



# PDA-300 Upgrade

## Powered Device Analyzer

IEEE 802.3at Power over Ethernet

### PDA-300 Highlights

- ❑ Automated Testing of IEEE 802.3at PD's
- ❑ Power Sourcing to Type-2 PD's
- ❑ Higher Coverage 802.3at Testing
- ❑ One-Button 802.3at Test Report
- ❑ Automated Class Compliance Analysis
- ❑ 802.3at Power Violation Captures
- ❑ Informative Spreadsheet Reporting



### PDA-300 Advantages (vs PDA-100)

- Continuous PD Sourcing Power to over 25.5 Watts
- Type-2 (2-Event) Power Grant Capability
- 802.3at PoE Testing: 20 Parameters including 10 New Parameters
- Test Coverage for Inrush, Type-2 Delay, Mark Discharge, DC MPS Validity
- Improved 802.3at Parameter Accuracies and Range
- New 802.3at Pop-Up Spreadsheet Report
- Multi-Unit / Multi-Cycle Test Statistics
- New PDA Interactive Load Monitor and Load Monitor Spreadsheet Report
- Automated Peak and Class Power Violation Capture and Analysis
- PD LLDP Power Request Validation
- PD Energy Consumption Monitor/Calculator
- Time-Synchronized Load Sampling
- Support Multiple Instruments on a Single Host
- All New PDA-300 Product Manual

**NEW!**  
802.3at PD Class Compliance Analysis

Alt-A, MDI	Alt-A, MDI X	Alt-B, MDI	Alt-B, MDI X	Det. Resistance
24.65k	24.67k	24.74k	24.76k	
0.100uF	0.101uF	0.096uF	0.096uF	Det. Capacitance
36.5mA	36.5mA	36.5mA	36.6mA	Class Current
4	4	4	4	Class Result

**Verification, Simplified.**

## PDA-300 Specification Comparison

The PDA-300 is the first Powered Device (PD) Analyzer from Sifos Technologies to benefit from extensive testing and analysis utilizing flexible and accurate PD simulations. The Sifos PSA-3000 platform, combined with special emulation software, enabled a very wide range of PD emulations that simulated borderline and out-of-tolerance PD parameters in order to validate both 802.3at PoE Test parameter responses as well as results from the new PD Load Monitor. Every parameter reported by the 802.3at PoE Test and by the PD Load Monitor was assessed and validated using these new simulation tools.

Feature	PDA-100	PDA-300	PDA-300 Advantages
<b>PD Types Tested</b>	802.3at Type-1	802.3at Type-1 and Type-2	Enables testing of new Type-2 PD's
<b>Classification Modes</b>	Single-Event	Single-Event and Two-Event	Enables testing of new Type-2 PD's and response of Type-1 PD's to Two-Event classification
<b>Class Signature Current</b>	0 – 60 mA	0 – 60 mA	Improved Accuracy > 30 mA
<b>802.3at Ppeak Measurement</b>	Not Available	Included	Measurement of Peak Power Load – Fully Excludes Inrush Period. Tested at both 48V and 54V.
<b>802.3at Pclass Measurement</b>	Type-1 Only, Un-Sync'd	Type-1 & Type 2, Synchronized	Fully Excludes Inrush Period and T <sub>delay</sub> following 2-Event Type-2 power grant. Tested at both 48V and 54V.
<b>802.3at Max_Load_N Measurement</b>	Type-1 Only, Un-Sync'd	Type-1 & Type-2, Synchronized	Fully Excludes Inrush Period. Tested at both 48V and 54V.
<b>802.3at MPS_Load_N Measurement</b>	Minimum Sampled Current	Min. Current + Embeds DC MPS Criteria	Tests for DC MPS Value and Timing Violation - Always Reports > 10mA if DC MPS Signature is VALID. Tested at both 48V and 54V.
<b>802.3at Inrush Energy Measurement</b>	Not Available	Included	Reports Max Charging Energy over the first 60 msec after power-up
<b>802.3at Mark Current Measurement</b>	Not Available	Included	Reports Mark Region Discharge Load
<b>802.3at Type-1 PD Power</b>	Not Available	Included	Reports PD power draw between Inrush and T <sub>delay</sub> following 2-Event power grant
<b>802.3at Test Reporting</b>	Hardcode Pass/Fail, No Statistics	Flexible Pass/Fail, Cycle Stats.	Reports Min/Max/Average per parameter over test cycles. Limit logic and values built into report. Eliminated dependency on Microsoft Office versions. Simplified GUI interactions.
<b>Load Monitor - General</b>	0.3 second sampling	18 msec real time or 1 second running average	PDA Interactive Load Monitor charts >50 power samples / second or 1 second running average of PD power.
<b>Load Monitor Ppeak_Violation</b>	Not Available	Capture and report Ppeak_max Violations	Assess worst case peak transients over arbitrarily long time periods while interacting with or manipulating PD states.
<b>Load Monitor Pclass_Violation</b>	Not Available	Capture and report Pclass_max Violations	Assess worst case power transients relative to PD Static Operating Mask over arbitrarily long time periods while interacting with or manipulating PD states.
<b>Load Monitor Pclass Configuration</b>	Not Available	Configure arbitrary Pclass value	Enable capture and reporting of loading events that exceed and LLDP advertised Power Request.

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