

PowerSync Analyzer Version 3.5 Supplement



PowerSync Analyzer **Version 3.5.01** software and related documentation is available starting June 7, 2010. This software replaces Version 3.4 software originally released in October 2009. PSA Version 3.5.01 software upgrades do not require any firmware upgrades to the PSA-1200 unless PSA-3102 or PSL-3102 blades are to have firmware updated inside a PSA-1200 or PSA-1200-PL chassis.

PSA 3.5 Host Platform Support

PSA Software version 3.5 is the first major release of PSA software to universally support the following host platforms:

Any Dual-Core PC Processor Host

The dual core PC architecture does not assure the same real time execution speed of programming commands that would otherwise occur in a single processor architecture under Windows or Linux. Random occurrences of command “slips” lasting over 0.5 seconds can be detrimental to applications such as the PSE Conformance Suite or the PSA Multi-Port Suite. PSA 3.5 adds operating system controls that restrict all processing to a single core (or processor) for best real-time performance.

Windows 7 and Vista

Windows 7 and more recent versions of Windows Vista place severe constraints on software installation, software updating, and especially placement of user data under the \Program Files directory. For security reasons, these versions of Windows will often prohibit such operations without announcing this to users. The PSA 3.5 installer establishes proper credentials to facilitate installations and upgrades under Windows 7 and Windows Vista, however, all user data files and directories associated with PSA 3.5 software are relocated to the `\user\public\` directory on these systems. See section 2.4 of the version 3.5 PSA Technical Reference Manual for further information.

PSA-1200 Technical Reference Updates

PSA Software Version 3.5 introduces several changes that may affect certain PSA-1200 and PSA-1200-PL users. The changes that will be described below are:

- New User Data File Directories for Windows Vista and Windows 7
- PSA Interactive Enhancements affecting the PSA-1200, PSA-100, and PSA-2400
- PSE Conformance Test Suite updates (version 3.5.03)
- PowerShell Enhancements affecting the PSA-1200, PSA-100, and PSA-2400

New User Data File Directories for Windows Vista and Windows 7

Then following change is from the PSA-1200 and PSA-1200-PL Technical Reference Manual Version 3.4 dated March, 2010:

Directory and File Organization – Microsoft Windows

When PowerSync Analyzer software is installed to a Microsoft Windows® PC, files will be populated to particular directories as described in the following table.

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Directory Path	Directory	Files
C: \Program Files\Sifos\PSA1200		PowerShell Script Library PowerShell Wish and PowerShell Tcl Executables PSA Initialization Script PowerShell Wish and PowerShell Tcl resource files
	\documentation\	Various PSA reference documents
	\PSA Interactive\	PSA Interactive Script Library and various library sub-directories to support PSA Interactive functions (plotchart, tkprint1.1, tbcload14, etc.). PSA Interactive Executable PSA Interactive resource file
<i>Windows NT – Windows XP</i> C: \Program Files\Sifos\PSA1200 <i>Windows Vista – Windows 7</i> C:\Users\Public\Sifos\PSA1200	\Config\	PSA (local) Configuration Files including \Config\env environment file sub-directory.
	\Results\	PSA Test Report Files Including psa_report.xls , mp_report.xls , and service_report.xls template report spreadsheets and the psa_trace.xls trace display spreadsheet. Chassis-specific subdirectories under \Results will automatically be created as needed by PowerSync Analyzer software.
	\Emul\	Files only used when PSA software is placed in “Demo Mode” (also called Emulation Mode).
	\Contrib\	Tcl scripts stored in this directory will automatically source into PowerShell. This directory includes various sample scripts at installation.

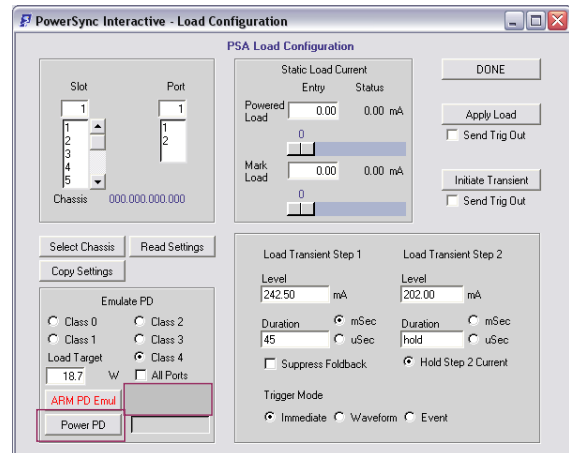
Version information concerning individual PowerSync Analyzer software libraries is available from PSA Interactive under the [Help] menu as well as from PowerShell using the **psa_version** command.

PSA Interactive Enhancements affecting the PSA-1200, PSA-100, PSA-2400

Various menus are modified to add certain LLDP related controls that are only pertinent to the PSA-3000 and PSL-3000 platforms. All of these controls will be disabled when working with a PSA-1200 that does not have any PSA-3102 or PSL-3102 test blades present or does not have the LLDP feature enabled.

Then Load Configuration menu is modified to add the **Power Port** control within the **Emulate PD** sub-menu. This control performs PD connection so that the emulated power-up will occur, and then results in a new power-up status message. The control will announce in **red** after PD Emulation is armed.

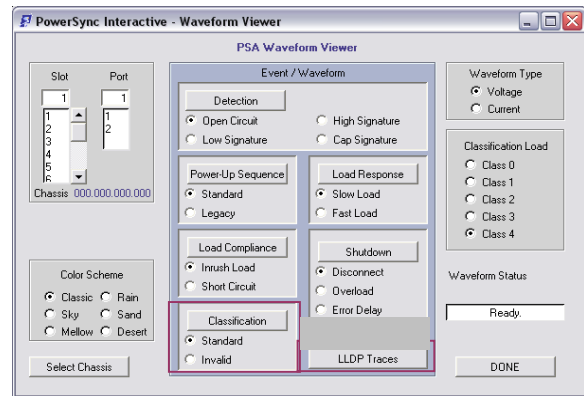
The **ARM PD Emul** control will now force a PD disconnect power-down prior to configuring the new Power-Up Emulation.



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The Waveform Menu has been re-named **Waveforms & Traces**. The original Classification Waveform is now the **Standard Classification** waveform and a new **Invalid Classification** waveform is added to examine PSE response to a invalid (75 mA) Classification Signature.

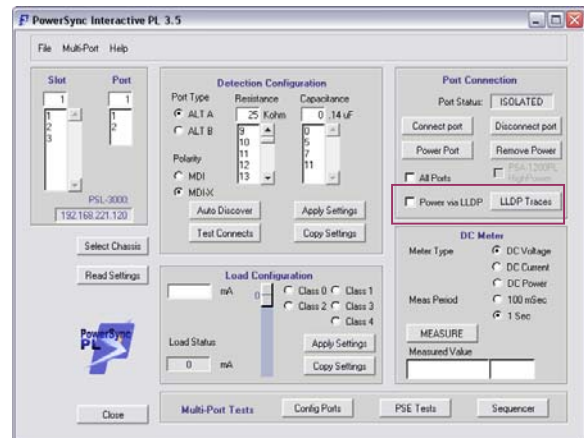
The new **LLDP Traces** menu access will be blocked unless connected to a PSA-3102 test port given that LLDP is enabled as a feature in the PSA-1200 chassis. See the PSA-3000 Technical Reference Manual for further information on the LLDP Traces menu.



PSA Interactive PL Enhancements affecting the PSA-1200-PL

The main menu is modified to add certain LLDP related controls that are only pertinent to the PSA-3000 and PSL-3000 platforms. All of these controls will be disabled when working with a PSA-1200-PL that does not have any PSL-3102 test blades present or has not been enabled for the LLDP feature.

The new **LLDP Traces** menu access will be blocked unless connected to a PSL-3102 test port and assuming LLDP is enabled as a feature in the PSA-1200-PL chassis. See the PSL-3000 Technical Reference Manual for further information on the LLDP Traces menu.



PSE Conformance Test Suite updates (version 3.5.03)

Under PSA version 3.5, enhancements affecting the “traditional” PSE Conformance Test Suite for 802.3af and for pre-standard high power testing include:

- Improvements to the original PSE adaptive logic to add coverage for a number of new variants of PSE Controller implementations observed since October, 2009 with full regression testing against many dozens of older PSE controller implementations.
- Improved **Tdbo** measurements in **det_time**.
- Improved **det_range** test in the area of capacitive signature analysis.
- Corrected conditional problems in **pwrup_time Trise** and **mps_dc_valid Tmps** measurements.
- Modified **mps_dc_valid**, **mps_dc_pwrdsn**, **pwrdsn_time**, and **pwrdsn_v** to accept PD Class argument to enable emulation of PD Class 1 and 2, rather than default PD Class 0.
- Revise **Tovld** parameter in **pwrdsn_overld** to **Tcut** to align to final 802.3at standard.
- Modified PSE Conformance Test sequencer (using PowerShell PSA **sequence** command) to run with pure PD **Class 1** and PD **Class 2** emulations. This facilitates testing of PSE's that are designed to power PD's up to Class 1 (max 4 watts per port) or Class 2 (max 7 watts per port).

The original PSE Conformance Test Suite (for 802.3af) will continue to be supported on the PSA-1200 platform in future releases.

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Future releases of PSA software will automatically substitute the PSE Conformance Suite for **802.3at** whenever users are connected to a PSA-3000 (or PSA-1200 with 100% PSA-3102 test blades). So the original PSE Conformance Test Suite (for 802.3af) would no longer be utilized with PSA-3000's from that point forward.

As many PSE's evolve to 802.3at and Sifos customers upgrade from PSA-1200 to PSA-3000 platforms, the original PSE Conformance Suite (for 802.3af) will eventually reach obsolescence.

PowerShell Enhancements affecting the PSA-1200, PSA-100, PSA-2400, and PSA-1200-PL

PSA version 3.5 software includes the following modifications and enhancements to PowerShell PSA:

- Modified sequence command to accept a PD Classification sub-argument following the **type 1** argument so that any tests that accept a PD class configuration will run under the sequencer with the user specified PD Class (0, 1, 2, or 3). Example:

```
sequence -p {1,1 1,2 2,1 2,2} -type 1 -class 2 -c
```

- Corrected a problem in **sequence** affecting selected test lists with one or more **mps_** tests included.
- Corrected a problem with PSA-1200 firmware updates that was introduced in a prior release.
- Modified **psa_update_fw** to allow automated sequencing of PSA-3102 and PSL-3102 firmware updates inside a PSA-1200 or PSA-1200-PL chassis.

Besides the above changes, the PSA-1200 and PSA-1200-PL Technical Reference Manuals, Version **3.4**, remain as the standard references for the PSA-1200 and PSA-1200-PL respectively and will remain so indefinitely given the changeover to the new PSA-3000 platform from Sifos.

PSA-1200 Firmware Requirements

If PSA-3102 or PSL-3102 test blades are installed in a PSA-1200 or PSA-1200-PL, any firmware upgrades to those PSA-3102 / PSL-3102 test blades will require PSA-1200 Controller Blade firmware version **1.66** or later.