* press enter) and at the command prompt enter.

```
>route add 192.168.0.100 10.1.1.20
```

Where 10.1.1.20 is the IP address of the Ethernet interface on the PC that the unit is plugged into with the crossover cable.

Now ping* 192.168.0.100 to see if the connection was successful.

7. Quick Facts and FAQ:

Question:

How does the RAMOS Optima record the sensor data and how much can it store?

Answer:

The RAMOS Optima will record and store the changes for the dry contacts and sensors as the unit's hardware has a data logger where it stores this data in memory. It can save 8,640 points per sensor. So, if you set your collection time period for 15 minutes for example, then you can save data up to 3 months on the unit.

Question:

Can you please tell how often the RAMOS Optima unit interrogates each sensor to obtain the sensor's readings?

Answer:

This really depends on the sensor type that you have connected to the unit. The switch type sensor interrogates with the RAMOS Optima more than 2 times per second.

The temperature and analog type sensors interrogate 1 time per second.

But all of the readings depend on the environment like the number of sensors you have online and your email and SNMP trap alert settings.

Question:

Is there a way to reboot the RAMOS Optima unit's web interface remotely?

Answer:

Yes, you can reboot the unit's web interface remotely using this SNMP command and OID here:

```
snmpset -m all -v 1 -c <community> <IPaddress> .1.3.6.1.4.1.3854.1.2.2.1.106.0 i 1
```

Question:

Is there any way to edit the content of the email alerts that are sent out from my RAMOS Optima unit?

Answer:

Yes, we have added a separate e-mail notification function. You can set this by using the following SNMP command:

```
snmpset -m all -v 1 -c <community> <ip address> .1.3.6.1.4.1.3854.1.2.2.1.112.0 l <separate>
```

When <community> is admin password <ip address> is ip address of the unit

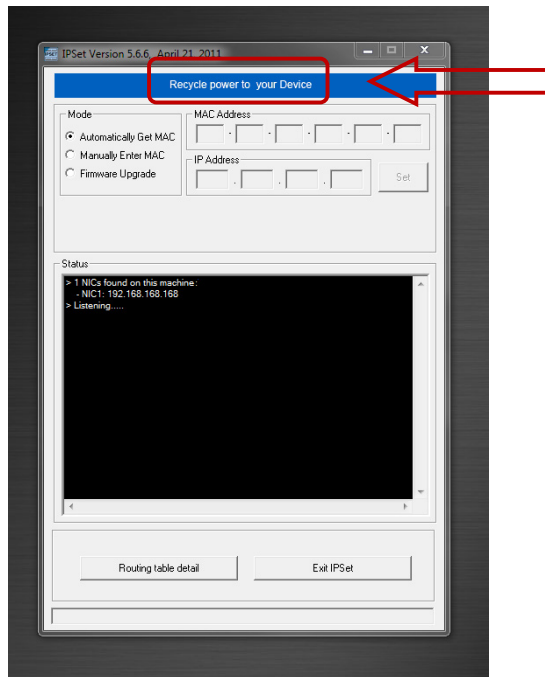
<separate> is for the separate e-mails or not if this value is 1 it will have the separate e-mails if this value is 0 it will not have the separate e-mails.

Question:

I have forgotten the IP address that my RAMOS Optima is configured with. Is there a way I can determine this IP?

Answer:

Yes, you can unplug the power cord, then plug it back in, to cycle the power on the RAMOS Optima while you have the IPSet utility software running on your PC. When you open the IPSet utility, it will say "Recycle power to RAMOS Optima" as shown in this screen shot on next page:



When the RAMOS Optima is powered up, the IPSet will capture its IP address, and then you will be able to click on the flashing button to open the web interface. You can download the IPSet utility from Conteg web site.

Question:

I am still having trouble connecting to the unit and opening the web interface, what could be the problem and what should I try?

Answer:

If you are using IE7 or IE8 web browser versions, try placing the unit in the “trusted sites” list. Try clearing the cache and refreshing your browser with the ctrl + F5 key. Are you using HTTPS? The RAMOS Optima not support HTTPS. This is only available on the RAMOS Ultra unit.

Question:

I have assigned the gateway IP, and when I click Save, it reverts back to the default IP?

Answer:

This happens when the device is not able to find the IP entered. When the IP is entered the device searches for the IP and will accept it if it is found, or else it will revert back to the default IP.

Question:

I have an alert condition from one of my sensors attached to my RAMOS Optima unit, in that the base unit (RAMOS Optima) started to send e-mail alerts. Before I was able to fix the problem, my SMTP server was clogged with several hundreds of messages waiting in the outbound queue to be sent.

Is there a way to add a parameter to the base unit’s web interface that defines the interval between successive e-mail alerts in order to limit the rate at which these alerts are being sent and keep the SMTP server operational?

Answer:

Yes, we have the "Minimum time between each Trap/Email" feature in the Sensor Settings > Sensor Status Filters button. This feature can limit the traps and e-mails that the unit will send. A similar parameter also exists on the RAMOS Optima's web interface called "Resend Intervals (secs)" and another one called "Maximum Times to Resend" which will also limit the alerts being sent.

Question:

I am having trouble connecting the RAMOS Optima to my SMTP email server, what could be the problem?

Answer:

Here are some things to check when having trouble with SMTP server connections and saving your settings.

Try changing your SMTP server from the name to the IP address of the server.

The SMTP server entered is wrong.

The send mail option is not enabled in the Mail settings page.

The timeout period entered is too low.

The gateway IP is not entered in the network page

The mail from address is not set

The mail server is not responding

The mail from address is not validated in the mail server

The mail server settings prohibit it from accepting connections from the device IP

The mail server is an SSL type, which is not supported by the RAMOS Optima units.

Question:

I am using Microsoft Exchange Server, but the Exchange server fails to receive the email alerts from my RAMOS Optima unit, does my RAMOS Optima support MS Exchange Server?

Answer:

Yes, the units do support MS Exchange Server. However, the RAMOS Optima's only support basic authentication. MS Exchange by default, when a connector is set up uses TLS, then basic. You have to uncheck this option.

Question:

Is there a way to download my sensor data, or push this out in real time to my PC?

Answer:

Yes, you have several options for collecting, downloading and storing the data from the RAMOS Optima units. See the section in this manual that covers this.

You can graph each sensors output readings and then download that data as a text file, so you can import it into say an Excel spread sheet.

We also have the two utilities that allow you to download the sensor data. The first is called dataDownload, which is a command line program that will download all the sensor readings stored on the RAMOS Optima. This data is then stored in a text file and can then be easily imported into a spread sheet program, such as MS Excel.

Or you can use our dataCollect utility that allows you to poll the sensor data directly from a PC on the same LAN as your RAMOS Optima in real-time. You can collect an unlimited number of readings and you can collect data from multiple RAMOS Optima's simultaneously.

These software applications are for download from CD or Conteg web site.

Question:

I am not too familiar with SNMP or what OID's to use with your products. How would I find out more about this and what OID's to use?

Answer:

We have an OID manual that includes basic information on SNMP and were to find out more information on this. The manual also includes all our OID's and related information. Manual is on product CD or on our web site.