

## **10/100Mb ConnectUPS Web/SNMP Card Firmware Enhancement History**

This history applies to part numbers 116750221-001, 116750220-001 and some 103002974-5501 (blue colored PC board material) which first shipped with v4.18 firmware.

### **Version 4.38 – November 2012**

- Fixed the SNMP Output Watts value for both 1-phase and 3-phase UPS. Version 4.36 was incorrectly displaying the output watts by power factor of 10.
- Changed the data value storage size for “xupsBatTimeRemaining” from a WORD to Double WORD. This problem was reported by a customer using a 9130 UPS with extended batteries packs.
- Fixed a math calculation/conversion error for upsEstimatedMinutesRemaining.
- Fixed a buffer overflow issue affecting output current values used in the percent load calculations. Version 4.36 was incorrectly storing the output current values as a double word integer with format xxx.xx. In version 4.38 the output current values are rounded down to xxx format which correctly stores the appropriate value.
- Enhanced the email SMTP with TLS functionality to be more robust, supporting both SMTP server types: Those which require authorization and those that do not require authorization.

### **Version 4.36 – November 2011**

- The ConnectUPS now implements SMTP over Transport Layer Security (TLS) with email servers that support TLS for email transmissions.
- The algorithm for the SNMP output power (Watts) now matches the algorithm of the output power (Watts) value that is displayed on the web Summary page.
- A decimal rounding error is now fixed for the SNMP Input Current value.
- A double word overflow error is now fixed for the SNMP Input True Power value.
- A browser cookie-related issue has been fixed in v4.36. In v4.34, under some limited circumstances, the ConnectUPS did not recognize the user’s password when entered in the web UI.

### **Version 4.34 – December 2010**

- The MAIL FROM field was being set to UPS.Web.Card@xxx.xxx.xxx.xxx (xxx.xxx.xxx.xxx represents the IP address of the mail server) following a reset to default in v4.32 firmware. It should have been set to UPS.Web.Card@eaton.com. This was only evident in the SMTP server log and has been corrected with this release.
- The user may now completely view the Card Settings and Event Log Summary via SSH. Data is released immediately via SSH now to prevent display issues.
- The time zone for Venezuela (GMT – 04:30) has been added in this release. DST rules for the other supported time zones were reviewed and updated as necessary.

### **Version 4.32 – September 2009**

- A Logout button is now available on the ConnectUPS web pages. It allows the user to logout of the super user mode and remains in the general user mode. The browser’s ability to receive cookies must be enabled for this feature to work. If the browser will not accept cookies, the logout button is grayed-out.
- The Email Notification webpage has been enhanced to allow up to 10 email recipients to be entered. Previous versions of firmware only allowed 4 email recipients.
- The data corruption problem related to the emailed Data Log CSV file has been fixed. The data packet processing mechanism was improved to better handle large data packets in the Data.csv file.
- The Telnet session timeout value is now 180 seconds. In previous firmware versions it was 60 seconds.
- The buffer overflow problem related to SNMP MIB objects xupsInputWatts and xupsOutputWatts is now fixed. In previous firmware versions the SNMP values for xupsInputWatts and xupsOutputWatts per phase were not correct when the actual reading from the UPS exceeded 65535 watts.

## Version 4.30 – October 2008

- UPS event “cleared” emails are now sent for all event levels (critical, major, minor, all) when *Event Type PowerMIB* is selected. In v4.28, UPS event “cleared” emails were sent when only event level “all” was selected.
- The ConnectUPS Web/SNMP card’s firmware version is now also displayed on the Summary web page and on the serial/telnet connection login page for easier identification.
- A user-configurable menu item was added to allow a user to enter a hostname for the DHCP request.
- Daylight saving time (DST) is now adjusted automatically (default) based on the programmed rules for the user-selected time zone. If the user wishes to ignore DST in a specific location the *Daylight Saving Time Enable Automatically* box may be unchecked. The time zone selection and automatic adjustment for DST is only available when the card is configured to synchronize with an available NTP Server. Previous versions of firmware required a manual adjustment for DST twice a year.
- *ABM Status* information is now displayed on the Summary web page if the connected UPS has the Advanced Battery Management feature.
- Outgoing event emails now have the tag *ALARM NUMBERS*< > in the email body indicating the UPS-specific alarm number(s) that caused the email to be sent. In the past, this tag was *ALARMS*< > which was confusing to some users.
- The ConnectUPS Web/SNMP card’s web pages have an updated color scheme consistent with Eaton’s Power Xpert supported devices.
- The *ConnectUPS card initiated NetWatch client shutdown* logic for a manual load segment shutdowns is fixed. Now, during a manual load segment shutdown, the ConnectUPS does not instruct NetWatch clients to shut down when “Load segment to turn off following OS shutdown=No”.
- The Input Frequency data corruption problem related to the emailed Data Log CSV file has been fixed.
- The email sending mechanism was improved to better handle resending emails after a network connection has been regained.
- The ConnectUPS now implements PowerMIB object *xupsRecepShedSecsWithRestart* to support multiple load segment UPS models. In the older firmware, only MIB object *xupsLoadShedSecsWithRestart* (for the whole) was implemented.
- The default address for *Sender’s Email Address* and *SMTP Reply to Address* have been changed from *UPS.Web.Card@xxx.xxx.xxx.xxx* (where xxx is the card’s IP address) to *UPS.Web.Card@eaton.com*. SMTP servers were known to reject emails coming from the old formatted email address.
- The ConnectUPS now sends a trap/email when the UPS announces the clearing of alarm *xupsAlarmTestInProgress*. This alarm is associated with the UPS battery test.
- UPS-initiated battery test results are now reported by the ConnectUPS. In previous versions of firmware, only test results from a ConnectUPS-initiated battery test were reported.

## Version 4.28 – December 2007

- A user-configurable menu option (serial and Telnet/SSH menu accessible) was added to allow the user to set the network connection speed and duplex settings. Auto Negotiate (default), 100M Full Duplex Only, 100M Half Duplex Only, 10M Full Duplex Only and 10M Half Duplex Only are selectable now to support customer requests for this feature.
- The Japanese language support has been updated to correct previous translations issues.
- UPS shutdown and restart capability has been added so that EMP-related shutdown events can now trigger the UPS to be turned off and (optionally) back on.
- Emails sent from the card now include an *ALARMS* tagged field in the email body that provides the native XCP alarm number that’s responsible for triggering the email.
- SSH support can now be enabled/disabled via serial, Telnet, SSH and the Configuration webpage.
- The ConnectUPS help text that explains the *Last Battery Status* was changed to clarify that it is related to a ConnectUPS Web/SNMP card-invoked battery test rather than the status of any test initiated by the UPS itself.

- The PowerMIB-asserted trap ID number for xupsAlarmOutputBad now correctly displays ID 46 for traps sent by the ConnectUPS.
- The ConnectUPS no longer reboots and output the message "No memory space" to the configuration port following a SSH session that has timed out.
- SSL support has been enhanced to be more secure. With previous versions of firmware each card shared the same Certificate Authority (CA) and generated a single certificate from that CA. Now, each ConnectUPS creates its own CA during the first boot-up and generates a single certificate from that CA. The result of this is that users may now use SSL to view more than one ConnectUPS in tabbed browsers such as IE7 and Firefox.
- XCP alarm #246 (Neutral Current Limit) has been remapped from an internal failure (WKA\_FAL) condition to a notification condition (WKA\_NTC) inside the ConnectUPS to lessen the severity of notification when this condition occurs under normal conditions on some UPS models.
- The default event type selection that determines which SNMP MIB is referenced to generate email notifications has been changed from the RFC-1628 MIB to the PowerMIB since that is the preferred selection.
- In previous firmware versions, the ConnectUPS reports a loss of UPS communication after 6 communications retries. In v4.28, a user configurable menu item was added to the serial/Telnet interface to allow a user to set the number of communication retries before the ConnectUPS will report a loss of UPS communication. The number of retries can be adjusted from 6 to 50. This was implemented to provide some flexibility when used with the Powerware 9370 UPS.

#### **Version 4.26 – June 2007**

- The number of supported UPS alarms was increased to support additional alarms present in the Powerware 9395.
- When the ConnectUPS sends a PowerMIB trap indicating that an alarm no longer exists, the OID associated with it ends with the appropriate alarm number instead of .209 which never changed in previous versions.
- The ConnectUPS now correctly sends emails when the language support has been localized to French, German, Italian, Portuguese-Brazil, Russian, Simplified Chinese, Spanish or Japanese.

#### **Version 4.22 – February 2007**

- A RSS feature was added to allow a short status “feed” to be displayed in appropriate RSS reader software.
- Japanese language support has been added.
- The card now correctly disables the DHCP mode associated with DIP switch 2 when that switch is returned to the OFF position.
- The card now provides the correct IP address when sending a Loss of Communications trap. In previous versions, the IP address associated with the trap was incorrect.
- For UPS models that do not support initiating a battery test, the card will no longer allow the test to be requested via SNMP.
- SNMP traps associated with the return of AC power will no longer be sent out by the card if they happen within the time value associated with *Delay Before First AC Warning Message*.
- The default value for RFC-1628 UPS MIB object *upsAutoRestart* is now Off in order to be synchronized with the web page displayed *Load Segment to Restart following the return of AC Line*. This prevents issues when LanSafe software is used to communicate with the UPS through a ConnectUPS.
- The ConnectUPS LAN chip “driver” was improved to correct DHCP operation with Linux-based DHCP servers. Only v4.18 and v4.22 firmware exhibited the original problem.
- Netwatch client support has been improved by resending client shutdown requests until an appropriate acknowledgement is received.

- The ConnectUPS Web/SNMP firmware upgrade utility *Upgrade100.exe* has been enhanced to support multiple network interfaces on the host PC. The new version is 3.10.

#### **Version 4.20 – April 2006**

- Emails sent from the card now include a *MODEL* tagged text field in the email body to indicate the UPS-configured model text.
- The UPS Data log page was fixed to correctly display the load percent and output voltage for the 9155 UPS with specifically the 3-phase input / 1-phase output configuration. The load percent and output voltage data were misaligned on the UPS Data Log page which also resulted in misalignment occurring in the Datalog Applet display and data log files sent along with emails from the card. Note: The Summary web page was unaffected by this problem.
- The card now logs the event message “Shutdown request sent to registered clients” whenever an EMP-related event occurs AND the user has selected “Notify Client OS to Shutdown” which instructs Netwatch clients to start their OS shutdown process based on the EMP-related event (temperature, humidity, contact closure) occurring. Previously, the OS shutdown activity was initiated correctly, but the card’s event log didn’t contain a record of the shutdown process being started.
- This version now supports a serial pass-through mode for direct communication with the UPS via PC serial connection (e.g. LanSafe may be used to speak serially with the UPS).

#### **Version 4.18 – January 2006**

- First firmware version for ConnectUPS Web/SNMP X-Slot card P/N 103002974-5501 built on the new blue colored PC board material. Version 4.18 has all the features of v3.18 which was released for use on the previous revision of the ConnectUPS hardware. The hardware is different; therefore the firmware is NOT interchangeable. Language file supplements for French, German, Italian, Portuguese-Brazil and Russian are available for use with version 4.18.