

American Power Conversion

AP9617 Network Management Card EX

AP9618 Network Management Card EM/MDM

AP9619 Network Management Card EM

[www.apc.com](http://www.apc.com)

Released: February 3, 2010

Affected Revision Levels:

apc\_hw02\_aos\_373.bin Network Management Card Operating System &  
TCP/IP Stack for Hardware Platform v02

apc\_hw02\_dp3e\_372.bin UPS Application for DP300, BC300 and AIS  
5000 Series

apc\_hw02\_sumx\_372.bin UPS Application for Smart-UPS(R), Smart-UPS  
XL, Smart-UPS RT, Smart-UPS VT,  
Matrix-UPS(R), Smart-UPS DP, APC S Type  
Power Conditioner with Battery Backup

apc\_hw02\_sy\_372.bin UPS Application for Symmetra, Symmetra LX

apc\_hw02\_sy3p\_372.bin UPS Application for Symmetra(R) PX

powernet398.mib PowerNet(R) SNMP Management Information  
Base (MIB)

For details on upgrading the Network Management Card's firmware, see  
the User's Guide on the Utility CD or on the APC Web site  
([www.apc.com](http://www.apc.com)).

APC Device IP Configuration Wizard v3.0.1

The Wizard is a Windows application designed specifically to remotely or serially configure the basic TCP/IP settings of Network Management Cards. The Wizard runs on Windows(R) 2000, Windows 2003, and Windows XP. The Wizard is available as a free download from the APC Web site and is on the Utility CD. On the Web site, search by part number SFDIPW301 to find the downloadable file.

#### Contents:

### 1.0 OS & TCP/IP Stack Modifications (apc\_hw02\_aos\_373.bin)

#### 1.1 COMPATIBILITY

#### 1.2 KNOWN ISSUES IN THIS VERSION

#### 1.3 NEW FEATURES & ENHANCEMENTS SINCE AOS v3.5.9

#### 1.4 BUGS FIXED IN THIS VERSION SINCE AOS v3.5.9

### 2.0 UPS Application for Smart-UPS, Smart-UPS XL, Smart-UPS RT,

Smart-UPS VT, Matrix-UPS, Smart-UPS DP, APC S Type Power

Conditioner with Battery Backup (apc\_hw02\_sumx\_372.bin)

#### 2.1 COMPATIBILITY

#### 2.2 KNOWN ISSUES IN THIS VERSION

#### 2.3 NEW FEATURES & ENHANCEMENTS

#### 2.4 BUGS FIXED IN THIS VERSION

### 3.0 UPS Application for Symmetra, Symmetra LX (apc\_hw02\_sy\_372.bin)

#### 3.1 COMPATIBILITY

#### 3.2 KNOWN ISSUES IN THIS VERSION

#### 3.3 NEW FEATURES & ENHANCEMENTS

#### 3.4 BUGS FIXED IN THIS VERSION

### 4.0 UPS Application for Symmetra PX (apc\_hw02\_sy3p\_372.bin)

#### 4.1 COMPATIBILITY

4.2 KNOWN ISSUES IN THIS VERSION

4.3 NEW FEATURES & ENHANCEMENTS

4.4 BUGS FIXED IN THIS VERSION

## 5.0 UPS Application for DP300, BC300, and AIS 5000 Series

(apc\_hw02\_dp3e\_372.bin)

5.1 COMPATIBILITY

5.2 KNOWN ISSUES IN THIS VERSION

5.3 NEW FEATURES & ENHANCEMENTS

5.4 BUGS FIXED IN THIS VERSION

## 6.0 APC Device IP Configuration Wizard v3.0.1

6.1 COMPATIBILITY

6.2 KNOWN ISSUES IN THIS VERSION

6.3 NEW FEATURES & ENHANCEMENTS

6.4 BUGS FIXED IN THIS VERSION

## 7.0 Miscellaneous

7.1 Recovering from a Lost Password

7.2 Event Support List

7.3 PowerNet MIB Reference Guide

---

## 1.0 OS & TCP/IP Stack Modifications (apc\_hw02\_aos\_373.bin)

---

### 1.1 COMPATIBILITY

apc\_hw02\_sumx\_372.bin UPS Application for Smart-UPS, Smart-UPS XL,

Smart-UPS RT, Smart-UPS VT, Matrix-UPS,

Smart-UPS DP, APC S Type Power Conditioner

with Battery Backup

apc\_hw02\_sy3p\_372.bin UPS Application for Symmetra(R) PX

apc\_hw02\_sy\_372.bin UPS Application for Symmetra, Symmetra LX

apc\_hw02\_dp3e\_372.bin UPS Application for DP300, BC300 and AIS 5000

Series

## 1.2 KNOWN ISSUES IN THIS VERSION

1. Reported Anomaly: "Reset to Defaults" does not change the baud rate to its default value of 2400 baud. Depending on the installed application, the serial baud rate may be specific to the attached device.

Disposition: No fix is planned for future releases.

2. Reported Anomaly: On the Web interface, when user tries to switch console modes (Telnet to SSH) and does not perform a logoff after switching modes, the user can no longer see the SSH disclaimer page when trying to switch modes again. However, the feature works fine when the user logs off after switching modes.

Disposition: A fix is planned for a future release.

## 1.3 NEW FEATURES & ENHANCEMENTS SINCE AOS v3.7.1

1. Support for PowerNet MIB 3.9.8.
2. Enhancements to address the XSS web vulnerability.

## 1.4 BUGS FIXED IN THIS VERSION SINCE AOS v3.7.1

1. Custom DST enabled with NTP server will now update correctly.
2. Input contacts now retains the default state when upgrading from 2.x to 3.x firmware.
3. Corrected the Secondary data email recipient address in RMS configuration page.
4. NTP update interval now takes correct value from the config.ini file
5. Addressed the vulnerability to cross site scripting and cross site request forgery in the Web interface.
6. Web interface updated to show the correct HTTP and HTTPs port number.
7. The Network Management Card warmstarts occasionally when the user constantly changes the SNMPV3 user profile for hours (around 6-8 hours). The warmstart seems to happen after one SNMPV3 user has an Authorization and Privacy password set and the user attempts to modify the second user profile.
8. The Network Management Card warmstarts when the datalog server setting is configured to itself.
9. Correction of SNMPv3 time rollover issue which occurred 49.7 days of consecutive runtime.
10. Increase to size of ASI listening socket buffer (nmcrpdu-797)
11. Adjustment to SNMMPv3 kul generation (nmccore-1040)

---

2.0 UPS Application for Smart-UPS, Smart-UPS XL, Smart-UPS RT,  
Smart-UPS VT, Matrix-UPS, Smart-UPS DP (apc\_hw02\_sumx\_372.bin)

---

## 2.1 COMPATIBILITY

apc\_hw02\_aos\_373.bin Network Management Card OS & TCP/IP Stack

See OS & TCP/IP Stack Modifications (apc\_hw02\_aos\_373.bin) for a list of modifications and enhancements that affect this application version.

## 2.2 KNOWN ISSUES IN THIS VERSION

1. Reported Anomaly: InfraStruXure Manager does not report overload conditions when they are generated by the Network Management Card. The alarm is propagated to other interfaces as expected.  
Disposition: No fix is planned for a future release.
2. Reported Anomaly: Graceful Shutdown is logged twice in the event log when initiated from an upstream/downstream device.  
Disposition: A fix is planned for a future release.
3. Reported Anomaly: In the Telnet user interface, setting multiple environmental thresholds at once can fail to apply even when all values meet maximum, high, low, and minimum threshold value rules.  
Disposition: A fix is planned for a future release.
4. Reported Anomaly: No trap is generated for the "Self-Test Started" event.  
Disposition: A fix is planned for a future release.
5. Reported Anomaly: The "Graceful Reboot" event is not logged on the initiator card when multiple Network Management Cards are connected to the same UPS.  
Disposition: A fix is planned for a future release.
6. Reported Anomaly: No trap is being sent for Site Wiring Fault.  
Disposition: A fix is planned for a future release.

## 2.3 NEW FEATURES & ENHANCEMENTS

1. Support for PowerNet MIB 3.9.8.
2. Increased the maximum interval between data log uploads from its current value of 8 hours to a new value of 24 hours.
3. Provided the ability to append a unique identifier (MMDDYY for example) to the upload filename for each upload.
4. Provided an error notification mechanism if the user tries to install a Rhodes1 card into a5G (Microlink) UPS.

## 2.4 BUGS FIXED IN THIS VERSION

1. Discovery info table populated correctly after reboot/coldstart.
2. SmartUPS VT: Telnet interface updated to display the self test status.
3. SCG group number range now updated to match the telnet help range.
4. Internal temperature hysteresis accepts the values within range and retains original value if out of range value is entered.
5. WAP page updated to render properly.
6. On Graceful shutdown, the reboot time is now made to calculate correctly.
7. Provided support to additional events.
8. Fixed the configuration parameters that were missing from SmartUPS/Matrix section of config.ini for Tomcat UPS.
9. Fixed the connection lost issue when Reboot and GraceReboot command issued through CLI interface.
10. During graceful shutdown, NMC was incorrectly reporting Online Green status for the duration of shutoff delay prior to turning the UPS off.
11. Invalid UPS Turn Off packet sent to PCNS clients installed in Multiple UPS configuration causing a PCNS graceful shutdown followed by UPS Turn Off has been fixed.
12. Resolved the Warm start during config.ini upload. Increased the stack size

for the application.

13. Batteries needs immediate replacement alarm was not earlier propagated correctly in ISX Central and Net Botz.
14. Rectified the Weird error message when walking particular oids in  
SNMP: 1.3.6.1.4.1.318.1.1.1.2.2.7 and 1.3.6.1.4.1.318.1.1.1.2.2.6
15. Bypass Input voltage value now shown in NMC Web interface.
16. The "Battery Replacement Date" can be configured via Console interface.
17. Environmental Temperature and Humidity values were not setting properly in SNMP interface.
18. WAP authentication has been provided for SUMX applications.
19. When the UPS is rebooted, the event log records "Environment Relay Fault"

---

### 3.0 UPS Application for Symmetra, Symmetra LX (apc\_hw02\_sy\_372.bin)

---

#### 3.1 COMPATIBILITY

apc\_hw02\_aos\_373.bin Network Management Card OS & TCP/IP Stack

See OS & TCP/IP Stack Modifications (apc\_hw02\_aos\_373.bin) for a list of modifications and enhancements that affect this application version.

#### 3.2 KNOWN ISSUES IN THIS VERSION

1. Reported Anomaly: No trap is generated for "Self-Test Started" event.  
Disposition: A fix is planned for a future release.
2. Reported Anomaly: External Battery Cabinet Amp-Hour field allows invalid

characters.

Disposition: A fix is planned for a future release.

### 3.3 NEW FEATURES & ENHANCEMENTS

1. Support for PowerNet MIB 3.9.8
2. Increased the maximum interval between data log uploads from its current value of 8 hours to a new value of 24 hours.
3. Provided the ability to append a unique identifier (MMDDYY for example) to the upload filename for each upload.

### 3.4 BUGS FIXED IN THIS VERSION

1. Fixed the connection lost issue when Reboot and GraceReboot command issued through CLI interface.
2. Internal temperature hysteresis accepts the values within range and retains original value if out of range value is entered.
3. Provided support to additional events.
4. Resolved the Warm start during config.ini upload. Increased the stack size for the application.
5. Batteries needs immediate replacement alarm was not earlier propagated correctly in ISX Central and Net Botz.
6. During graceful shutdown, NMC was incorrectly reporting Online Green status for the duration of shutoff delay prior to turning the UPS off.
7. An Invalid UPS Turn Off packet sent to PCNS clients installed in Multiple UPS configuration causing a PCNS graceful shutdown followed by UPS Turn Off has been fixed.
8. Resolved the warm start during data log upload to the ftp server.

---

## 4.0 UPS Application for Symmetra PX (apc\_hw02\_sy3p\_372.bin)

---

### 4.1 COMPATIBILITY

apc\_hw02\_aos\_373.bin Network Management Card OS & TCP/IP Stack

See OS & TCP/IP Stack Modifications (apc\_hw02\_aos\_373.bin) for a list of modifications and enhancements that affect this application version.

### 4.2 KNOWN ISSUES IN THIS VERSION

1. Reported Anomaly: Not all of the Raw Status Data appears in the Web interface.

Disposition: A fix is planned for a future release.

2. Reported Anomaly: No trap is generated for the "Self-Test Started" event.

Disposition: A fix is planned for a future release.

3. Reported Anomaly: The upsCommStatus OID returns no value while communication between the Network Management Card and the UPS is lost.

Disposition: A fix is planned for a future release.

### 4.3 NEW FEATURES & ENHANCEMENTS

1. Support for PowerNet MIB 3.9.8.

2. Increased the maximum interval between data log uploads from its current

value of 8 hours to a new value of 24 hours.

3. Provided the ability to append a unique identifier (MMDDYY for example) to the upload filename for each upload.
4. Provided the ability to initiate a PCNS server shutdown from the NMC based on battery capacity.

#### 4.4 BUGS FIXED IN THIS VERSION

1. Resolved the sync control issues.
2. Added support to two new alarms "battery weak" and battery defective" on PX1.
3. Added support to additional events.
4. Fixed the connection lost issue when Reboot and GraceReboot command issued through CLI interface.
5. During graceful shutdown, NMC incorrectly reports Online Green status for the duration of shutoff delay prior to turning the UPS off.
6. An Invalid UPS Turn Off packet sent to PCNS clients installed in Multiple UPS configuration causing a PCNS graceful shutdown followed by UPS Turn Off has been fixed.
7. Resolved the Warm start during config.ini upload. Increased the stack size for the application.
8. Boundaries were enforced incorrectly when setting environment thresholds through SNMP.
9. Batteries needs immediate replacement alarm was not earlier propagated correctly in ISX Central and Net Botz.
10. Battery replacement future date was selected incorrectly.
11. User could not link to battery XR frames, when selected the login page appears.
12. Resolved the warm start during data log upload to the ftp server.

---

## 5.0 UPS Application for DP300, BC300 and AIS 5000 Series

(apc\_hw02\_dp3e\_372.bin)

---

### 5.1 COMPATIBILITY

apc\_hw02\_aos\_373.bin Network Management Card OS & TCP/IP Stack

See OS & TCP/IP Stack Modifications (apc\_hw02\_aos\_373.bin) for a list of modifications and enhancements that affect this application version.

### 5.2 KNOWN ISSUES IN THIS VERSION

1. Reported Anomaly: The Control Console and Web user interface have some minor aesthetic issues.  
Disposition: A fix is planned for a future release.
2. Reported Anomaly: User name/password credentials are not available to send to the SMTP server when sending e-mails.  
Disposition: A fix is planned for a future release.
3. Reported Anomaly: The Web interface does not display the time remaining to shut down the UPS for any graceful shutdown command.  
Disposition: This feature has been removed for all interfaces to eliminate ambiguity of shutdown timers.
4. Reported Anomaly: The Web device user does not have access to the

online help pages.

Disposition: A fix is planned for a future release.

5. Reported Anomaly: SNMP GETs of OIDs of instance indexes beyond the scope of the reported index size will return meaningless data and will not return an error.

Disposition: A fix is planned for a future release.

6. Reported Anomaly: The UPS temperature is not being logged in the data log. Disposition: A fix is planned for a future release.

7. Reported Anomaly: When an APC Interface Expander is installed in the chain of devices between the UPS and the Network Management Card, the Low Battery signal will be blocked from the Network Management Card.

Disposition: A fix is not planned.

8. Reported Anomaly: A sensor attached to the AP9618 and AP9619 Integrated Environmental Monitor clears any existing alarm conditions when the sensor loses communications.

Disposition: A fix is planned for a future release.

### 5.3 NEW FEATURES & ENHANCEMENTS

1. Support for PowerNet MIB 3.9.8.
2. Increased the maximum interval between data log uploads from its current value of 8 hours to a new value of 24 hours.
3. Provided the ability to append a unique identifier (MMDDYY for example) to the upload filename for each upload.

### 5.4 BUGS FIXED IN THIS VERSION

1. Fixed the connection lost issue when Reboot and GraceReboot command

issued through CLI interface.

2. Internal temperature hysteresis accepts the values within range and retains original value if out of range value is entered.
  3. Provided support to additional events.
  4. Resolved the Warm start during config.ini upload. Increased the stack size for the application.
  5. Batteries needs immediate replacement alarm was not earlier propagated correctly in ISX Central and Net Botz.
  6. Silicon essential alarms not properly propagated to ISX Manager, Central and Netbotz.
  7. Turning off a Parallel Silicon UPS does not keep the UPS off regardless of whether the UPS is configured to turn off and stay off.
  8. No longer the "Alarm name not available" event is generated when one silicon unit in parallel configuration is in hot standby mode.
  9. Inconsistent error reporting for UPS name in Telnet interface was corrected.
  10. Resolved the warm start during data log upload to the ftp server.
- 

---

## 6.0 APC Device IP Configuration Wizard v3.0.1

---

### 6.1 COMPATIBILITY

AP9617/AP9618/AP9619 apc\_hw02\_aos\_373.bin and prior Network Management Card OS & TCP/IP Stack

## 5.2 KNOWN ISSUES IN THIS VERSION

1. Reported Anomaly: The installation process, help document and the Device IP Configuration Wizard have some minor aesthetic issues.  
Disposition: A fix is planned for a future release.

---

## 7.0 Miscellaneous

---

### 7.1 Recovering from a Lost Password

See the User's Guide on the Utility CD or on the APC Web site ([www.apc.com](http://www.apc.com)) for instructions on how to recover from a lost password.

### 7.2 Event Support List

For the event names and event codes for all events supported for a currently connected APC device, first retrieve the config.ini file from the attached Network Management Card. To use FTP to retrieve config.ini from a configured Network Management Card:

1. Open a connection to the Network Management Card, using its IP Address:

```
ftp> open <ip_address>
```

2. Log on using the Administrator user name and password.

3. Retrieve the config.ini file containing the settings of the Network Management Card of the UPS.

```
ftp> get config.ini
```

The file is written to the folder from which you launched FTP.

In the config.ini file, find the section heading [EventActionConfig]. In the list of events under that section heading, substitute 0x for the initial E in the code for any event to obtain the hexadecimal event code shown in the user interface and in the documentation. For example, the hexadecimal code for the code E0033 in the config.ini file (for the event "System: Configuration change") is 0x0033.

### 7.3 PowerNet MIB Reference Guide

The MIB Reference Guide, available on the Network Management Card CD and on the APC Web site ([www.apc.com](http://www.apc.com)), explains the structure of the MIB, types of OIDs, and the procedure for defining trap receivers. For information on specific OIDs, use a MIB browser to view their definitions and available values directly from the MIB itself. You can view the definitions of traps at the end of the MIB itself (the file `powernet393.mib` on the Network Management Card CD and also downloadable from the APC Web site, [www.apc.com](http://www.apc.com)).