Industrial Network UPS Firmware Release Notes 205.315

Contents

General

The 2XX.3XX firmware series adds alarm and protection features to improve product reliability and quality. The 205.315 release adds support for Rev2 HW, patches security vulnerabilities and improves internal communication reliability.

Supported Hardware

Model	*Required Firmware to support Release*	*Notes*
35W (UPS003024024015)	Any	
100W (UPS00100DC)	Any	

Released Production Files

Product Upgrade

Image Information

```
Filename: image.bin
Version: 205.315
CRC32:   C3343066
SHA256:  809c942cad4e54f36f79be0673c9d9588f88fed1f9a6ad51c14ac174921f7a98
Filesize: 1203611 bytes
```

New Features

New Features added in version 205.315

Feature	*Title*
1	Stronger TLS Ciphers added to HTTPS
2	Additional HTTP Security Headers

1 HTTPS previously included SHA1 based ciphers. SHA1 is now considered weak by many security auditing devices. The SHA1 ciphers have been replaced with SHA256 ciphers.

2 Additional HTTP security headers including XSS protection, Content-Type-Operations: nosniff, X-XSS-Protection, and Cache-Control.

New Features added in version 202.313

Feature	*Title*
1	Webpage connection via HTTPS
2	Digitally signed firmware verification
3	Improved Spanish translations

1 Webpage connection via HTTPS. UPS certificate is unique to each device.

2 Digitally signed firmware verification. Device will now verify FW is signed by Panduit before allowing updates, this prevents maliciously compromised firmware from being loaded.

3 Improved Spanish translations. Some areas of the web UI were missing translations to Spanish.

New Features added in version 200.300

Feature	*Title*
1	Capacitor Over-Temperature Alarm and End of Life
2	Capacitor Over-Voltage End of Life
3	Capacitor State of Health Monitoring Alarm and End of Life
4	Capacitor Voltage Reduction

1 The UPS will monitor the internal temperature of the UPS. If the temperature nears maximum temperature, an over-temperature alarm will be issued. If the temperature exceeds the maximum temperature, the capacitors are damaged. The UPS will continue to allow bypass mode only and indicate that it must be replaced. No backup power will be provided.

2 The UPS will monitor internal cell voltage. If any cell voltage is above safe limits, the cell has been damaged. The UPS will continue to allow bypass mode and indicate that it must be replaced. No backup power will be provided.

3 The UPS will monitor capacitor health. When health nears 0%, the UPS will issue an “End of Service Life” warning and continue to operate normally. When health reaches 0%, the UPS will continue to allow bypass mode and indicate that it must be replaced. No backup power will be provided.

4 The UPS will reduce the maximum capacitor voltage. This will increase the lifetime of the UPS and prevent capacitor damage at high temperatures but will reduce the hold time of the UPS.

Resolved Issues

Issues resolved by version 205.315

Issue ID	*Title*
UPS-245	WebUI Anti-Clickjacking fails to protect
UPS-248	TRECK Stack Security Vulnerabilities
UPS-249	Extremely high web traffic can cause Webpages to hang
UPS-263	Firmware upgrade using IE11 and https does not work

UPS-245 WebUI Anti-Clickjacking fails to protect

On older browsers that do not support X-Frame-Options, anticlick jacking code is used to defend against UI redress attacks. The previously added anti-clickjacking code did not work properly.

UPS-248 TRECK Stack Security Vulnerabilities

Security researchers have identified critical vulnerabilities in the TRECK TCP/IP stack used in the UPS. These vulnerabilities would allow an attacker with access to the UPS network to run unauthorized FW on the UPS.

UPS-249 Excessive web traffic can cause Webpages to hang

A high number of recurring web requests can cause the webUI to hang. UPS functionality is not affected, but the device must be power cycled to recover.

UPS-263 Firmware upgrade using IE11 and https does not workFirmware upgrade from 202.313 to 205.315 does not work when using Internet Explorer 11 and connected to the UPS via https (secure).

Workaround: Upgrade using Chrome or Firefox. If IE11 is required, use http (insecure).

Issues resolved by version 202.313

Issue ID	*Title*
UPS-64	Firmware Update Process initiation is intermittent
UPS-124	Factory account enabled by default
UPS-125	SNMP upsBatteryVoltage reads zero when input power is removed
UPS-152	Factory Restore does not reset SNMP settings
UPS-155	Event Log Refresh button does not always load events
UPS-168	HTTP uses Basic Authentication
UPS-169	Potential Cross-Frame Scripting Vulnerability

UPS-64 Firmware Update Process initiation is intermittent

Depending on the browser used, the firmware update process may haved failed to initiate after the file was selected and the “update” button was pressed. This is caused by browsers not properly supporting http authentication requests on file posts. A webpage change is able to work around this issue in browsers.

UPS-124 Factory account enabled by default

This firmware disables a factory login account by default. Panduit can no reset passwords without completely defaulting the device. The user may perform a factory reset as described in the instruction manual.

UPS-125 SNMP upsBatteryVoltage reads zero when input power is removed

SNMP was improperly reading the input power for the battery voltage object. Object is now reading capacitor voltage.

UPS-152 Factory Restore does not reset SNMP settings

Factory restore now defaults SNMP settings

UPS-155 Event Log Refresh button does not always load events

Some events were only updated on initial load of the module status page. All events are now managed asynchronously and will updated when the events page is refreshed.

UPS-168 HTTP uses Basic Authentication

HTTP basic authentication sends the username and password in clear text. HTTP now uses digest authentication. For maximum security the user should only login when connected via https.

UPS-169 Potential Cross-Frame Scripting Vulnerability

Automated security scanners identified a potential cross-frame scripting vulnerability. The webpages now have industry standard frame-breaking code and X-Frame-Options:Deny to the http headers to prevent any cross-frame scripting attacks.

Outstanding Issues

New Issues

The following issues were discovered while working on this release.

Issue ID	*Title*	*Version*	*Status*
UPS-265	Unwanted text in event log	205.315	DEFER

UPS-265 **Unwanted text in event log**Formatting data is displayed along with cell over-temperature events.

Workaround: Ignore formatting text

Existing Issues

The following reported issues were found prior to this release and are still outstanding.

Issue ID	*Title*	*Version*	*Status*
UPS-130	Unimplemented SNMP items are included in the MIB	128.212	DEFER
UPS-131	upsAlarmTable not updated for upsAlarmOnBattery condition	128.212	DEFER
UPS-225	FW Version incorrect briefly after reboot	128.212	DEFER
UPS-226	UPS allows invalid static IPv4 addresses	128.212	DEFER
UPS-237	SNMP: Depleted battery alarm goes away during discharge	128.212	DEFER

UPS-130 Unimplemented SNMP items are included in the MIBThe following objects are readable or writeable in the SNMP, but are not functional:

upsOutputPercentLoad
upsBypassTable
upsRebootWithDuration

Workaround: These objects should not be used in SNMP.

UPS-131 upsAlarmTable not updated for upsAlarmOnBattery condition.When the upsAlarmOnBattery condition occurs, the upsTrapOnBattery notification will be raised. The upsAlarmTable is not updated with the upsAlarmOnBatteryCondition.

Workaround: The upsInputVoltage will be 0 when operating on Battery.

UPS-225 FW Version incorrect briefly after reboot

If the webpages are loaded soon after the UPS boots, the charge controller firmware version may not have loaded. The settings page will report a version number of 000.XXX.

Workaround: Periodically refresh until the first three digits are no longer zero.

UPS-226 UPS allows invalid static IPv4 addresses

UPS does not check the validity of static IP addresses

Workaround:Verify the validity of an IP address for your network prior to saving. If a non-addressable IP address is saved and you are unable to connect, perform a factory default as described in the manual.

UPS-237 SNMP: Depleted battery alarm goes away during discharge

Workaround: Read both the depleted battery alarm and the battery status to verify charge recovery.

Document History

Revision	Date	Reason for Change
1	October 15, 2018	Initial Release
2	October 19, 2018	Added UPS-152
3	July 29, 2019	v202.312 -Improve Security and Translations
4	August 31, 2020	v205.315 – Improve Security and Reliability