CYBER POWER SYSTEMS, INC.

# REMOTE MANAGEMENT CARD FIRMWARE RELEASE NOTES Applicable Products:

Version 1.3.0 (Release Date: Apr.10, 2020)

#### New Feature

- Support TLS 1.2.
- Add new commands in Command Line Interface(CLI): SNMP settings ATS Control
   Trap Receiver viewer account enable/disable reset SSH Hostkey to default.
- Support setting LDAP Authentication Mode with "Accredited User" and "By Logon User" and LDAP Authorization Mode with "By Group".

#### Feature Improved

- Force user to change different username/password upon login with default.
- Expand the compatibility to support Gmail notification function.
- Support Hostkey upload via Secure Copy Protocol (SCP).
- Support setting range of Periodical Battery Test up to 1 year for OL series UPS in Japan.
- Add X-Frame-Options to the http header for enhanced security.
- Display the measured value in the notification events when the temperature or humidity is above/below the thresholds.
- Support the format of domain name in LDAP/RADUIS server fields.
- Add new "options" of "return" and "exit" in the console menu mode.
- Implement UPS configuration OID as follows :
  - upsAdvanceConfigHighTransferVolt
  - upsAdvanceConfigAlarm
  - upsAdvanceConfigMinReturnCapacity
  - upsAdvanceConfigSensitivity
- Adjust the function "Admin/ Viewer Manager IP" to be on the [System->Management] webpage as it is valid for Radius/LDAP as well.

- Failed to login SSH console via Putty version 0.71 or above.
- RMCARD would crash when the software "The Dude" detects and scans the RMCARD with SSH enabled.
- Incorrect OID value "Source B" is carried in the Trap event when Source A fails.
- The OID value of "atsStatusRedundancyState" is opposite to its definition.
- Rarely fail to login and keep redirecting to the login page after login procedure on the Web.

## Version 1.2.0 (Release Date: Oct.22, 2019)

#### New Feature

- Support PowerPanel Business (PPB) Remote 4.2.0 or above.
- Support setting "Low Battery Runtime Threshold" for PR series and OL series UPS.
- Support downloading Diagnostic Information for RMCARD.

#### Bug Fixed

- The Webpage sometimes displays as incorrect device type "UPS" when RMCARD205 is installed in an ATS and connects to PowerPanel Business (PPB).
- Administrator fails to login when using Windows AD Server with specific attribute setting.
- Special characters are not allowed when setting SMTP server account/password on the Web Interface.
- Special characters are not allowed when setting SNMPv3 authentication password and privacy password on the Web Interface.
- The description of syslog help on Command Line Interface (CLI) is incorrect.
- The format of Syslog message is incorrect with displaying information of year.
- The value of battery voltage OID for Three Phase UPS is incorrect.
- RMCARD sometimes reboots unexpectedly when RADIUS Shared Secret setting is more than 19 characters on the Web Interface.
- Time not in Daylight Saving Time (DST) period is incorrectly turned forward one hour in the Start and End Month (only in the Southern Hemisphere).
- E-mail notification is unavailable when SMTP server address length is more than 32 characters.
- Login failure might happen when the communication between RMCARD and UPS is lost.
- Connection to the PowerPanel Business (PPB) Remote might fail when using Command Line Interface (CLI) with error command.

# Version 1.1.7 (Release Date: May.24, 2019)

# New Feature

- Add SNMP OID upsAdvanceConfigLowBatteryThreshold.

# Feature Improved

- Add status value "4" to represent "Battery not Present" in upsBaseBatteryStatus OID.

#### Bug Fixed

- The Model Name on the Web Interface would display incorrectly with the following
Three Phase UPS :HSTP3S10KE,HSTP3S20KE

- The settable of "External Battery Module" on the Web Interface could not display the correct maximum number of the following OLS series UPS:

  OLS6000E, OLS6000EXL, OLS10000E, OLS10000EXL, OLS3S20KE, OLS3S20KEXL,

  OLS6000ERT3U, OLS6000ERTXL3U, OLS10000ERT3U, OLS10000ERTXL3U.
- RMCARD would unexpectedly send the "Return from Low Battery" event when the UPS is turned off in low battery condition.
- Using Windows NPS RADIUS Server could not login with Administrator.
- Using Command Line Interface (CLI) could not disable the secondary LDAP Server
   SSL.
- Setting the Schedule Once on the Web Interface of ATS, the same action might unexpectedly do again after 11 days.

#### Version 1.1.6 (Release Date: Feb. 23, 2019)

#### New Feature

- Add SNMP OID as follows :
  - envirTemperatureCelsius
  - envirTempCelsiusHighThreshold
  - envirTempCelsiusLowThreshold
  - envirTempCelsiusRateOfChange
  - envirTempCelsiusHysteresis
- Display UPS output wattage information via the following ways:
  - Check the Load field on the UPS status webpage.
  - Get SNMP OID upsAdvanceOutputPower

# Feature Improved

- Display passwords with five asterisks "\*\*\*\*" instead of originally blank once the password field of SNMPv3 authentication and privacy are set.
- Modify the hint of quit command to "q" on the "eventlog show" of Command Line Interface (CLI).
- Implement SNMP OID upsAdvanceBatteryVoltage (Not including OR series UPS) Bug Fixed
- RMCARD serial number would display 12 zeros in a row after RMCARD is reset to default settings.
- The UPS energy field would not display correctly on the UPS status webpage when energy meter reading is greater than 1677K kWh.
- The E-mail Recipients webpage would not display correctly once the test message is sent to more than one email recipient and DNS server is not functional.

# Version 1.1.5 (Release Date: Nov. 16, 2018)

#### New Feature

- Support Save and Restore Configuration function for UPS and ATS parameter configuration.
- Support Charge Mode and Charge State display for OL series UPS.
- Support Wake-on-LAN (WOL) function for Three Phase Tower UPS and Three Phase Modular UPS.
- Display model name for Three Phase RT Series UPS.
- Support setting range of Periodical Battery Test up to 1 year for PR series UPS.

## Feature Improved

- Expand account/password up to 63 characters for the Administrator on the Local
   Account and the SMTP Server.
- Modify the error that firmware upgrade for new PR Series UPS is occasionally dysfunctional.
- Display error code in the notification event when UPS hardware has faults.
- Display passwords with five asterisks "\*\*\*\*\*" instead of originally blank once the password field of SMTP server is set.
- Display remaining runtime as two dashes "--" when Three Phase Modular UPS is in line mode.
- Correct the word of "Runtime Calibration" to "Runtime Estimation" on the display of Diagnostics function.

- Setting Gmail authentication on SMTP server would not succeed due to the change of verification method in Google mail Server.
- Webpage is no longer accessible through HTTPS once the handshake between RMCARD and LDAPS server fails.
- Error message "Key Exchange Fail" appears on the console or RMCARD reboots unexpectedly when users attempt to log in through SSH by PUTTY.
- RMCARD is not compatible with Three Phase STP Series UPS and would reboot unexpectedly.
- RMCARD would not operate normally except FTP function once incorrect firmware file is uploaded.
- SMS service is not functional in specific servers with severe standard.
- Disabling DHCP from UPS panel would not succeed if all IP information (IP address, Subnet Mask and Gateway) remains the same.
- Save and Restore Configuration function is dysfunctional for the configuration of Environmental Sensor and System Events on the [Notification->Event Action] webpage.

- Special characters are not allowed when setting account/password on the menu mode through Console.

## Version 1.1.4 (Release Date: Sep. 7, 2018)

#### New Feature

- Add the Battery Status page to the Web Interface for displaying built-in battery and Extended Battery Module (EBM) information including temperature, voltage and equalization status for new PR series UPS.

## Feature Improved

- Add new command of setting Battery Replacement Date to Command line interface.
  - For example, to set the Battery Replacement Date as May 29, 2018, the command should be typed as below:
    - upsbatt rdyyyy 2018 rdmm 5 rddd 29
- Display RMCARD Serial Number information via the following ways:
  - Check the [System->About] page of the Web Interface.
  - Enter the command "sys show" in Command line interface.
  - Get SNMP OID as follows: atsIdentAgentSerialNumber upsAdvanceIdentAgentSerialNumber
- Implement SNMP OID upsAdvanceBatteryVoltage (For new PR series UPS)

- When UPS reboots via the Web Interface, the reset procedure would sometimes cease and display "Wait for UPS Turning On" and would not return to the right status back.
- The status of UPS would display normal on the PPBE Client even when UPS hardware has faults.
- Using TLS/SSL to verify user's identity on the SMTP server would get authentication failure when the character length of account is shorter than the character length of password.
- RMCARD would crash after the software "NESSUS" detects and scans the RMCARD.
- The Diagnostics page of the Web Interface would not display and operate normally when executing battery test in the following condition (including but not limited):
  - The Bypass Condition is set as "No Bypass" in the Configuration page of the Web Interface for OL series UPS.
- The Environment Traps sent with trap types between 100 and 113 are inconsistent with the Environment Traps with defined trap types as between 200 and 213 in the CyberPower MIB file.

# Version 1.1.2 (Release Date: Apr. 2, 2018)

#### New Feature

- Support Firmware Update function via Secure Copy Protocol (SCP) and PuTTY Secure
   Copy client (PSCP).
- Support SSH Hostkey export function.
- Support Dry Contact function for new PR series UPS.
- Add SNMP OID as follows: atsLoadStatusBankEnergy atsLoadStatusBankStartTime

upsPhaseOutputPower (For Three Phase Tower UPS and Three Phase Modular UPS)

# Feature Improved

- Display outlet user name in the Event Logs when outlet user logs in/out.
- Display character length which can be input to the account and password in the hint window of changing default username/password and in the Local Account page.
- Modify the settable year range as 2015 to 2025 in the Manual Setup option of the Time page.
- Correct the misspelled characters and renew the logo pattern in the Web Interface.

# Bug Fixed

- Using SNMP to get "upsAdvanceTestCalibrationResults" would get undefined status value "4" when UPS calibration is processing.
- Inputting incorrect Manager IP format in the Local Account page would be accepted and be configured an unpredictable setting value.

# Version 1.1.1 (Release Date: Nov. 2, 2017)

#### Feature Improved

- Display timezone settable options if using incorrect parameter to set timezone via command line interface.

- If DNS failed to get IP happened once, then DNS would not succeed anymore.
- Web UI was displaying "UPS firmware waiting for updates" when RMCARD was used with the following OR series UPS: OR1500LCDRM2U, OR2200LCDRM2U, OR2201LCDRM2U, OR1500LCDRTXL2U, OR2200LCDRTXL2U
- Use the CLI to set the timezone and then reboot system, timezone would return to default value.
- Web page could not be opened anymore if HTTPS network handshake failed.
- When the time is obtained from NTP server between 00:00 and 01:00, and the time

is in the range of DST, the system time would go wrong.

- OAuth could not be used after the HTTP(or HTTPS) port changed.
- PPBE Client kept warning remaining runtime not enough when modular UPS in line mode.

## Version 1.1.0 (Release Date: May. 16, 2017)

#### New Feature

 Support UPS Firmware Update function, UPS Energy Meter/Record, UPS IP Address Setting via LCD control panel for the following UPS models (including but not limited):

PR series: PR750(E)RT2U, PR1000(E)RT2U, PR1500(E)RT2U, PR2000(E)RT2U, PR2200(E)RT2U, PR3000(E)RT2U, PR750(E)RTXL2U, PR1000(E)RTXL2U, PR1500(E)RTXL2U, PR2000(E)RTXL2U, PR2000(E)RTXL2U, PR2200(E)RTXL2U, PR3000(E)RTXL2U, PR2200(E)RTXL2UA, PR3000(E)RTXL2UA, PR2200RTXL2UHVA, PR3000RTXL2UHVA OL series: OL1000RTXL2U, OL1500RTXL2U, OL1500RTXL2UN, OL2200RTXL2U, OL3000RTXL2U, and OL3000RTXL2UHV

Note: OL model firmware version needs to be Sv3A00 or above. Please see respective UPS User Manual on how to identify the firmware version.

#### Feature Improved

- Added the SYSLOG description for Event Action Help page.
- The date setting of Manual Setup option for Year can only be displayed after 2000.

#### Bug Fixed

- Using SNMP to get "atsStatusCommStatus" and "atsStatusRedundancyState" would get unexpected numbers such as negative numbers.
- "Turn Off capacity threshold" could not be displayed in the configuration page for PR Rack Series UPS.
- Unexpected reboot when E-mail notification was executed via Office365 SMTP Server.
- The SSH Console could not be logged in by PUTTY.

# Version 1.0.9 (Release Date: Dec. 9, 2016)

#### New Feature

- Three Phase Tower UPS and Three Phase Modular UPS support.

- Fixed the detection function while utility frequency out of range.
- Fixed the issue that system could not login when using MAC Safari.
- Fixed the mis-sending in Bank Overload Event to PPBE Center when RMCARD lost

the communication with ATS.

- Fixed the mis-sending in Login Event when testing LDAP and RADIUS.
- Fixed being unable to authenticate for the change of verification method in Google email.
- Regulated the Battery Replacement Date setting for particular PR UPS Models.
- Regulated the expired date of battery for particular PR UPS Models.
- Fixed the incorrect type of UPS MIB (RFC1628) OID.

## Version 1.0.8 (Release Date: Nov. 4, 2016)

#### New Feature

- Force user to change the default username/password upon first login.

## Feature Improved

- Increase the SSH certificate compatibility.
- Increase the SMTP certificate compatibility.
- The Web Interface is modified in words.

## Bug Fixed

- Fixed SNMP communication when more than one user set the same community but with different IP addresses.
- Fixed the system not sending the login fail event when user's IP not matching with manager IP.
- Fixed Battery Voltage Rating display when UPS have 4 internal battery packs.
- Fixed SNMP communication being failing after use OID to reset RMCARD.

# Version 1.0.7 (Release Date: Aug 8, 2016)

#### Bug Fixed

- Fixed the issue of being unable to log in after changing the admin user password.

# Version 1.0.6 (Release Date: Jul. 12, 2016)

# Feature Improved

- Display UPS Serial Number information at the UPS Detail Information field on the PPBF Center user interface.

- Fixed the Save and Restore Configuration about event action.
- Fixed the issue about Next Replacement Date setting.
- Fixed the issue about UPS battery test result display on the PPBE Center user interface.
- Fixed the issue about ATS administrator having insufficient control permissions by external authentication after an ATS outlet user logs out.

Version 1.0.5 (Release Date: Apr. 26, 2016)

#### New Feature

- Google Gmail authentication interface.

#### Feature Improved

- Allow outlet user to log in with RADIUS/LDAP.
- Allow two decimal digits displayed for Electricity Rate.
- Modified the display content of webpage.

## Bug Fixed

- Fixed the issue about daylight saving time setting.
- Fixed the issue about RADIUS feature being unable to create.
- Fixed the issue about Command line interface feature being unable to work on certain conditions.

Version 1.0.4 (Release Date: Mar. 11, 2016)

#### New Feature

- Command line interface feature.

# Feature Improved

- SSH remove MD5. (Security vulnerability consideration)
- Add Event about UPS Battery Replace.
- Allow users set account and password with all special characters. (eg. !@#\$%^&\*)
- Increase the SNMP trap compatibility.

#### Bug Fixed

- Fixed the issue about Australian daylight saving time setting.
- Fixed the inappropriate display for "NCL off delay" for particular UPS models.
- Fixed the bug while using SNMP to get "upsBaseIdentModel" and "sysObjectID".

Version 1.0.3 (Release Date: Dec. 10, 2015)

# Bug Fixed

- Environmental Sensor was unable to work with RMCARD305.
- Fixed the issue that the setting could not work if Manager IP without subnet mask.
- Fixed the issue that the system could not login when Manager IP used Ipv6 subnet mask setting which was not a multiple of 4.
- Fixed the inappropriate display for battery replace date on UI for particular UPS models.

Version 1.0.2 (Release Date: Nov. 18, 2015)

#### New Feature

- Add support ATS 32A feature.

#### Feature Improved

- SSL remove RC4 related cipher suites. (Security vulnerability consideration)
- Using the cross-network segment by PPBE can access control RMCARD.

#### Bug Fixed

- Fixed the issue about Manager IP by subnet mask feature unable to work.
- Fixed RMCARD and PPBE sync related issue, including Periodical Battery Test and NCL Turn Off Delay.
- Fixed Outlet User related issue, including user account, logout event, auto login and webpage identity display.
- Fixed the issue about RMCARD NCL Bank setting and display unable to be synchronized.

# Version 1.0.1 (Release Date: Sep. 30, 2015)

#### New Feature

- Configurable System Date Format.
- For OL Series UPS, users can configure exclusive days of week and a period of time when selecting ECO mode.
- Users can set Manager IP by subnet mask.

#### Feature Improved

- Added retry mechanism on WOL function.
- Modified the input field of system date to Drop-Down Menu format.
- German grammar correction.
- French grammar correction.

# Bug Fixed

- Expanded the compatibility for uploading certificate for SSL/SSH.
- Fixed the bug about DHCP being disabled occasionally when syslog enabled.
- Fixed UPS sleep function compatibility issues.

# Version 1.0.0 (Release Date: Aug. 3, 2015)

- First Release.

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