

PSA 5.1.07 Release Notes

The PSA 5.1.07 Release Note is applicable to the PSA-3000 and PVA-3000 family of test instruments.

Highlights

The 5.1.07 Release is essentially a pre-release of PSA 5.2 software. The PSA 5.2 software release will soon follow after all applicable documentation is completed.

The PSA 5.1.07 Release includes enhancements exclusively in the following area:

4-Pair PSE Conformance Test Suite

The 4-Pair PSE Conformance Test Suite is now versioned to **5.2.12**.

The 4-Pair PSE Conformance Test Suite is adapted to work with additional “restricted PSE power” and additional special power demotion cases that include single pairset powering of Dual Signature PD’s and PSE’s that offer Class 5 or Class 7 maximum power grants.

ALC Firmware Update

This update was included in the PSA 5.1.06 release.

As part of the extensive 4-Pair test suite QA, a couple of issues were resolved to be features of PSA-3202 ALC (automatic load control) firmware. So this release includes ALC version 17 and it is **HIGHLY RECOMMENDED** that PSA-3202 test ports all be updated to version 17. See [PSA-3202/PSL-3202/PSA-3402 ALC Version 17 Update](#) near the end of this Release Note.

PSE Conformance Test Suite Tracking Service

When installing 5.1.07 software, customers who are licensed for the **2-Pair** (formerly 802.3at) PSE Conformance Test Suite and are active on Conformance Test Suite Tracking Service must enter the 2Pair CTS Key in order to retain the PSE Conformance Test Suite after the software update. Customers who are licensed for the **4-Pair** test suite must enter the 4Pair CTS Key to maintain that test suite.

Both Product Keys are equivalent to those issued for the PSA 5.1.05 and PSA 5.1.06 releases and may be obtained by registering / logging into the Sifos website for product downloads. Customers who are active on Conformance Test Suite Tracking Service and have accounts at www.sifos.com may obtain product keys from the Product Download area.

PSA 5.1.07 Release Notes

PSA 5.1.07 Enhancements

Software Entity	Impact	Feature
4-Pair PSE Conformance Test Suite	Important	Modified the utility that discovers the maximum assigned Dual Signature class to require that both pairsets be powered and granted the classification that is reported as maximum dual signature class (used in a number of tests).
	Moderate	Also modified this utility to automatically override the declared 4-Pair Type if it is Type-3 and the maximum supported classification exceeds Class 6 or Class 4D.
	Moderate	pwron_pwracap : Modified to process special power demotions of a Class 5 capable PSE powering > Class 5 and Class 7 capable PSE powering Class 8. Extensively modified to work with Dual Signature cases where just one pairset gets powered - will measure capacity on just that pairset
	Moderate	pwron_unbal : Modified to process special power demotions of a Class 5 capable PSE powering > Class 5 and Class 7 capable PSE powering Class 8. Modified to anticipate that a PSE with with maximum class grant less than 5 may remove power or oscillate pairset voltage when load is set to 0mA.
	Moderate	class_time : Modified to use the maximum dual signature class for dual signature testing to better support a PSE in power limited modes.
	Moderate	class_response : Modified to process dual signature power-ups where only one pairset powers.
	Minor	det_v : Added waveform logging when a det_cycle waveform cannot be processed through step resolver
	Minor	class_err : Modified to improve reliability of Class_lim measurements with a particular PSE implementation. Also added waveform logging if a Class_lim current measures less than 40mA.
	Minor	class_ildp : Modified to allow full range of PSE Max Power regardless of PD emulation (1-999) and to add a new flag parameter that indicates if PSE processes higher PD requests than 51W with Class 6 negotiations.
	Minor	class_ildp2 : Modified to allow full range of PSE Max Power regardless of PD emulation (1-999).
	Minor	pwron_v : Modified to perform the Vdiff measurement to adapt to a PSE that removes power with 0mA on a pairset.
	Minor	Test reporting modifications: * Modified limits table to allow -1 result on class_response dual signature event counts * Modified limits table and Notes tab for pwron_pwracap to allow that dual signature pairset for Class 3D-5D may be unpredictable

PSA 5.1.07 Release Notes

Software Entity	Impact	Feature
		<ul style="list-style-type: none"> * Modified several test limit entries under class_v and class_time to accept -1 results where parameters are not relevant. * Added new class_lldp parameter PSE_Class_6_Pwr_Ext indicating if PSE allows more than 51 W requests to Class 6 PD's * Added conditional maximum limits to 6 of the parameters in class_response that should be restricted according to the PSE Type (3 vs 4)
One-Click Waveforms	Moderate	Classification Waveform: Modified waveform to allow for a PSE that powers just one pairset of a Dual Signature emulated PD under particular dual signature classifications.
	Minor	Detection Waveforms Connection Check and High Signature Connection Check modified to improve reliability and to better remove artifacts of detection pulse overlaps.
PowerShell PSA	Moderate	In power_bt , added ability to return event counts for PD Classes 1-4. With this, power_bt now supports autotest for Classes 1-4.

PSA 5.1.06 Bug Fixes

Software Entity	Impact	Feature
4-Pair PSE Conformance Test Suite	Minor	class_response : Modified to correct bug where a '0' event count on one pairset caused '0' to be reported on both pairsets

PSA/PVA Firmware Versions

PSA 5.1 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.

PSA-3000 Controller: ver 3.18	PSA-3202, PSL-3202 , PSA-3402:
PSA-3402 Controller: ver 3.18	Test Port ver 4.17 , ALC ver 17
PSA/PSL-3102 or PSA-3002	PVA-3102
Test Port ver 3.2B	Test Port ver 3.0B

Important! **PSA-3000 Controller** firmware **3.18** or later is required in order for PSA 5.1 software to speed up host-to-test-port communications. Without this firmware version, there will be no change in communications bandwidth.

Important! The **4-Pair** PSE Conformance Test Suite requires PSA-3202 firmware version **4.14** or later. This version implements a trace capture feature that enables better resolution of PSE classification timing. Version **4.17** is recommended.

Important! PSx-**3202** firmware **4.17** or later and PSx-**3102** firmware **3.2B** addresses an extremely subtle and rare problem that develops when running PSE conformance tests with **LLDP power-granting**

PSA 5.1.07 Release Notes

PSE's. The problem can manifest as either an I/O timeout to the PSA instrument or as an LLDP LAN interface that fails to auto-negotiate with the PSE port under test. Only PSx-3202 and PSx-3102 **hardware versions 8** and **9** are impacted by this problem. These versions also address another rare problem that manifests in the **pwruptrace** meter used by the **2-Pair PSE Conformance Test Suite** where early portions of a voltage trace may have corrupted values.

PSA-3202/PSL-3202/PSA-3402 ALC Version 17 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 17**. Any instruments that are used for 802.3bt PSE testing either now or in the future should be updated to this version.

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

```
psa_config -alc
```

ALC Version 17 Update Instructions

Updating any PSA/PSL test instrument to ALC version 17 is a very simple task. However, it should be performed when the instrument is not needed for a while as it may take from 3 to 10 minutes PER TEST PORT 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 17 update to all PSA/PSL-3202 test ports:

After installing PSA version 5.1.06 software, open PowerShell (Wish or Tcl), connect to instrument that will be updated, and execute:

```
alc_updater_17
```

When the update is completed, look for the indication:

```
alc_updater_17: UPDATES COMPLETED !!!!
```

```
Ports **** Updated Successfully!
```