

## PSA 5.3.04 Release Notes

The PSA **5.3.04** Release Note is applicable to the PSA-3000 and PVA-3000 family of test instruments.

### Highlights

The PSA 5.3.04 release mainly introduces enhancements to both the 2-Pair and 4-Pair PSE Conformance Test Suites. These enhancements add some new defect coverages and provide some minor bug fixes. Additionally, enhancements in LLDP testing are provided to create a better overall connection between **class\_lldp** (and **class\_lldp2**) outcomes and LLDP protocol traces utilized for troubleshooting LLDP protocol problems.

The 5.3.04 release provides some critical groundwork for the upcoming third generation **PSE Multi-Port Test Suite** that will, utilizing the **PSL-3424** platform, provide deep insights into PSE power management in PSE's offering any mix of 2-Pair and 4-Pair powering ports up to 96 total ports.

### PSE Conformance Test Suite Tracking Service

The PSA 5.3.04 release requires updated Product Keys for installing the 2-Pair and 4-Pair PSE Conformance Test Suites. These keys are available from the Sifos website to all customers with active Tracking Service agreements.

### EA Gen1 and Gen2 Certification Testing

PSA software version **5.3.04** is not certified for EA 1<sup>st</sup> party Gen1 (802.3at) and Gen2 (802.3bt) certification testing. The most current version of PSA software certified for EA 1<sup>st</sup> Party testing is version **5.3.01** (available from the Sifos website). Sifos does not plan to re-certify this particular release.

### PSA 5.3.04 Enhancements

| Software Entity                   | Impact    | Feature   |
|-----------------------------------|-----------|---|
| 2-Pair PSE Conformance Test Suite | Important | <b>class_time</b> : Added new test to measure mark time interval in response to minimum valid PD mark load producing new parameter <b>Mark_Tme1_Lowl</b> .  |
|                                   | Moderate  | <b>det_range</b> : Added new test to assess if a 2-Pair actually replicates signaling and powering on both pairsets (Alt-A and Alt-B). Reported by new parameter <b>4Pair_Pwr_?</b> .   |
|                                   | Minor     | <b>class_time</b> : Modified to compensate timing resolution inaccuracy by altering limit-line measurements rather than test limits. Reporting now uses 802.3 limits.   |
|                                   | Minor     | <b>class_time</b> : Modified to report <b>Tpdc</b> as duration of 1 <sup>st</sup> event recovered from 802.3bt 2-Pair PSE's when emulating class 0 PD's. 802.3at PSE's providing 2-event classification to class 0 PD's will still report <b>Tpdc</b> as average duration of both events. |
|                                   | Minor     | <b>pwron_maxi</b> : Improve compensation for very marginal current meter inaccuracies that might affect <b>llim_min</b> measurements, thus preventing false failures.   |
|                                   | Minor     | Reduced Interop Index impact of INFO mark for <b>Effective Backoff</b> parameter in <b>det_time</b> test as this has no real impact at all.   |

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| Software Entity                   | Impact    | Feature  |
|-----------------------------------|-----------|--|
| 4-Pair PSE Conformance Test Suite | Important | <b>class_time</b> : Added new test to measure mark time interval in response to minimum valid PD mark load producing new parameter <b>Min_Mark_EV_LowI_SS</b>  |
|                                   | Moderate  | <b>class_v</b> : Enhanced to remove any high (e.g. 20V) open circuit signaling that might appear if both pairsets power a dual signature PD in less than 500msec   |
|                                   | Moderate  | <b>class_lldp</b> and <b>class_lldp2</b> : Enhanced error messages suggesting user utilized LLDP traces when tests errs due to PSE not Echoing or Acknowledging PD requests as expected. Enhanced Notes 5.x.x. tab with parameter explanations that connect better with LLDP protocol trace usage. |
|                                   | Minor     | <b>class_response</b> : Enhance logic to report 2-Pair powering that is unexpected. Example: PSE that 4-Pair powers Class 1 but 2-Pair powers Class 3.   |
|                                   | Minor     | <b>class_ldap</b> : Modified to prevent test error if PSE loads the PSE <b>Max Power</b> field with irrational values such as current (mA)   |
|                                   | Minor     | <b>pwron_maxi</b> : Test had vulnerability to PSE that 4-Pair powers class 1 but not class 2 or 3 resulting in unset variable.   |
|                                   | Minor     | <b>pwron_maxi</b> : <b>lilm_min</b> measurements assumed current meter absolute accuracy was $\pm(0.5\%+.25mA)$ . Published spec is $\pm(0.5\%+.5mA)$ . Increased low-side current tolerance accordingly.  |
| PSA Interactive                   | Moderate  | Modified Auto-Discover menu to keep the PSA Interactive tab menus inhibited until the Auto-Discover menu is closed. Previously PSA Interactive enabled after 1 <sup>st</sup> auto-discover completed.  |
|                                   | Minor     | Modified Auto-Discover results display to include Max Power Grant Method for 802.3bt PSE's.  |
| Test Suite Reporting with Excel   | Minor     | Altered response of report generators to prevent software error condition when running on a Windows PC that does not have Excel installed.   |
| PowerShell PSA                    | Minor     | <b>psa_conn_check_4p</b> : Modified to prevent false triggering to large open circuit oscillations on a non-powering pairset.  |
|                                   | Minor     | <b>psa_auto_port</b> : (Auto-Discover) Enhanced logic distinguishing 2-Pair 802.3bt from 4-Pair 802.3bt PSE's, added Max Power Grant Method to output from 802.3bt (Type-3, Type-4) PSE results.   |
|                                   | Minor     | <b>psl_conn_check</b> : (PSL-3424 Instruments) Revise method of connection verifications to improve reliability with PSE's presenting very short duration and very low duty cycle impulses during open circuit signaling.  |

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### PSA 5.3.03 Bug Fixes

| Software Entity                   | Impact | Feature  |
|-----------------------------------|--------|--|
| 4-Pair PSE Conformance Test Suite | Minor  | <b>cc_response</b> : Corrected error condition if testing LLDP granting PSE with Show Traces active.   |
|                                   | Minor  | <b>class_v</b> : Corrected issue that erased an Alt-A trace if running with <code>-ds</code> (Dual Signature only) option.                                 |
| PSA Interactive                   | Minor  | In Power Up tab menu, corrected display of <b>Unbal. B</b> measurement that previously displayed 2 Alt-A pairset currents and not the Alt-B current.       |
| LLDP Protocol Traces              | Minor  | <b>trace_lldp_pwrup</b> : Reduced initial power draw to assure power stays under 13W for greater than 80 msec following power-ups.                         |
| PowerShell PSA                    | Minor  | <b>power_pse</b> : (PSL-3424 Instruments) Altered to properly handle case of LLDP power-up in 4-pair mode where only Alt-A powers ( <code>PWRD_A</code> ). |

### PSA/PVA Firmware Versions

PSA 5.3 software requires certain minimum versions of PSA/PSL test port firmware. The following versions are the current versions for each product. Sifos recommends updating firmware to these.

|   |   |   |
|---|---|---|
| <b>PSA-3000 Controller:</b> ver <b>3.1C</b><br><b>PSA-3402 Controller:</b> ver <b>3.1C</b><br><b>PSA-3424 Controller:</b> ver <b>3.1C</b><br><b>PSA-3002 Controller:</b> ver <b>3.14</b> <sup>1</sup> | <b>PSA-3202, PSL-3202, PSA-3402:</b><br>Test Port ver <b>4.19</b> , ALC ver <b>19</b> | <b>PSL-3424 Test Port:</b><br>ver <b>5.02</b> |
| <b>PSA/PSL-3102 or PSA-3002</b><br>Test Port ver <b>3.2B</b>  | <b>PVA-3102</b><br>Test Port ver <b>3.0B</b>  |   |

- 1 PVA-3002 compact PhyView Analyzers can run firmware versions later than 3.14 if the host software is version 5.3.00 or later. If software is before version 5.3.00, then controller firmware 3.14 should be installed.

### PSA-3202/PSL-3202/PSA-3402 ALC Version 19 Update

The ALC firmware within a PSA-3202/PSL-3202/PSA-3402 is a vital element affecting the instrument's ability to reliably emulate all **802.3bt** PD's and to test **802.3bt** PSE's under a wide variety of conditions. The current version of ALC firmware is **version 19** that was introduced with the PSA **5.2.03** release. Any instruments that are used for 802.3bt PSE testing either now or in the future should be updated to this version if they have not already had that update.

To examine current ALC firmware version, simply open **PowerShell Tcl** or **Wish** and execute:

```
psa_config -alc
```

### ALC Version 19 Update Instructions

Updating any PSA/PSL test instrument to ALC version 19 is a very simple task. However, it should be performed when the instrument is not needed for a while as it will consume 10 minutes PER TEST PORT

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to complete. It is recommended to simply run this update overnight from a PC that is not busy performing other tasks.

To perform the ALC version 19 update to all PSA/PSL-3202 test ports:

After installing PSA version 5.2.03 or 5.2.04 software, open PowerShell (Wish or Tcl), connect to instrument that will be updated, and execute:

**alc\_updater\_19**

When the update is completed, look for the indication:

**alc\_updater\_19: UPDATES COMPLETED !!!!**

**Ports \*\*\*\* Updated Successfully!**