

USER MANUAL  
**UPS SERIES**  
NETWORK INTERFACE CARD  
UPS-IPCARD



**Middle Atlantic Products**



I-00453

Rev C

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## **INTRODUCTION**

### **Overview**

The Middle Atlantic Network Interface Card allows for remote monitoring and control of a UPS attached to a network. After installing the hardware and configuring an IP address, the user can access, monitor, and control the UPS from anywhere in the world. Simply use a web browser such as Internet Explorer or Firefox to access your UPS. Servers and workstations can be protected by the UPS utilizing the Power Manager to gracefully shutdown when signaled by the Network Interface Card.

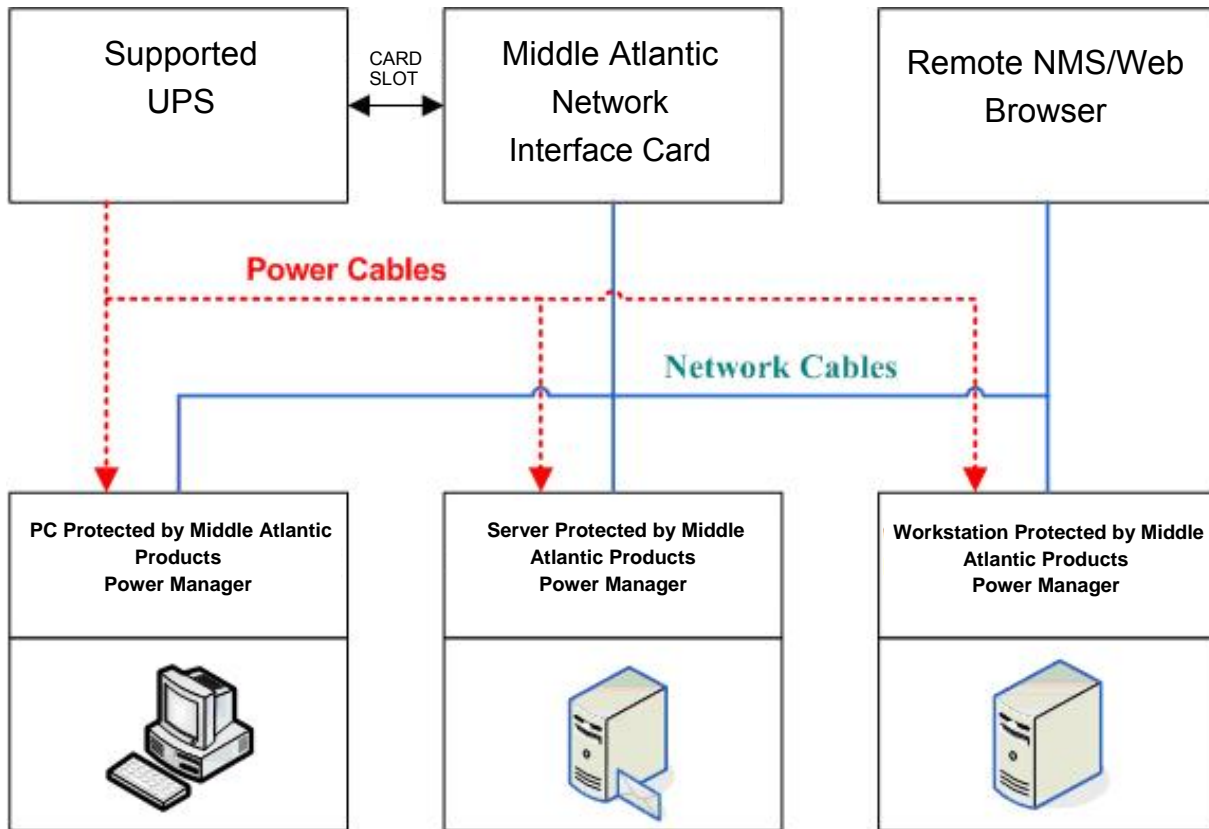
### **Features**

- Real time UPS monitoring
- Remote management and configuration of UPS via Web Browser or NMS
- Auto-shutdown to protect servers/workstations from data lose due to power failure
- Schedule shutdown/start-up/reboot of the UPS via remote control
- Event logging to trace UPS operational history
- Data logging for analyzing power conditions
- Event notification via email and SNMP traps
- Support TCP/IP, UDP, SNMP/HTTP, NTP, DNS, SMTP protocol
- SNMP MIB provided
- Quick installation and user friendly interface
- User upgradeable firmware via FTP
- Security management provided

### **System Requirements**

- A computer with a Windows or Linux Operating System (for optional Power Manager Client)
- An Ethernet connection to an existing network
- NMS (Network Management Station) compliant with SNMP (for optional NMS management)

## APPLICATION



## UNPACKING

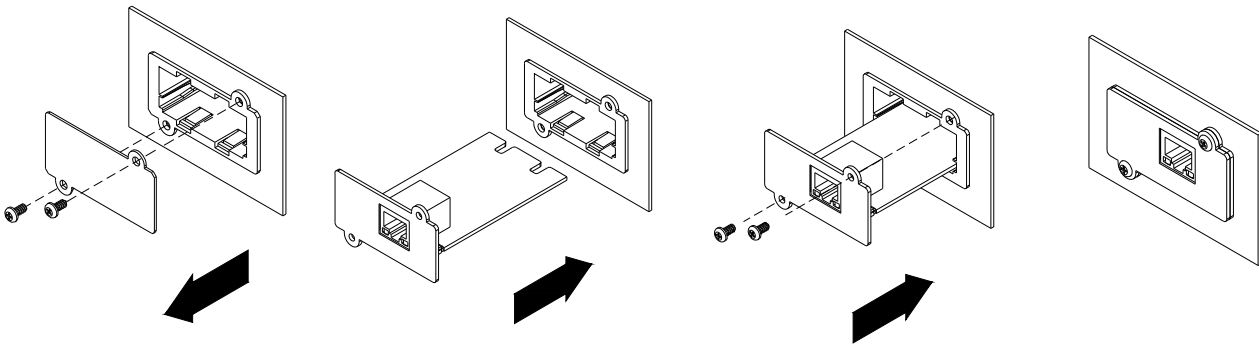
Inspect the Network Management Card upon receipt. The package should contain the following:

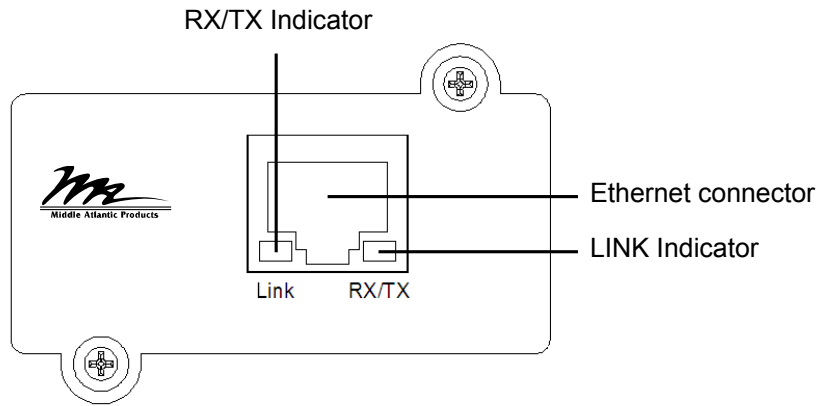
- Middle Atlantic Network Interface Card.
- Middle Atlantic Products Power Manager CD with software and user manuals.

## **INSTALLATION GUIDE**

### **Step 1 - Hardware Installation**

- 1) Turn off the UPS before removing the expansion port cover on the UPS.
- 2) Remove the two retaining screws from the expansion port cover and remove the cover.
- 3) Install the Middle Atlantic UPS-IPCARD into the expansion port.
- 4) Re-install and tighten the retaining screws.
- 5) Connect the Ethernet cable to the LAN port on the Middle Atlantic UPS-IPCARD.
- 6) Turn on the UPS.





**Definitions for LED Indicators**

Link LED color	Condition
Off	The Network Management Card is not connected to the Network/or the Network Interface Card Power is off.
On(Yellow)	The Network Interface Card is connected to the Network.
<b>RX/TX LED color</b>	
Off	The Network Interface Card power is off.
On(Green)	The Network Interface Card power is on.
Flashing	- Receiving/transmitting data packet. - Reset finished.

**Step 2 - Configure the IP address for the Middle Atlantic Network Interface Card.**

**Method 1: Using the Middle Atlantic Power Device Network Utility Tool**

- 1) Install the Middle Atlantic Power Device Network Utility Tool from the included CD. It is located on the CD in the \software folder. Double click the “Middle Atlantic UPS-IPCARD Setup Utility” installation file, “MAP\_SNMP\_Setup.msi” to begin the installation.
- 2) After installation is complete, run the “Middle Atlantic UPS-IPCARD Setup Utility” program. Under “All Programs”, select “Middle Atlantic UPS-IPCARD Setup Utility.”
- 3) The main dialog of the “Middle Atlantic UPS-IPCARD Setup Utility” program is shown in Figure 1. The configuration tool will display all Middle Atlantic network cards of present on the same network. The "Refresh" button is used to search the entire local network for SNMP cards.

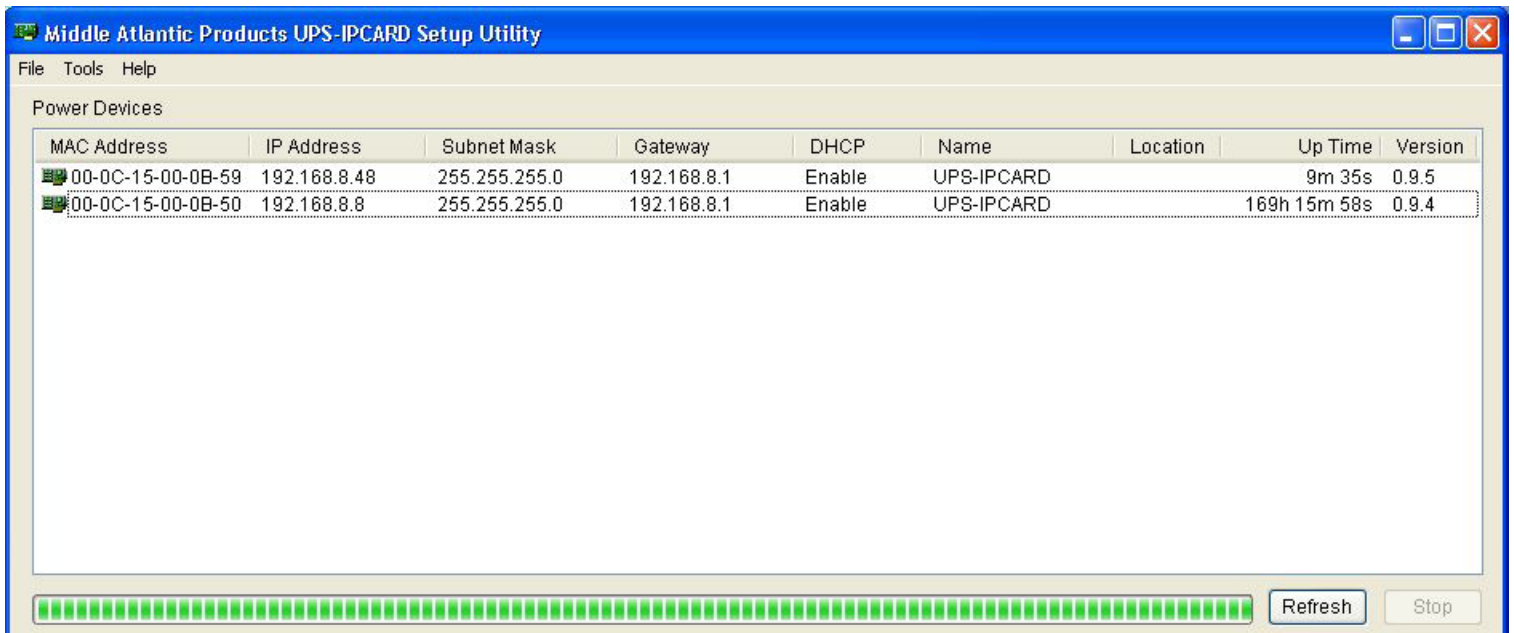


Figure 1. The main window of the “Middle Atlantic UPS-IPCARD Setup Utility” program.

- 4) Select the SNMP card you are setting up. Click on the Tools menu and select “Device Setup” or double click the SNMP card you want to configure.
- 5) You can modify the IP Address, Subnet Mask, and Gateway address for the Device MAC Address listed in the Device Network Settings window, as shown in Figure 2. The default IP Address is 192.168.20.177, the default Subnet Mask is 255.255.255.0.

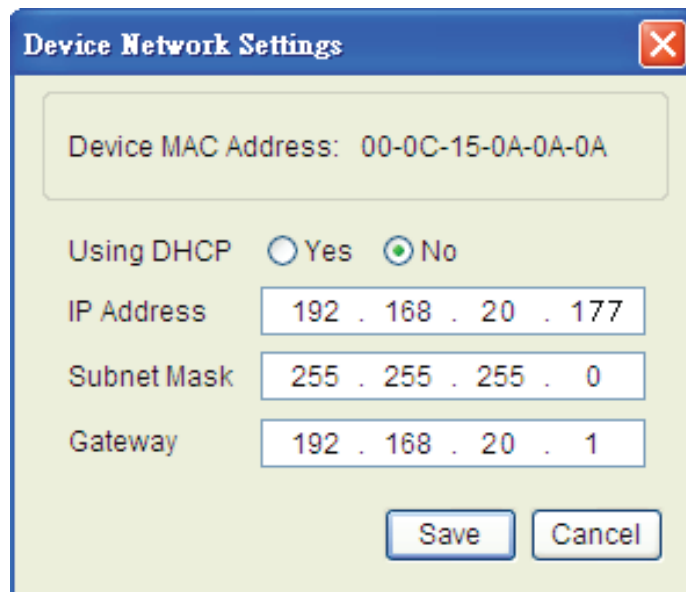


Figure 2 - The SNMP card-setting window

- 6) To modify the IP Address, Subnet Mask, or Gateway Address, enter the new addresses into the corresponding fields.

- 7) You will need to enter a User Name and Password for the SNMP card in the authentication window, as shown in Figure 3. \*Default user name: **admin**; Default password: **admin**

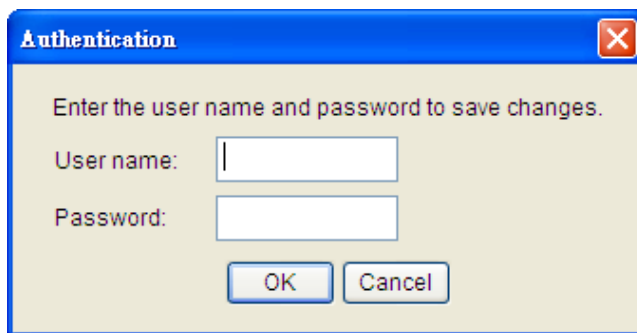


Figure 3 - Authentication window

After logging in for the first time, the system forces you to change the default password for security purposes.

- 8) If the IP address is successfully set, you will see a message that the IP set up is OK, as shown in Figure 4.



Figure 4 - Setup IP Address successfully message



## **Method 2: Using a command prompt**

- 1) Obtain the MAC address from the label on the Network Interface Card labels on top. Each Interface card has a unique MAC address.
- 2) Use the ARP command to set the IP address.

### **Example:**

To assign the IP Address 192.168.20.240 for the Network Interface Card, which has a MAC address of 00-0C-15-00-00-01 you will type in the following command prompt from a PC connected to the same network as the Network Interface Card.

1. Type in “arp-s 192.168.20.240 00-0C-15-00-00-01” then press **Enter**.
- 3) Use the Ping command to assign a size of 123 bytes to the IP.
    1. Type in “ping 192.168.20.240 -1 123” then press **Enter**
    2. If the replies are received, your computer can communicate with the IP address.

To select an IP address for the Network Interface Card, please refer to Appendix 1.

# UPS REMOTE MANAGEMENT LOGIN

UPS Remote Management | Login

UPS Remote Management

User name: admin

Password: ●●●●●●

LOGIN

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## UPS REMOTE MANAGEMENT LOGIN:

There are two account types:

- Administrator (default username: admin; default password: admin)
- Viewer (default username: guest; default password: guest)

## NOTE:

- The Administrator can access and control all functions, including enabling/disabling of the Viewer account. The Viewer's access allows them read permissions for all functions, but they cannot control or change any settings.
- After logging in as the Administrator for the first time, the system forces you to change the default password for security purposes.

# SUMMARY

The screenshot shows the 'UPS Remote Management' web interface in a Windows Internet Explorer browser. The address bar shows 'http://192.168.8.8/summary.html'. The page title is 'UPS Remote Management' and the logo for Middle Atlantic Products is visible. The user is logged in as an administrator from IP 192.168.8.44. The interface is divided into several sections:

- Current Condition:** A message icon indicates 'UPS is normal'.
- UPS Status:** A table showing:
  - Battery Capacity: 100% (represented by a full green bar)
  - Load: 0% (represented by an empty grey bar)
  - Remaining Runtime: 139 min(s)
- System Data:** A table showing:
  - Name: UPS-IPCARD
  - Location: (empty field)
  - Contact: (empty field)
  - Uptime: 2day, 15hr, 5min, 21sec.
- Recent Events:** A table with columns 'Date & Time' and 'Event':

Date & Time	Event
09/18/2010 22:35:18	Admin login from 192.168.8.44.
09/16/2010 21:24:04	Admin logout from 192.168.8.27.
09/16/2010 21:23:03	Admin login from 192.168.8.27.
09/16/2010 03:20:59	Communication with the UPS has been established
09/14/2010 22:02:16	Communication with the UPS has been established

At the bottom of the page, there is a footer with copyright information: '© Middle Atlantic Products, Inc. All Rights Reserved www.middleatlantic.com rev 0.9.4'.

## UPS SUMMARY:

**Current Condition:** Displays the current operating condition of UPS

### UPS Status:

- Battery Capacity:** Remaining battery capacity
- Load:** Current load as a percentage of max. load
- Remaining Runtime:** On battery run-time

### System Data:

- Name:** UPS name (editable field)
- Location:** UPS location (editable field)
- Contact:** Primary contact (editable field)
- Uptime:** Time since last power on

### Recent Device Events:

**Recently Occurring Events:** The maximum number of events displayed is 5 (five)

# STATUS

The screenshot shows the 'STATUS' page of the UPS Remote Management interface. The page has a dark blue header with the 'UPS Remote Management' logo and navigation links. The main content area is white and contains a sidebar menu on the left and a main data table on the right. The sidebar menu includes 'Status' (highlighted), 'Information', 'Configuration', 'Control', 'Outlet Control', 'Diagnostics', and 'Schedule'. The main data table is titled 'Status:' and is organized into sections: 'Input', 'Output', 'Battery', and 'System'. Each section contains specific metrics and their values.

Status:	
<b>Input</b>	
Line Voltage	116.0 V
<b>Output</b>	
Voltage	116.0 V
Frequency	60.0 Hz
Load	0 %
<b>Battery</b>	
Remaining Capacity	100 %
Remaining Runtime	139 min(s)
<b>System</b>	
Temperature	95.0 °F

## STATUS:

### Input:

**Line Voltage:** Current input voltage (utility power)

### Output:

**Voltage:** Output voltage of the UPS

**Frequency:** Output frequency

**Load:** Load expressed as a percentage of maximum load

### Battery:

**Remaining Capacity:** Remaining battery capacity

**Remaining Runtime:** On battery run-time

### System:

**Temperature:** Internal temperature of the UPS

# INFORMATION

The screenshot shows the 'UPS Remote Management' web interface. The browser title is 'UPS Remote Management'. The page header includes the logo for Middle Atlantic Products, Inc. and the text 'UPS Remote Management'. The user is logged in as 'Administrator' from IP address '192.168.8.44', with a 'Logout' link. The navigation menu includes 'Summary', 'UPS', 'Logs', 'System', and 'Help'. The main content area is titled 'Information:' and displays the following details:

<b>Status</b>	Model Name	UPS-1000R
<b>Information</b>	Voltage Rating	120.0 V
<b>Configuration</b>	Operating Frequency	57-63 Hz
<b>Control</b>	Power Rating	1000 VA
<b>Outlet Control</b>	Maximum Load	750 Watts
<b>Diagnostics</b>	Battery Voltage Rating	48.0 V
<b>Schedule</b>	Firmware Version	1.750

At the bottom of the page, there is a footer with the following text: '© Middle Atlantic Products, Inc.', 'All Rights Reserved', 'www.middleatlantic.com', and 'rev 0.9.3'.

## INFORMATION:

**Model Name:** The model name of the UPS

**Voltage Rating:** The nominal operating voltage rating

**Operating Frequency:** The frequency of the UPS input/output power

**Power Rating:** The capacity of the UPS in Volt-Amperes (VA)

**Maximum Load:** The capacity of the UPS in Watts

**Battery Voltage Rating:** The DC voltage rating of the battery

**Firmware Version:** The revision number of the UPS firmware

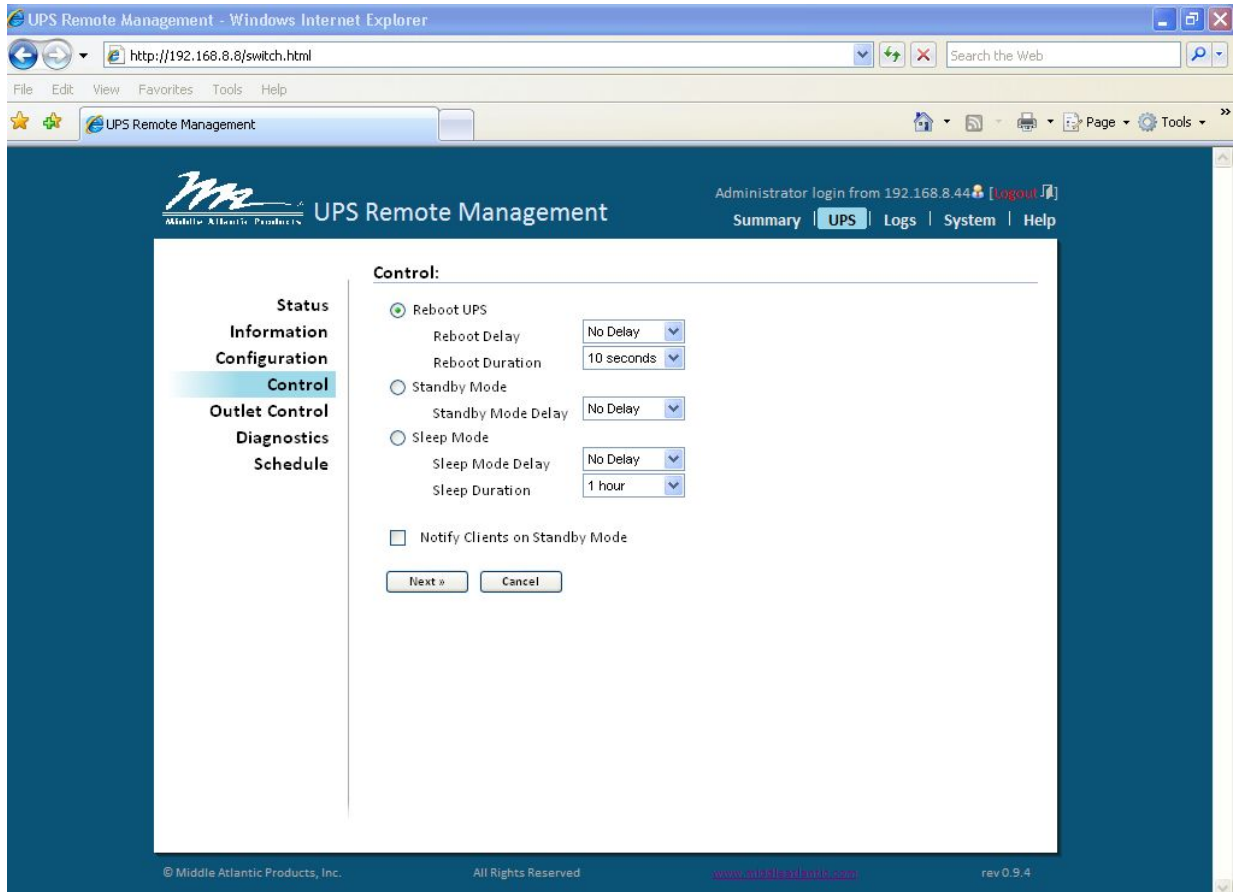
# CONFIGURATION

The screenshot displays the 'UPS Remote Management' web interface. At the top, the browser title is 'UPS Remote Management'. The page header includes the logo for Middle Atlantic Products, the text 'UPS Remote Management', and the user information 'Administrator login from 192.168.8.44 [Logout]'. A navigation menu contains 'Summary', 'UPS', 'Logs', 'System', and 'Help'. On the left, a sidebar menu lists 'Status', 'Information', 'Configuration' (highlighted), 'Control', 'Outlet Control', 'Diagnostics', and 'Schedule'. The main content area is titled 'Configuration:' and contains the setting 'Audible Alarm' with a checked checkbox and the label 'Enable'. Below this setting are 'Apply' and 'Cancel' buttons. The footer contains copyright information: '© Middle Atlantic Products, Inc.', 'All Rights Reserved', the website 'www.middleatlantic.com', and the version 'rev 0.9.3'.

## CONFIGURATION:

**Audible Alarm:** Enable or disable audible alarms

# CONTROL



## CONTROL:

**Reboot UPS:** Turns the UPS off and back on

**Reboot Delay:** How long the UPS waits before it turns off in response to a Reboot UPS

**Reboot Duration:** Period of time between 'power off' and 'power on' following a Reboot command

**Standby Mode:** Put UPS into standby mode

**Standby Delay:** How long the UPS waits before it turns off in response to a Standby Mode

**Standby Delay:** How long the UPS waits before it turns off in response to a Standby Mode

**Sleep Mode:** Temporarily suspends UPS operation for a pre-defined period of time

**Sleep Mode Delay:** How long the UPS waits before it turns off in response to Sleep Mode commands

**Sleep Duration:** Period of time between entering and recovering from Sleep Mode command

**Notify Clients on Standby Mode:** Alert Power Manager clients that UPS is entering Standby Mode

**Cancel:** Cancels a pending action

**Click Next:** The UPS will turn off in approximately 0 seconds. Once off, the UPS will restart after 10 seconds

# OUTLET CONTROL (INDIVIDUAL OUTLET MODELS) (UPS-1000R-8-IP, UPS-2200R-8-IP)

The screenshot shows the 'UPS Remote Management' web interface. The main content area is titled 'Individual Outlet Control:'. It features a table with the following data:

Outlet	Current State	ON	OFF
1. Outlet1	ON	<input type="radio"/>	<input type="radio"/>
2. Outlet2	ON	<input type="radio"/>	<input type="radio"/>
3. Outlet3	ON	<input type="radio"/>	<input type="radio"/>
4. Outlet4	ON	<input type="radio"/>	<input type="radio"/>
5. Outlet5	ON	<input type="radio"/>	<input type="radio"/>
6. Outlet6	ON	<input type="radio"/>	<input type="radio"/>
7. Outlet7	ON	<input type="radio"/>	<input type="radio"/>
8. Outlet8	ON	<input type="radio"/>	<input type="radio"/>

Below the table are two buttons: 'Apply' and 'Reset'. The left sidebar contains navigation options: Status, Information, Configuration, Control (highlighted), Diagnostics, and Schedule. The top navigation bar includes 'Summary', 'UPS', 'Logs', 'System', and 'Help'. The footer contains copyright information for Middle Atlantic Products, Inc., the website URL www.middleatc.com, and the version number rev 0.9.3.

## OUTLET CONTROL:

The Outlet Control page displays the current state of, and provides on/off control for each individual outlet. Note: if a control PC has been assigned to a specific outlet within Power Manager, this outlet will be annotated with an asterisk (\*). Select the outlet(s) to be controlled using the radio buttons and click *Apply*

### Outlet Control Options:

**On:** Turns the selected outlet on immediately

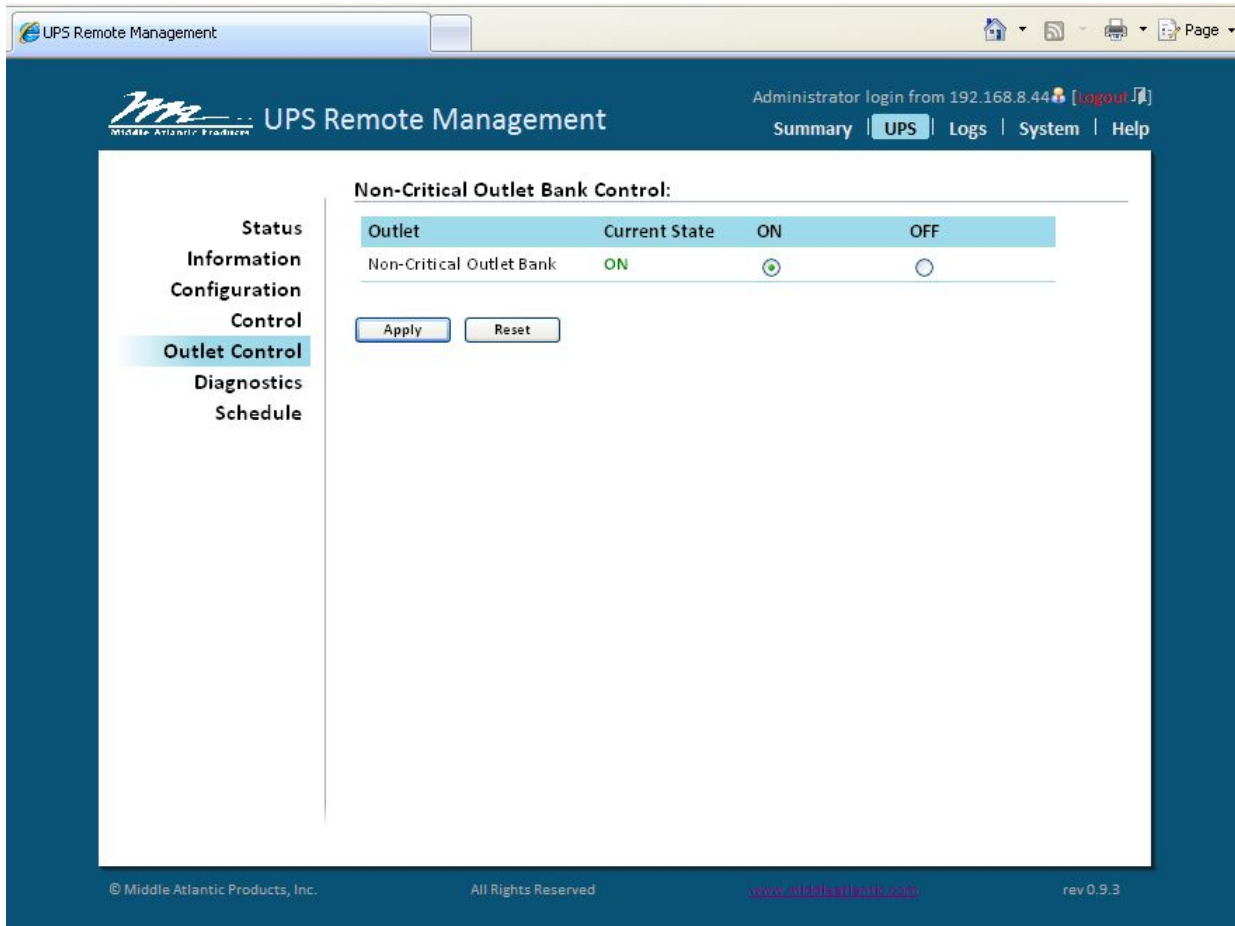
**Off:** Turns the selected outlet off immediately

### Edit Outlet Name:

To change or update an outlet name simply click on the respective outlet name, enter the next text and click *Apply*. Outlet name is restricted to a maximum of 15 characters.



# OUTLET CONTROL (BANK OUTLET MODELS) (UPS-1000R-IP, UPS-2200R-IP)



## OUTLET CONTROL:

The Outlet Control page displays the current state of, and provides on/off control for the Non-Critical Outlet Bank.

### Non-Critical Outlet Bank Control Options:

**On:** Turns non-critical outlet bank on immediately

**Off:** Turns non-critical outlet bank off immediately

# DIAGNOSTICS

UPS Remote Management

Administrator login from 192.168.8.44 [Logout]

Summary | **UPS** | Logs | System | Help

**Diagnostics:**

**Battery Test**

Last Test Result  
Last Test Date

Initiate

**Runtime Calibration**

Estimated Runtime  
Last Calibration Result **PASS**  
Last Calibration Date **09/04/2010**

Start Abort

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## DIAGNOSTICS:

**Initiate:** Start the battery test immediately

**BATTERY TEST:** During a battery test the UPS will switch to battery mode to verify that the batteries are good. Use this test to perform a quick battery test. You can also view the date and time of the last test

### PERFORM A BATTERY TEST:

1. Click the "Initiate" button, and you will hear a beeping sound while the test is being performed
2. Battery Test will report the result after the latest test is completed and display as follows:

### LAST TEST RESULT:

- PASSED:** The battery works normally.  
**NONE:** The battery has not been tested.  
**FAILED:** The UPS battery test failed.  
**FORBIDDEN:** Battery missing or internal error.  
**LAST TEST DATE:** Shows the date of the last test performed.

### SUGGESTIONS IF THE BATTERY TEST FAILED:

1. Clear "Remaining Runtime is Insufficient" event and/or the "Output is Overloaded" event and run another battery test.
2. Replace the batteries if the battery test fails again.
3. Contact Middle Atlantic Products for assistance if the battery test fails after the Batteries have been replaced.

**RUNTIME CALIBRATION:**

The runtime calibration synchronizes the runtime estimate with the current load and battery capacity. When a runtime calibration initiates, the “Calibration is Initiated” event occurs. A runtime calibration will discharge the batteries completely. The batteries will be recharged automatically following a calibration

**Note:** Frequent calibration will shorten the life of the batteries. We recommend one or two calibrations per year.

**PERFORM A RUNTIME CALIBRATION:****ALL OUTLETS MUST BE ON TO PERFORM THIS FUNCTION**

1. Click the “Start” button, this will initiate a runtime calibration
  2. Click the “Cancel” button if you want to stop the runtime test before it is complete.
- The Runtime Calibration will display the results either after the calibration finishes or you cancel the calibration. The results will report as follows:

**ESTIMATED RUNTIME:** The estimated runtime of the batteries under the present load conditions.

**LAST CALIBRATION RESULT:** The result of the most recent runtime calibration.

**PASSED:** Runtime calibration passed and the batteries are normal.

**NONE:** A runtime calibration has not been performed.

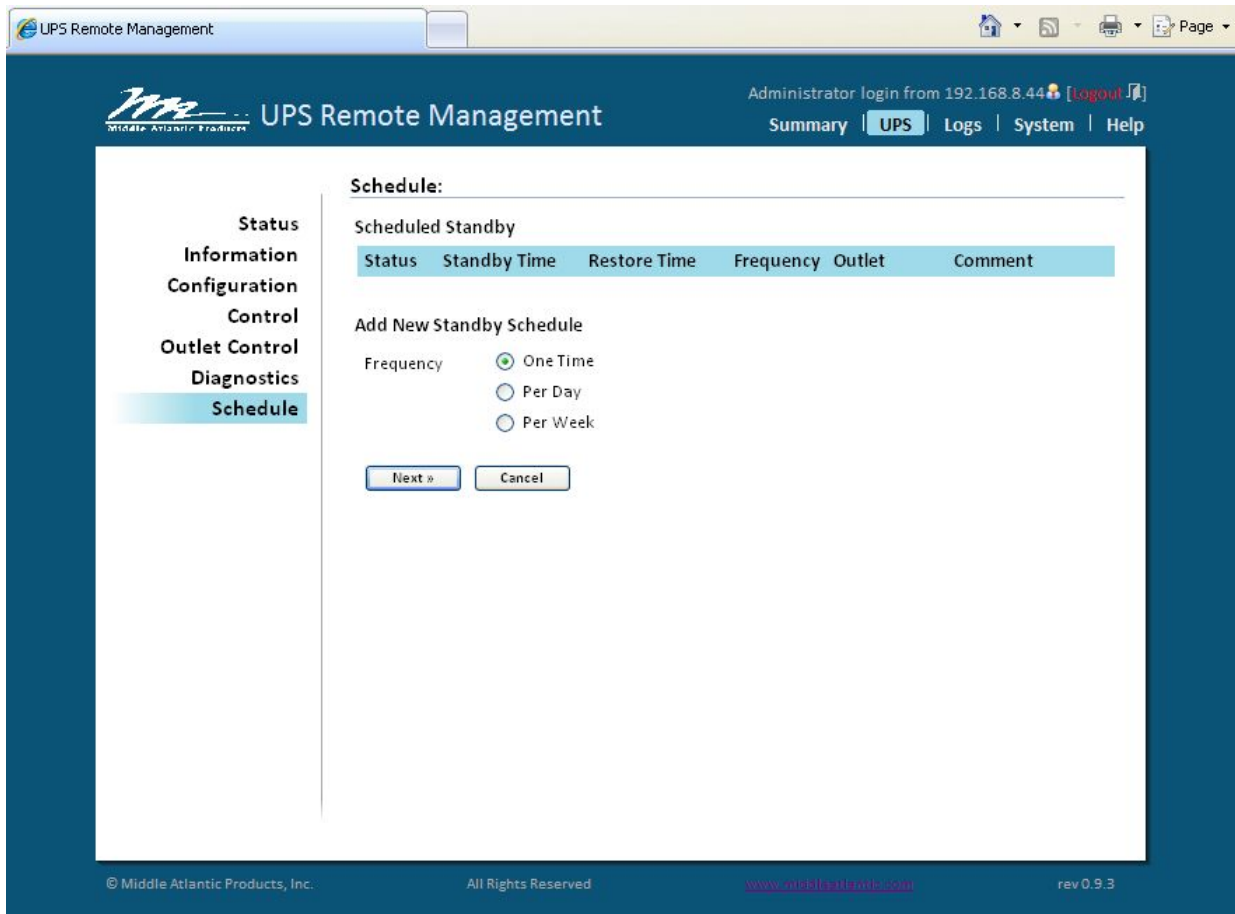
**FAILED:** The UPS failed during the runtime calibration.

**CANCELLED:** The runtime calibration was stopped before completion.

**LAST CALIBRATION DATE:** The date the last runtime calibration was performed.

**Note:** The calibration process causes the batteries to completely discharge. If a utility power failure occurs during the calibration, the UPS will not support the connected equipment.

# SCHEDULE



## SCHEDULE:

Choose from One Time, Per Day, Per Week, and click *Next>>*

[One Time]: The user may set a specific date and time for the UPS standby mode.

[Per Day]: Set a specific time of the day for the UPS standby mode.

[Per Week]: Set a specific day and time of the week for the UPS standby mode.

- Continued on next page -

# SCHEDULE CONTINUED

The screenshot shows the 'UPS Remote Management' web interface. The browser title bar reads 'UPS Remote Management'. The page header includes the logo for Middle Atlantic Products, Inc. and the text 'UPS Remote Management'. On the right, it says 'Administrator login from 192.168.8.44 [Logout]', and there are navigation links for 'Summary', 'UPS', 'Logs', 'System', and 'Help'. A left-hand navigation menu lists: 'Status', 'Information', 'Configuration', 'Control', 'Outlet Control', 'Diagnostics', and 'Schedule' (which is highlighted). The main content area is titled 'Add New Standby Schedule - One Time:'. It contains the following fields: 'Enable' (checkbox), 'Outlet' (dropdown menu showing 'ALL'), 'Standby Time' (four dropdown menus showing '9 / 8 22 : 45'), 'Restore Time' (radio buttons for 'Never' (selected), 'Immediately', and a third option with dropdowns '9 / 8 22 : 46'), 'Shutdown Clients' (checkbox), and 'Comment' (text area). At the bottom of the form are 'Apply' and 'Cancel' buttons. The footer of the page contains: '© Middle Atlantic Products, Inc.', 'All Rights Reserved', 'www.middleatlantic.com', and 'rev 0.9.3'.

## SCHEDULE CONTINUED:

**Active:** Enable or Disable this standby

**Outlet:** Define which outlets to shutdown (not available on all models)

**Standby Time:** Define when to standby

**Restore Time:** Define when to Restore

**Shutdown Clients:** Alert Power Manager Client(s) before entering standby mode

**Comment:** Enter an optional description of this schedule

# EVENT LOGS

UPS Remote Management

Administrator login from 192.168.8.44 [Logout]

Summary | UPS | **Logs** | System | Help

**Event Logs**  
Status Logs  
Maintenance

**Event Logs:**

Date & Time	Event
09/08/2010 22:26:20	Admin login from 192.168.8.44..
09/08/2010 22:22:32	Admin logout from 192.168.8.44..
09/08/2010 22:08:30	Admin login from 192.168.8.44..
09/08/2010 22:01:15	Admin logout from 192.168.8.44..
09/08/2010 21:37:46	Admin login from 192.168.8.44..
09/08/2010 21:26:28	Admin logout from 192.168.8.44..
09/08/2010 21:19:42	Admin login from 192.168.8.44..
09/08/2010 02:55:26	Communication with the UPS has been established.
09/08/2010 02:53:47	Communication with the UPS has been established.
09/07/2010 23:54:06	Communication with the UPS has been established.
09/07/2010 23:45:10	Communication with the UPS has been established.
09/07/2010 21:37:10	Admin logout from 192.168.8.44..
09/07/2010 21:21:10	Configuration change by 192.168.8.44..
09/07/2010 21:20:03	Admin login from 192.168.8.44..
09/07/2010 21:15:53	Admin logout from 192.168.8.44..

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## EVENT LOGS:

Event logs display event history together with a date and time stamp, and a brief description of the event

- Notes:
- 1) Time stamp is in 24-hour clock format
  - 2) Events to be recorded are listed under \system\event action

# STATUS LOGS

UPS Remote Management

Administrator login from 192.168.8.44 [Logout]

Summary | UPS | **Logs** | System | Help

### Status Logs:

Date & Time	Input min (V)	Input max (V)	Output (V)	Freq (Hz)	Load (%)	Capacity (%)	Remaining Runtime
09/08/2010 22:55:20	111.0	116.0	115.0	60.0	0	100	139
09/08/2010 21:55:20	112.0	117.0	115.0	60.0	0	100	139
09/08/2010 20:55:20	113.0	117.0	115.0	60.0	0	100	139
09/08/2010 19:55:20	113.0	119.0	117.0	60.0	0	100	139
09/08/2010 18:55:20	117.0	119.0	118.0	60.0	0	100	139
09/08/2010 17:55:20	119.0	119.0	118.0	60.0	0	100	139
09/08/2010 16:55:20	119.0	121.0	120.0	60.0	0	100	139
09/08/2010 15:55:20	121.0	121.0	120.0	60.0	0	100	139
09/08/2010 14:55:20	121.0	121.0	120.0	60.0	0	100	139
09/08/2010 13:55:20	119.0	121.0	120.0	60.0	0	100	139
09/08/2010 12:55:20	121.0	121.0	120.0	60.0	0	100	139
09/08/2010 11:55:20	121.0	121.0	120.0	60.0	0	100	139
09/08/2010 10:55:20	119.0	121.0	120.0	60.0	0	100	139
09/08/2010 09:55:20	119.0	121.0	120.0	60.0	0	100	139

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## STATUS LOGS:

Status logs display UPS status history together with a date and time stamp

All items are the same as in UPS\status with the following exceptions:

- **Input min(V)** - The minimum input (line) voltage recorded since the last snapshot
- **Input max(V)** - The maximum input (line) voltage recorded since the last snapshot

# MAINTENANCE

The screenshot displays the 'Maintenance' configuration page in the UPS Remote Management interface. The page is titled 'Maintenance:' and is divided into two main sections: 'Event Logs' and 'Status Logs'. In the 'Event Logs' section, there is a 'Clear All' option with radio buttons for 'No' (selected) and 'Yes'. Below this, it shows 'Number of Events Logged: 25 / 1024'. The 'Status Logs' section includes a 'Recording Interval' dropdown menu set to '1 hour', a 'Clear All' option with radio buttons for 'No' (selected) and 'Yes', and a 'Remaining Time' field showing 'More than a month'. At the bottom of the configuration area, there are 'Continue' and 'Cancel' buttons. The page header includes the UPS Remote Management logo, the user's login information (Administrator login from 192.168.8.44), and navigation links for Summary, UPS, Logs, System, and Help. The footer contains copyright information for Middle Atlantic Products, Inc., a disclaimer of all rights reserved, the website URL www.middleatlantic.com, and the revision number rev 0.9.3.

## MAINTENANCE:

**Clear Event Logs:** Delete the current event logs

**Recording Interval:** The data sample rate. A smaller time interval will allow for more frequent recordings but the UPS will maintain them for a shorter period. A longer interval will provide less frequent recordings, but the UPS will maintain them for a longer period.

**Clear Entire Records:** Clears all current data logs



# USER ACCOUNT

UPS Remote Management

Administrator login from 192.168.8.44 [Logout]

Summary | UPS | Logs | **System** | Help

**User Account:**

**Administrator**

User Name: admin

Current Password: [ ]

New Password: [ ]

Confirm Password: [ ]

**Guest**

Allow Access:  Enable

User Name: guest

New Password: [ ]

Confirm Password: [ ]

Apply Cancel

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## USER ACCOUNT:

**Administrator:** The administrator can access full functionality - includes enabling/disabling of the guest account

**Guest:** The Guest has read only access

### Change admin account:

- Enter the current user name
- Enter the new password
- Confirm the new password
- Click **Apply**

### Change guest account:

- Select Allow Access to enable the guest account
- Enter the user name
- Enter the new password
- Confirm the new password
- Click **Apply**

## NOTES

**Only one user session at a time is permitted**

**If you do not logout of the Remote Manager, the UPS-IPCARD will not allow a new session until the previous session times-out**

# DATE AND TIME

UPS Remote Management

Administrator login from 192.168.8.44 [Logout]

Summary | UPS | Logs | **System** | Help

### Date & Time:

**Current Settings**

Date & Time	09/08/2010 23:24:16
Status	Manually Updated
Next NTP Update	

**System Time Configuration**

Use NTP Server

Primary NTP Server

Secondary NTP Server

Time Zone

Update Interval  [1-8760 Hours]

Update right now

Manual Setup

Date  mm/dd/yyyy

Time  hh:mm:ss

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## DATE AND TIME:

### Current Settings:

Date & Time - The current date and time settings of the card.

Status - Displays configuration option

Next NTP Update - The remaining time before next automatic update (if NTP selected)

## SYSTEM TIME CONFIGURATION:

### Use NTP Server:

Enter Primary NTP Server IP address

Enter secondary NTP Server IP address

Select Time Zone

Enter Update Interval - Set the frequency to update the date and time from NTP server.

**(Choose *Update Right Now* to update immediately)**

**Manual Setup:** Enter the date and time in the designated format

Enter Date

Enter Time

Click **Apply**

# IDENTIFICATION

The screenshot shows the UPS Remote Management web interface. The browser title is "UPS Remote Management". The page header includes the logo for Middle Atlantic Products, the text "UPS Remote Management", and the user information "Administrator login from 192.168.8.44 [Logout]". Navigation links for "Summary", "UPS", "Logs", "System", and "Help" are present. The left sidebar contains a menu with items: "User Account", "Date & Time", "Identification" (highlighted), "Security", "Event Action", "SMTP Server", "E-mail Recipients", "Trap Receivers", "Client Standby", "TCP/IP", "HTTP Service", "SNMP Service", "FTP Service", "Preference", and "About". The main content area is titled "Identification:" and contains three input fields: "Name" with the value "UPS-IPCARD", "Contact" with the value "John Doe", and "Location" with the value "SERVER ROOM". Below these fields are "Apply" and "Cancel" buttons. The footer contains copyright information: "© Middle Atlantic Products, Inc.", "All Rights Reserved", the website "www.middleatlantic.com", and the version "rev 0.9.3".

## IDENTIFICATION:

**Name:** Friendly name - user editable

**Contact:** Who to contact for service/help

**Location:** The location of the UPS

*Note: Fields are limited to 15 (fifteen) characters*

# SECURITY

UPS Remote Management

Administrator login from 192.168.8.44 [logout]

Summary | UPS | Logs | System | Help

**Security:**

Login Session

Timeout 30 minute(s)

Apply Cancel

User Account  
Date & Time  
Identification  
**Security**  
Event Action  
SMTP Server  
E-mail Recipients  
Trap Receivers  
Client Standby  
TCP/IP  
HTTP Service  
SNMP Service  
FTP Service  
Preference  
About

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## SECURITY:

**Login Session:** Timeout The period (in minutes) that the system waits before auto-logging users out

# EVENT ACTION

UPS Remote Management

Administrator login from 192.168.8.44 [Logout]

Summary | UPS | Logs | **System** | Help

**Event Action:**

Event	Log	E-mail	Trap
Communication with the UPS has been established	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication with the UPS has been lost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS has switched to backup mode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power restored, return from backup mode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS has detected a load over 100% of its rated capacity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS is no longer in a overload condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS passed self test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS failed self test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS battery discharging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS battery charged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boost mode enabled - low utility voltage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buck mode enabled - high utility voltage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Battery capacity critically low	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recovered from critically low battery state	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS entering sleep mode sequence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS in sleep mode. Output power suspended	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS woke up from sleep mode. Output power active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS in standby mode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS recovered from standby mode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS entering standby mode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS reboot sequence started	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The outlet state has been changed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Cancel command has been executed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS internal over-temp condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS internal over-temp condition cleared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UPS has started a scheduled standby sequence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The UPS remote command failed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The UPS is compelled to standby	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrator login	<input type="checkbox"/>		
Administrator logout	<input type="checkbox"/>		
Guest login	<input type="checkbox"/>		
Guest logout	<input type="checkbox"/>		
Configuration changed	<input type="checkbox"/>		

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**EVENT ACTION:** Displays all possible events, and provides the means to configure responses to each event.

Click on the event to modify each respective response.

**Log:** Records the event in the "Event Logs"

**E-mail:** Sends an email to a specific e-mail address (requires an accessible SMTP server)

**Trap:** A SNMP trap is sent to a specific IP address

# SMTP SERVER

The screenshot shows the 'SMTP Server' configuration page in the UPS Remote Management web interface. The page has a dark blue header with the UPS Remote Management logo and navigation links. A sidebar on the left contains a menu with options like 'User Account', 'Date & Time', 'Identification', 'Security', 'Event Action', 'SMTP Server' (highlighted), 'E-mail Recipients', 'Trap Receivers', 'Client Standby', 'TCP/IP', 'HTTP Service', 'SNMP Service', 'FTP Service', 'Preference', and 'About'. The main content area is titled 'SMTP Server:' and contains the following fields and options:

- Server's IP/Host Name:
- Sender's E-mail Address:
- Authentication:  Required
- Username:
- Password:

At the bottom of the form are 'Apply' and 'Cancel' buttons. The footer of the page includes copyright information for Middle Atlantic Products, Inc., a website URL, and the version number 'rev 0.9.3'.

## SMTP SERVER:

After configuring the SMTP server, the UPS can send an email to users when a specific event occurs.

**Server's IP/Host Name:** The IP or host name of the SMTP server

**Sender's E-mail Address:** 'From' field as shown in the e-mail message sent to user

**Authentication:** Select this option if the SMTP server requires authentication check

**Username:** Username used for SMTP authentication

**Password:** Password used for SMTP authentication

# E-MAIL RECIPIENTS

The screenshot shows the UPS Remote Management web interface. At the top, there is a navigation bar with the UPS Remote Management logo and a user login status: "Administrator login from 192.168.8.44 [Logout]". Below the navigation bar, there are several menu items: "Summary", "UPS", "Logs", "System", and "Help". The main content area is titled "E-mail Recipients:" and contains a table with two columns: "Status" and "E-mail". Below the table is a button labeled "New Recipient". On the left side of the interface, there is a vertical menu with various configuration options: "User Account", "Date & Time", "Identification", "Security", "Event Action", "SMTP Server", "E-mail Recipients" (which is highlighted), "Trap Receivers", "Client Standby", "TCP/IP", "HTTP Service", "SNMP Service", "FTP Service", "Preference", and "About". At the bottom of the page, there is a footer with copyright information: "© Middle Atlantic Products, Inc.", "All Rights Reserved", the website "www.middleatprod.com", and the version "rev 0.9.3".

## E-MAIL RECIPIENTS:

Configure up to 5 (five) e-mail recipients. Each recipient will receive an e-mail notification on an 'Event' occurrence.

To add a new recipient, click **New Recipient**.

## E-MAIL RECIPIENTS CONTINUED

The screenshot shows a web browser window titled "UPS Remote Management - Windows Internet Explorer". The address bar contains the URL "http://192.168.8.8/recipients\_edit.html?add=New+Recipient". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The browser's toolbar shows "UPS Remote Management" as the current page, along with navigation icons and a "Tools" dropdown menu.

The main content area has a dark blue header with the "UPS Remote Management" logo and navigation links: "Summary | UPS | Logs | System | Help". A user login notification reads "Administrator login from 192.168.8.44 [Logout]".

The central form is titled "Add New E-mail Recipient:". It features a left-hand navigation menu with the following items: "User Account", "Date & Time", "Identification", "Security", "Event Action", "SMTP Server", "E-mail Recipients" (highlighted), "Trap Receivers", "Client Standby", "TCP/IP", "HTTP Service", "SNMP Service", "FTP Service", "Preference", and "About".

The form fields include:

- "Active" with a checked checkbox labeled "Enable".
- "E-mail" with an empty text input field.
- "Apply" and "Cancel" buttons.

At the bottom of the page, there is a footer with the text: "© Middle Atlantic Products, Inc. All Rights Reserved www.middleatlantic.com rev 0.9.4".

Enter the email address and click **Apply**

To modify or delete an existing recipient, click the e-mail address of that recipient.



# TRAP RECEIVERS

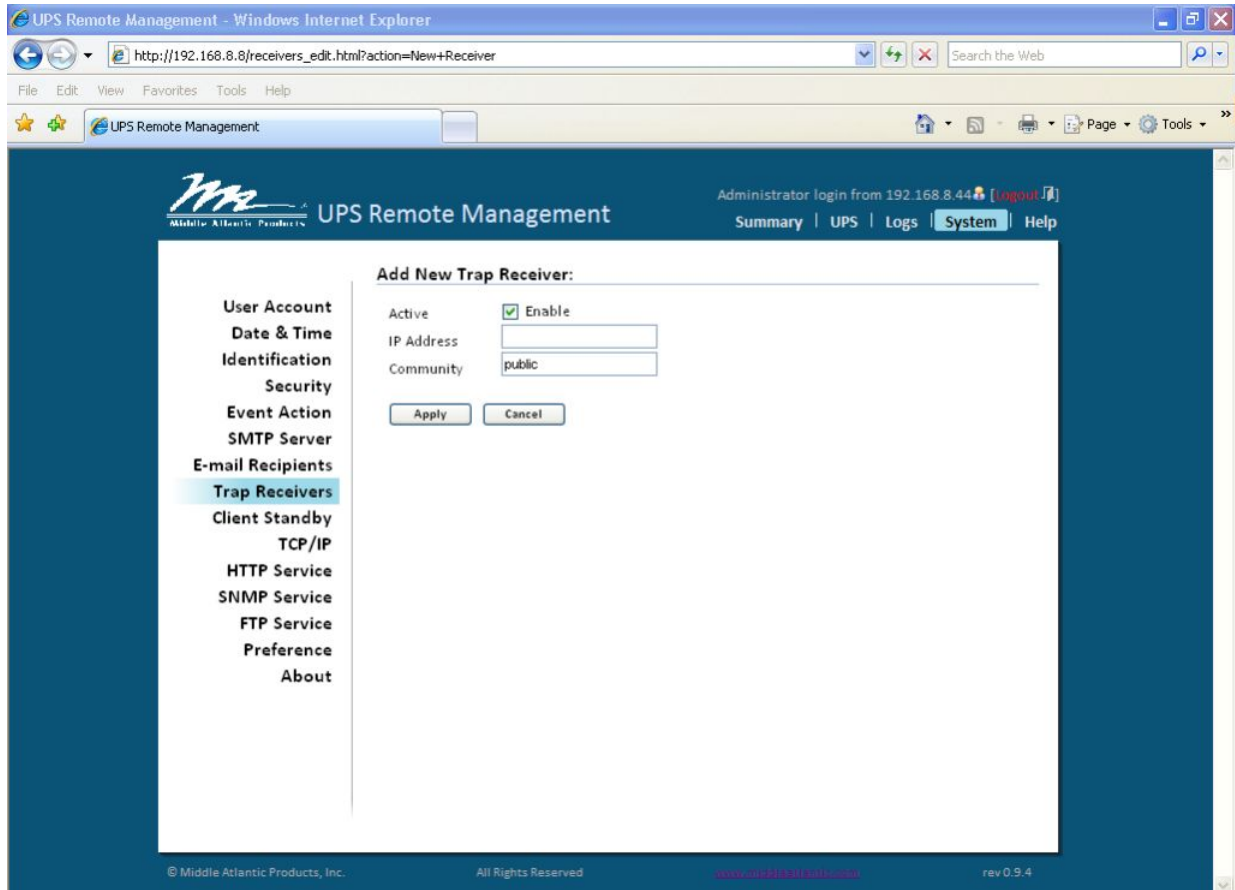
The screenshot displays the UPS Remote Management web interface. At the top, the browser title is "UPS Remote Management". The page header includes the UPS Remote Management logo and the text "Administrator login from 192.168.8.44 [Logout]". Navigation links for "Summary", "UPS", "Logs", "System", and "Help" are visible. A left-hand navigation menu lists various settings, with "Trap Receivers" highlighted. The main content area, titled "Trap Receivers:", features a table with columns for "Status", "IP Address", and "Community". Below the table is a "New Receiver" button. The footer contains copyright information for Middle Atlantic Products, Inc., a website URL, and the version number "rev 0.9.3".

## TRAP RECEIVERS:

Configure up to 10 (ten) SNMP trap receivers.

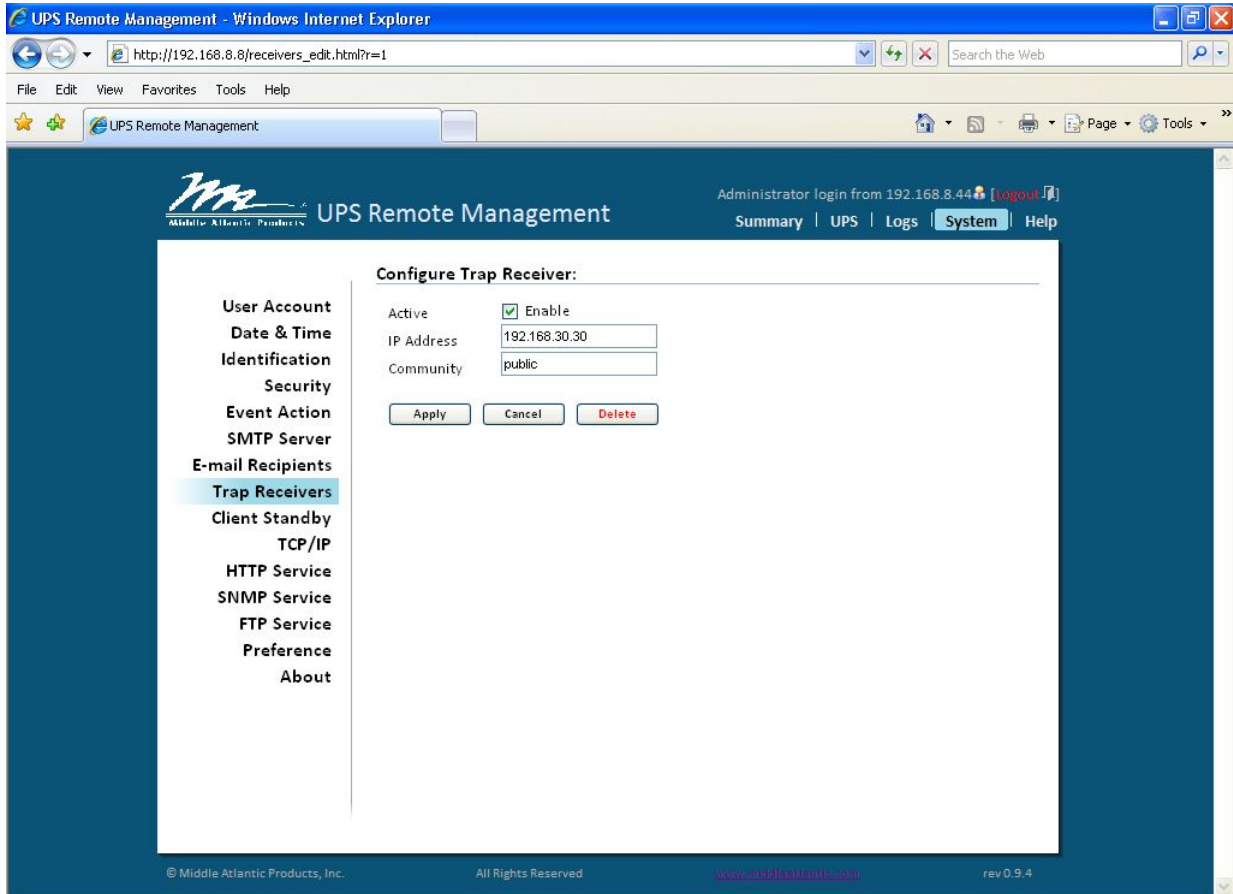
To add a new receiver, click **New Receiver**

# TRAP RECEIVERS CONTINUED



Enter the IP Address and Community and click **Apply**

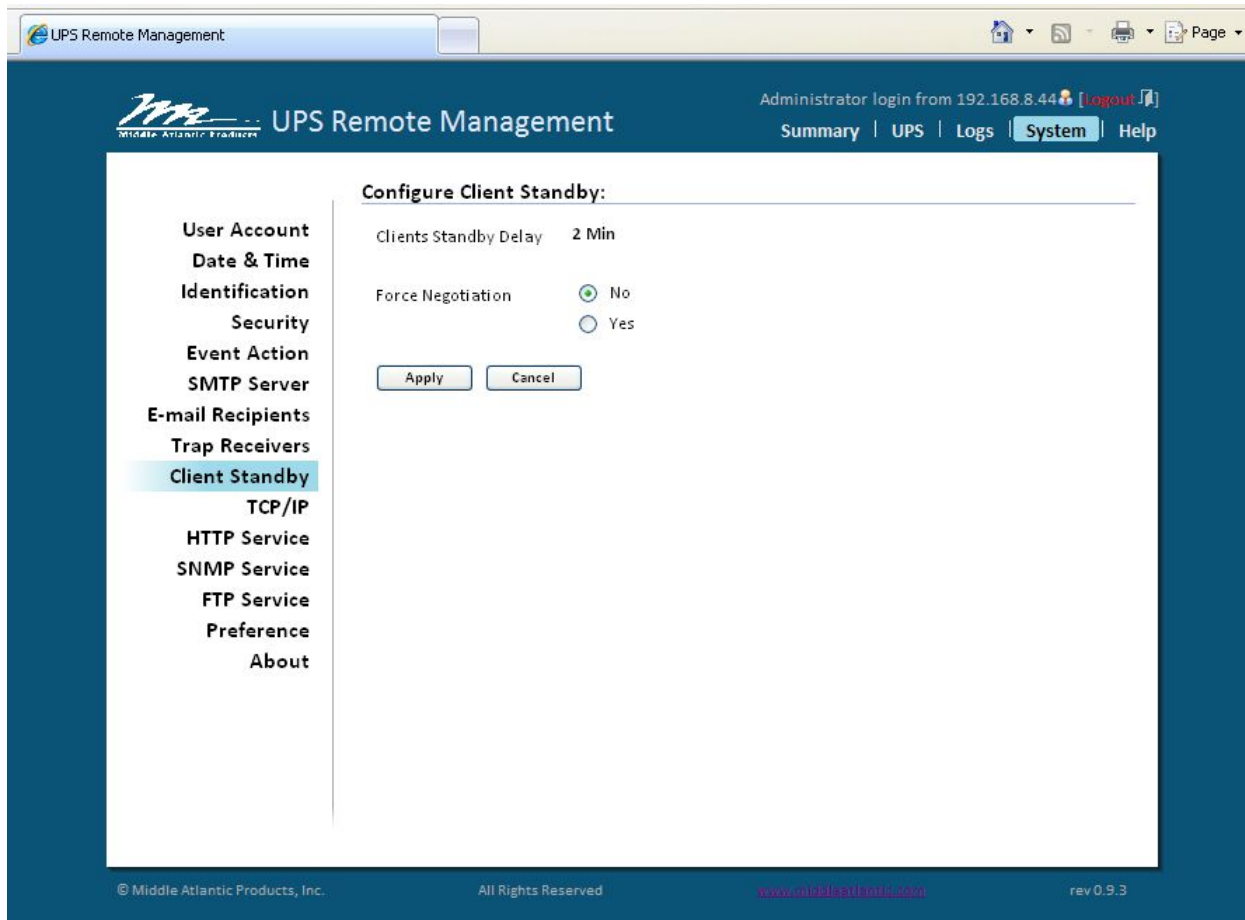
# TRAP RECEIVERS CONTINUED



- To modify or delete an existing receiver, click the IP Address of that receiver.

**Note:** When Middle Atlantic Power Manage connects to a UPS, the IP address of the host machine will be added to the list of trap receivers automatically.

# CLIENT STANDBY



## CLIENT STANDBY:

**Clients Standby Delay:** The longest standby delay time required for connected Power Manager client(s)

**Force Negotiation:** Select to re-negotiate the standby delay with Power Manager clients. The Client's standby delay reverts to the default setting of 2 (two) minutes, but allows a negotiation time of up to 10 minutes.

# TCP/IP

UPS Remote Management

Administrator login from 192.168.8.44 [Logout]

Summary | UPS | Logs | System | Help

### TCP/IP:

**User Account**  
**Date & Time**  
**Identification**  
**Security**  
**Event Action**  
**SMTP Server**  
**E-mail Recipients**  
**Trap Receivers**  
**Client Standby**  
**TCP/IP**  
**HTTP Service**  
**SNMP Service**  
**FTP Service**  
**Preference**  
**About**

**Current Configuration**

IP Address	192.168.8.8
Subnet Mask	255.255.255.0
Gateway	192.168.8.1
DNS Server	192.168.5.8

**DHCP**

- Enable DHCP
- Obtain DNS Address from DHCP

**Manual**

IP Address	192.168.8.8
Subnet Mask	255.255.255.0
Gateway	192.168.8.1
DNS Server	192.168.5.8

Apply Cancel

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## TCP/IP:

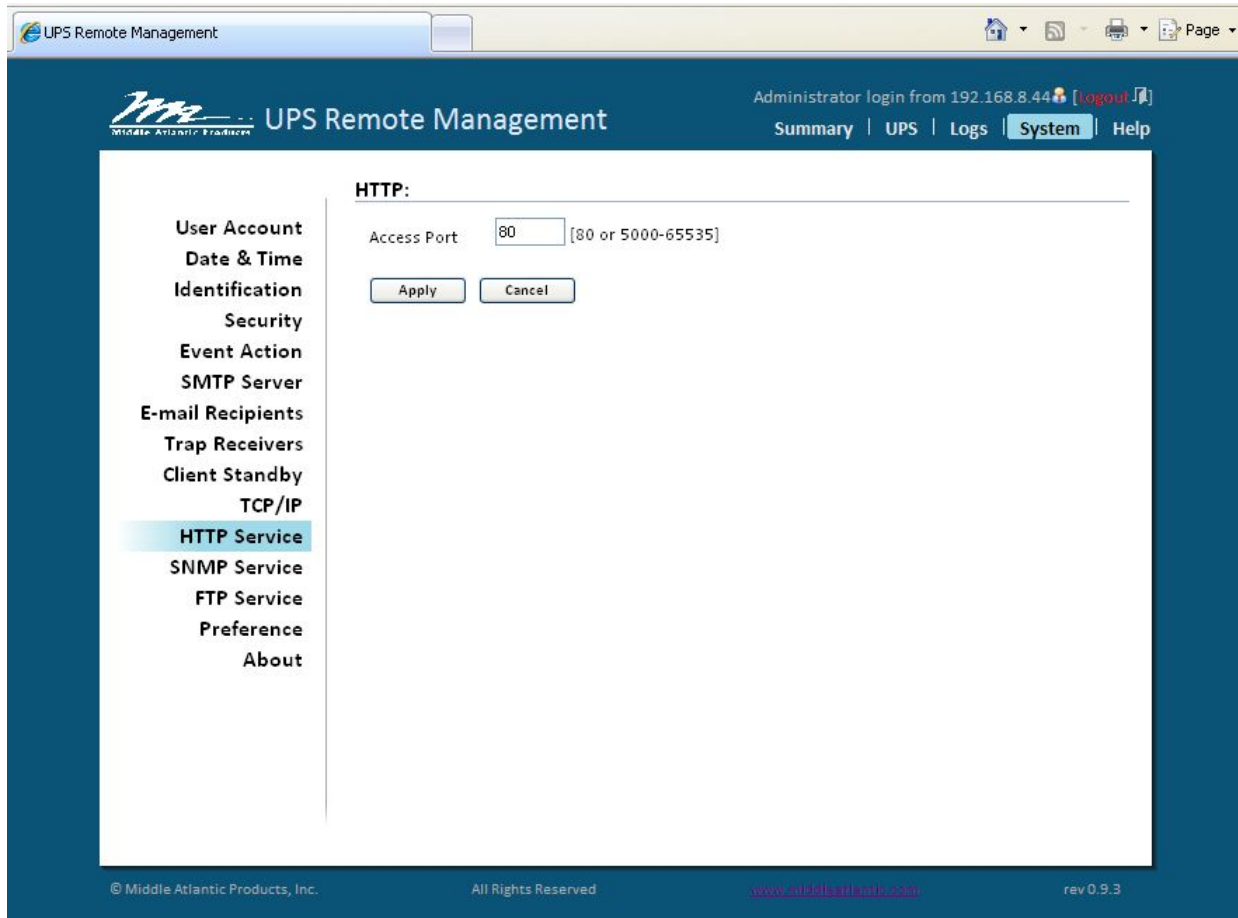
**Current Configuration:** Displays the current TCP/IP settings: IP address, subnet mask, gateway, primary DNS server

**DHCP Enable:** Select this option and click **Apply** to enable DHCP

- DHCP Enabled - Choose this option to get IP the address, subnet mask, and gateway.
- Obtain DNS Address from DHCP - Select the option to get the DNS by DHCP if DHCP is enabled.

**Manual Configuration:** To disable DHCP, enter the TCP/IP settings manually and click **Apply**.

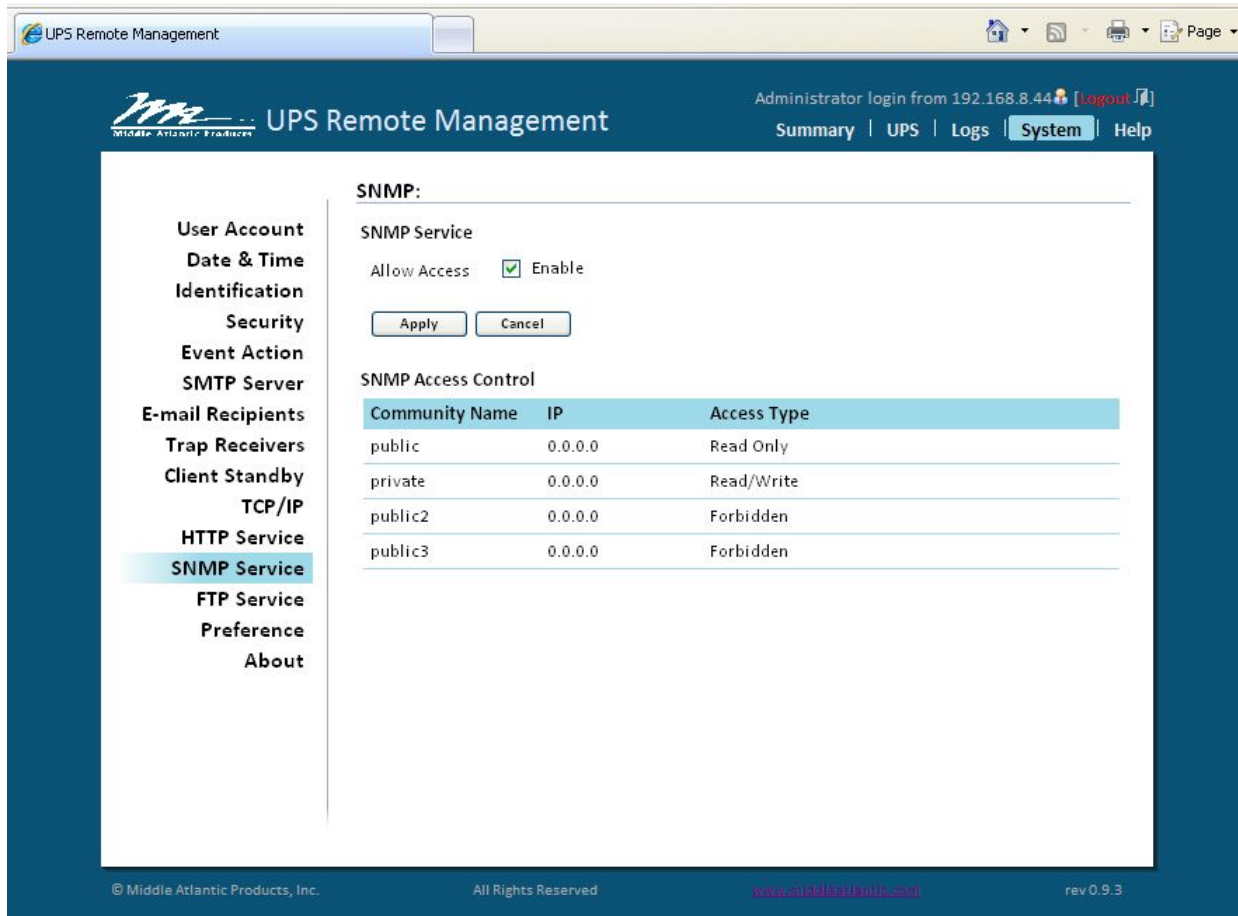
# HTTP SERVICE



## HTTP SERVICE:

**Allow Port:** The TCP/IP port of the Hypertext Transfer Protocol (HTTP) (80 is the default)

# SNMP SERVICE



## SNMP SERVICE:

**Allow Access:** Sets the SNMP service to either Enabled or Disabled

## SNMP ACCESS CONTROL

**Community Name:** The name used to access this community by a Network Management System (NMS). The field must be 1 to 15 characters in length.

**IP/Host Name:** The IP address or IP address mask accessible by the NMS. A specific IP address allows access only by the NMS with the specified IP address. The 255 is regarded as the mask and the rules are as follows:

- 192.168.20.255: Access only by an NMS on the 192.168.20 segment
- 192.255.255.255: Access only by an NMS on the 192. segment
- 0.0.0.0 (the default setting) or 255.255.255.255: Access by any NMS on any segment

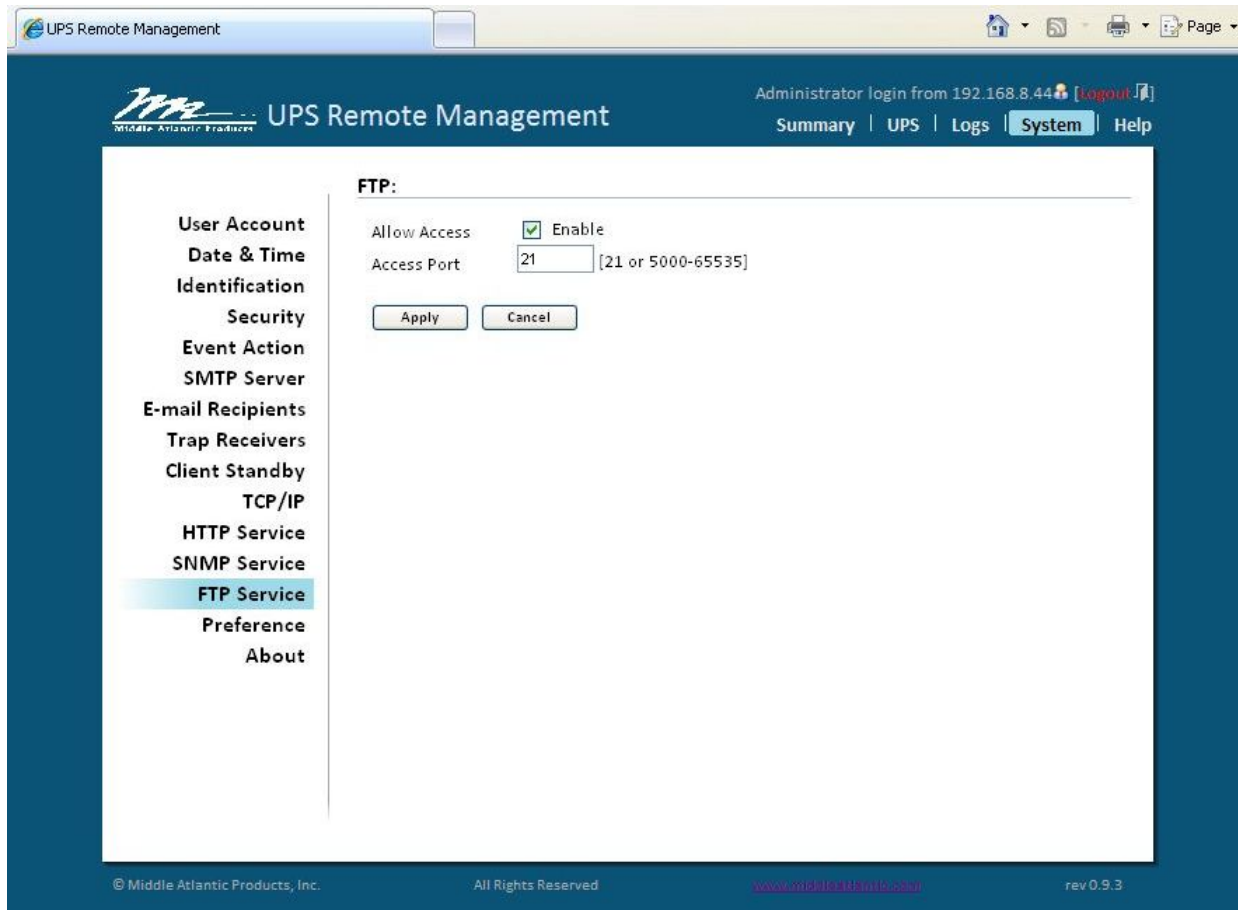
**Access Type:** The allowable action for the NMS through the community and IP

**Read Only** - GETs permitted but SETs not permitted

**Write/Read** - GETs permitted, SETs permitted unless someone is logged in the web interface

**Forbidden** - No GETs or SETs

# FTP SERVICE



## FTP SERVICE:

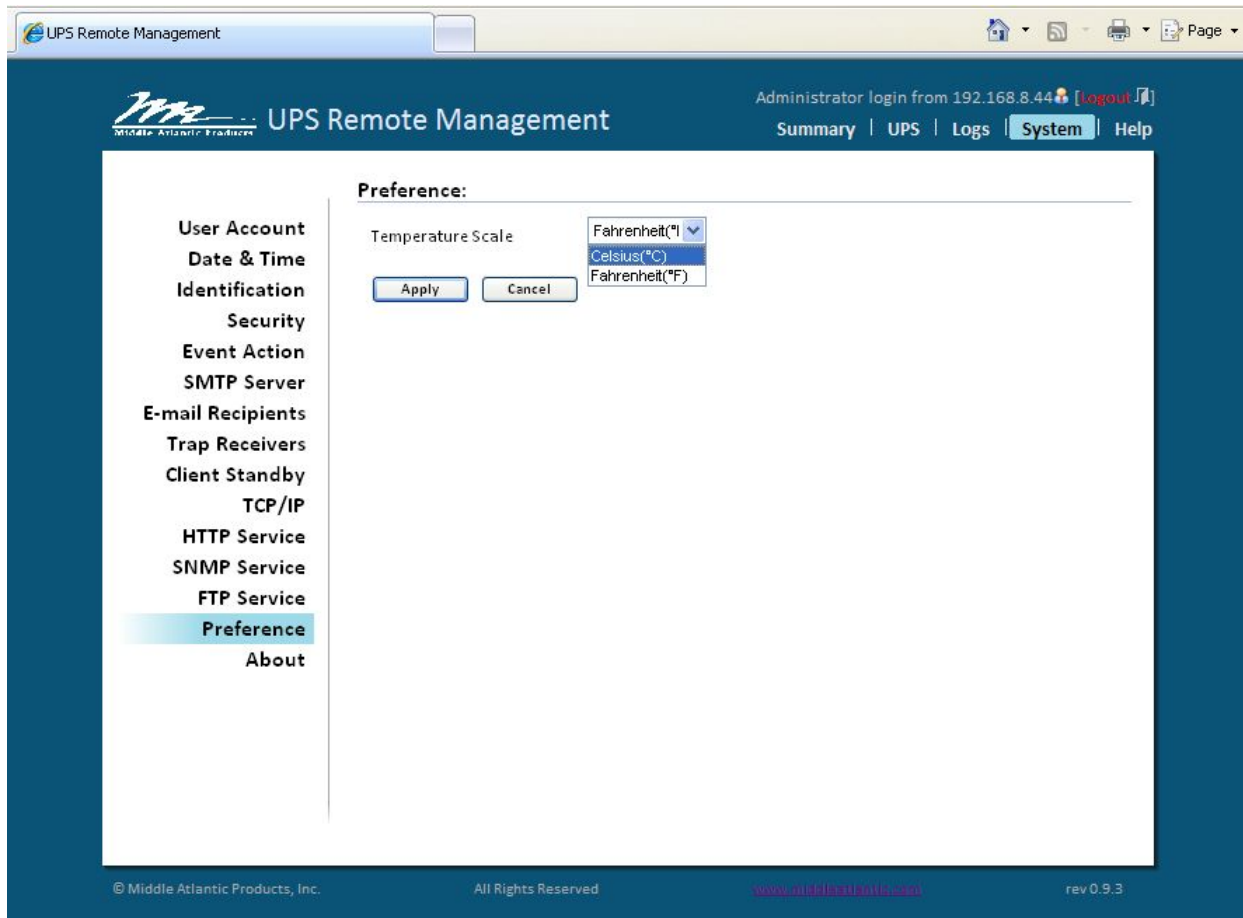
**Allow Access:** Enable access to the FTP server

**Access Port:** The TCP/IP port of the FTP server (21 by default)

**Note:** *FTP server is used for upgrading Firmware. For more details, refer to the firmware upgrade section of this manual.*



# PREFERENCE

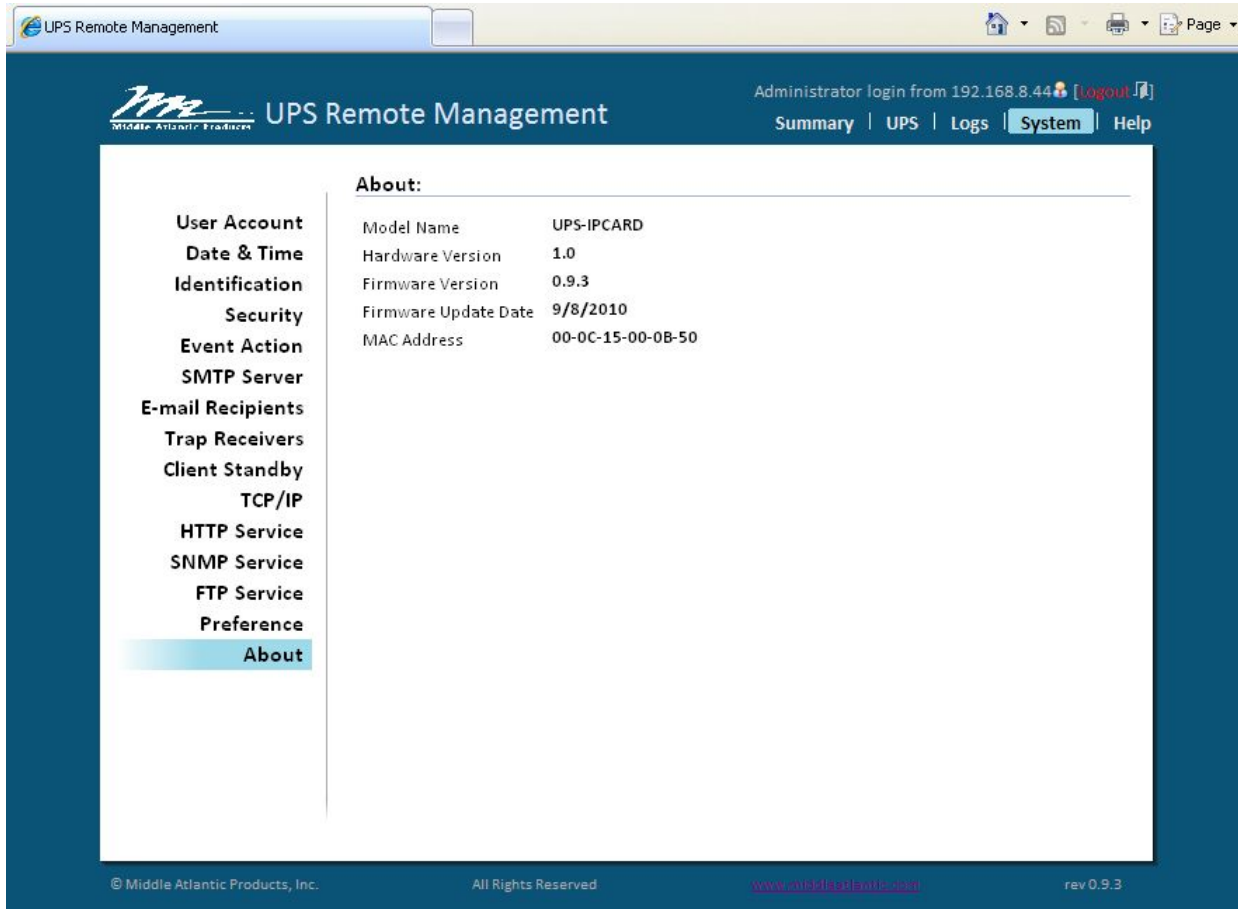


## PREFERENCE:

**Temperature Scale:** Selects the preferred unit of temperature (Celsius/Fahrenheit)

- Select the preferred unit from the dropdown and click **Apply**

# ABOUT



## ABOUT:

**Model Name:** Model name of the Network Interface Card

**Hardware Version:** The hardware version for the Network Interface Card

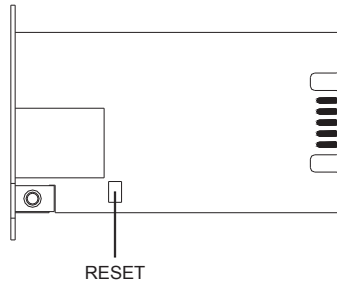
**Firmware Version:** The revision number of the firmware currently installed on Network Interface Card

**Firmware Updated Date:** The date the firmware was last updated

**MAC Address:** The MAC address of the Network Interface Card. Note that the MAC address is also detailed on the top of the Network Interface Card itself

## **Reset to Default Setting/Recover from a Forgotten Password**

To reset the Middle Atlantic Network Interface Card to its default setting (including WEB login user name and password), use the following steps.



- 1) Remove the two retaining screws on the card without turning off the UPS.
- 2) Remove the card from the expansion port.
- 3) Remove the jumper on the Reset pins as illustrated. (The jumper is still needed after the reset, carefully set it aside for now.)
- 4) Re-install the card into the expansion port.
- 5) Wait until the Green LED (RX/TX) is flashing (the frequency of the ON/OFF flashing is one second).
- 6) Remove the card from the expansion port.
- 7) Re-install the jumper on the reset pins.
- 8) Re-install the card into the expansion port.
- 9) Re-install and tighten the retaining screws.

After restoring default settings, the system forces you to change the default password for security purposes.

## **Firmware Upgrade**

### **INITIAL SETUP**

- 1) Ensure that the UPS-IPCARD to be upgraded is correctly installed in the UPS, and that the UPS is powered on.
- 2) Connect the UPS-IPCARD to the network and use the UPS-IPCARD Setup Utility to locate and identify the card to be upgraded. See Figure 1 on the following page.

1.2.1 The UPS-IPCARD Setup Utility will identify all UPS-IPCARDS that are on the same subnet, so carefully confirm that you have identified the desired card before proceeding.

1.2.2 If the computer and the UPS-IPCARD to be upgraded are not on the same subnet, the default gateway must be configured to correctly route between the two subnets.

1.2.3 The UPS-IPCARD Setup Utility can be installed from the CD originally provided with the network card.

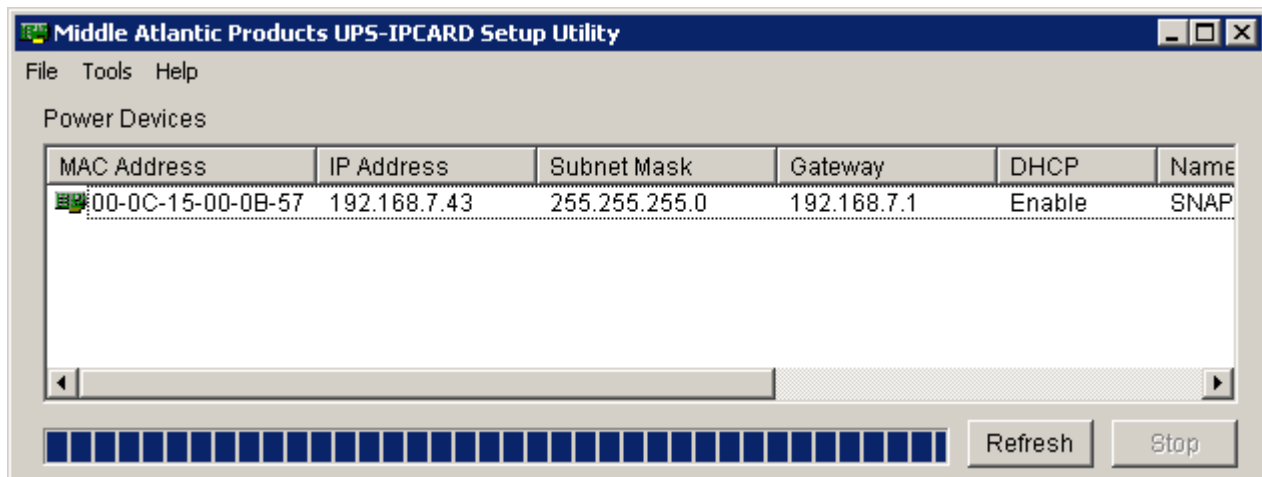


Figure 1: UPS-IPCARD Setup Utility

## 2) PROCEDURE

There are two separate files that required updating; these are:

- mapsnmpfw\_xxx.bin
- mapsnmpdata\_xxx.bin

where 'xxx' refers to the version of firmware

The 'XXX' version number of each file must match in order for the UPS-IPCARD to function.

The most recent firmware version can be obtained by contacting Middle Atlantic Products Technical Support at (800) 266-7225

Create a sub-directory 'MAP' at the root level of the installing PC and copy the two firmware update files to that directory (i.e. C:\MAP\).

### 2.1 Update mapsnmpfw\_XXX.bin

- Open a command prompt window
- Type **C:** and press the '**Enter**' key.
- Type **ftp xxx.xxx.xxx.xxx** and press the '**Enter**' key (where xxx.xxx.xxx.xxx is the IP Address of the UPS-IPCARD to be updated)
- When prompted enter 'user name' and press the '**Enter**' key (default username; **admin**)
- When prompted enter 'password' and press the '**Enter**' key (default password: **admin**)
- Type "bin", and press the '**Enter**' key.
- Type "put c:\map\mapsnmpfw\_XXX.bin", and press the '**Enter**' key

- When the update has completed type “bye”, and press the ‘**Enter**’ key
  - If ‘put c:\map\mapsnmpfw\_XXX.bin’ was not successful then type “ftp –w:16384 xxx.xxx.xxx.xxx” and go through the above steps again.

```

C:\>ftp 192.168.8.8
Connected to 192.168.8.8.
220 Middle Atlantic Power IPCARD FTP.
User (192.168.8.8:(none)): admin
331 User Name OK, Need Password
Password:
230 User Logged in
ftp> bin
200 PORT Command OK
ftp> put c:\map\mapsnmpfw_093.bin
200 PORT Command OK
150 opening data connection for STOR answer.
226 Closing data connection
ftp: 139385 bytes sent in 1.06Seconds 131.25Kbytes/sec.
ftp> bye
221 Thank you for using Middle Atlantic Power products
C:\>

```

Figure 1: Example of update process for mapsnmpfw\_XXX.bin

## 2.2 Update mapsnmpdata\_XXX.bin

- Open a command prompt window
- Type **C:** and press the ‘**Enter**’ key.
- Type **ftp xxx.xxx.xxx.xxx** and press the ‘**Enter**’ key (where xxx.xxx.xxx.xxx is the IP Address of the UPS-IPCARD to be updated)
- When prompted enter ‘user name’ and press the ‘**Enter**’ key (default username:**admin**)
- When prompted enter ‘password’ and press the ‘**Enter**’ key (default password: **admin**)
- Type “bin”, and press the ‘**Enter**’ key.
- Type “put c:\map\mapsnmpdata\_XXX.bin”, and press the ‘**Enter**’ key
- When the update has completed type “bye”, and press the ‘**Enter**’ key
  - If ‘put c:\map\mapsnmpdata\_XXX.bin’ was not successful then type “ftp –w:16384 xxx.xxx.xxx.xxx” and go through the above steps again.

```
C:\> Command Prompt
C:\>ftp 192.168.8.8
Connected to 192.168.8.8.
220 Middle Atlantic Power IPCARD FTP.
User (192.168.8.8:(none)): admin
331 User Name OK, Need Password
Password:
230 User Logged in
ftp> bin
200 PORT Command OK
ftp> put c:\map\mapsnmpdata_093.bin
200 PORT Command OK
150 opening data connection for STOR answer.
226 Closing data connection
ftp: 166652 bytes sent in 1.50Seconds 111.10Kbytes/sec.
ftp> bye
221 Thank you for using Middle Atlantic Power products
C:\>
```

Figure 2: Example of update process for mapsnmpdata\_xxx.bin

### 2.3 Clear current version of firmware

- Disconnect the UPS-IPCARD from the network.
- Remove the UPS-IPCARD from the UPS.
- Remove the jumper (as indicated below).



- Replace the UPS-IPCARD in the UPS.
- Wait for the green LED on the front of the card to start blinking (about 10 seconds).

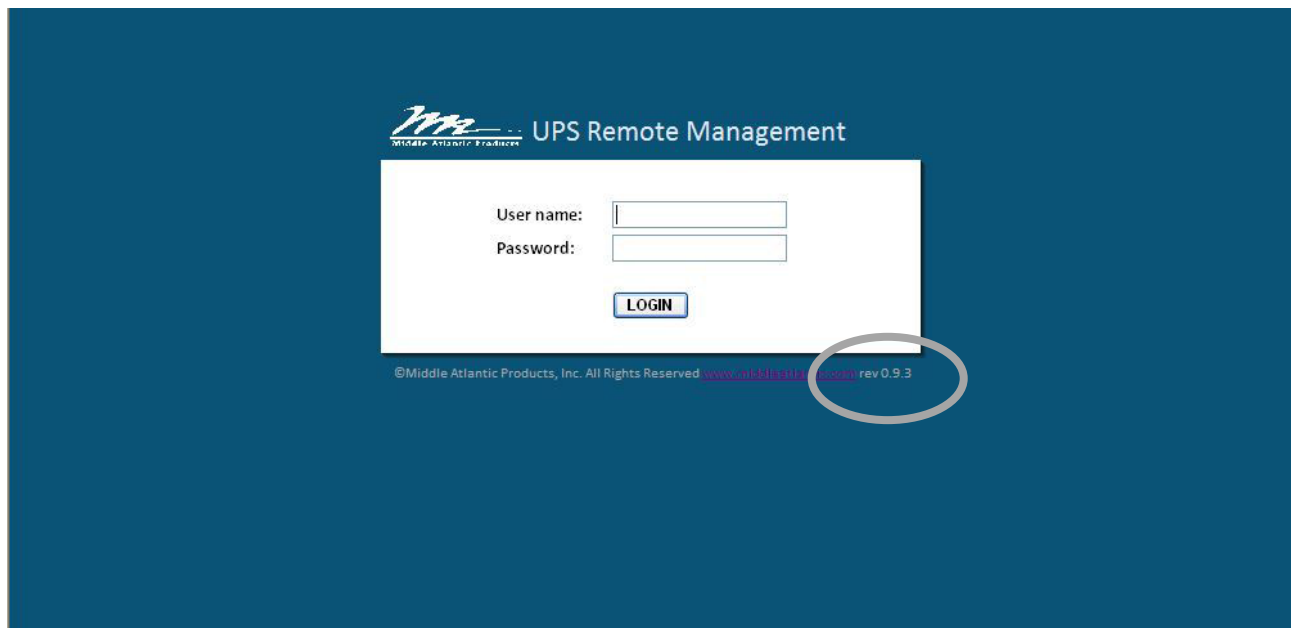
- Remove the UPS-IPCARD from the UPS, and replace the jumper.



- Replace the UPS-IPCARD in the UPS.
- Reconnect the UPS-IPCARD to the network.

#### 2.4 Confirm New Version of Firmware

- Open a browser session and go to the IP Address of the UPS-IPCARD.
- The current firmware version is displayed on the Login page as shown.



## TROUBLESHOOTING

Problem	Solution
Unable to configure the Management Card by method 1 or method 2	<p>1. Check the LED status, the normal condition is both the yellow and green LED are on.</p> <p><u>If green LED is off:</u></p> <p>Check the Interface Card for proper seating in the UPS and ensure that the UPS power is on.</p> <p><u>If yellow LED is off:</u></p> <ol style="list-style-type: none"><li>1. Ensure the network connection is valid</li><li>2. Ensure the PC being used is on the same physical network as Network Interface Card.</li></ol>
Unable to ping the Management Card	<ol style="list-style-type: none"><li>1. Verify the IP Address of the Network Interface Card. Refer to the appendix for selecting an IP Address</li><li>2. If the PC being used is on a different physical network from the Network Interface Card, verify the setting of subnet mask and the IP address of gateway.</li></ol>
Forgotten user name and/or password	Please refer to the “Reset to Default Setting/Recover from a forgotten password” section of the user’s manual.



## **APPENDIX: IP ADDRESS SETTINGS FOR THE MIDDLE ATLANTIC NETWORK MANAGEMENT CARD**

### **Overview**

All devices on a computer network need to have an IP address. Each device's IP address is unique. The same address cannot be used twice. In order to assign an IP address to the Middle Atlantic Network Interface Card, you must determine the range of the available IP addresses, and then choose an unused IP address to assign to the Network Interface Card.

**PLEASE NOTE:** You may need to contact your network administrator to obtain an available IP address.

Procedures to find an IP address:

#### **1) Locate the subnet of Middle Atlantic Network Interface Card.**

One way to determine the range of possible IP addresses is to view the network configuration on a workstation. Click on [Start] and select [Run]. Type "command" into the open box and click [OK]. At the command prompt type "ipconfig/all" and press [Enter]. The computer will display network information:

```
Ethernet adapter
Connection-specific DNS Suffix.....: xxxx.com
Description.....: D-Link DE220 ISA PnP LAN adapter
Physical Address.....: 00-80-C8-DA-7A-C0
DHCP Enabled.....: Yes
Auto configuration Enabled .....: Yes
IP Address.....: 192.168.20.102
Subnet Mask.....: 255.255.255.0
Default Gateway.....: 192.168.20.1
DHCP Server.....: 192.168.20.1
DNS Servers.....: 211.20.71.202; 168.95.1.1
```

#### **2) Select an IP Address for Middle Atlantic Network Management Card**

Verify the IP Addresses for the computer and the Network Management Card belong to the same subnet. Refer to the above network information, the possible IP Address for the Network Management Card could be 192.168.20.\* (\* hereafter represents any number between 1 and 255). Similarly, if the Subnet Mask is 255.255.0.0, the IP Address for Network Management Card could be set up as 192.168.\*.\* to reach the same subnet as the computer.

If you wish to set the IP Address to 192.168.20.240, type "Ping 192.168.20.240" in the command prompt. If the request times out (See Figure) the address is most likely not used and available for use with the Middle Atlantic Network Interface Card

Pinging 192.168.20.240 with 32 bytes of data:

```
Request timed out.
Request timed out.
Request timed out.
Request timed out.
```

## FIGURE AND PROMPT

Any other response indicates the IP Address selected is not available (See Figure). Select another IP Address and repeat the ping command until an available address is found.

```
Pinging 192.168.20.240 with 32 bytes of data:  
Reply from 192.168.20.240: bytes=32 time<10ms TTL=64  
Reply from 192.168.20.240: bytes=32 time<10ms TTL=64  
Reply from 192.168.20.240: bytes=32 time<10ms TTL=64  
Reply from 192.168.20.240: bytes=32 time<10ms TTL=64
```

## FIGURE AND PROMPT

## **WARRANTY**

For warranty information, refer to <http://www.middleatlantic.com/company/about-us.aspx#warranty>

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### **Factory Distribution**

United States: New Jersey, California, Illinois - Canada: Ontario - The Netherlands: Weert

**At Middle Atlantic Products we are always listening. Your comments are welcome.**

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