

PQ Analyze Software and F1760 Device Firmware

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Overview of Changes from V1.8.8 => V1.9.4

- ☺ EN50160 Event Statistics table added
- ☺ EN50160 Slow Voltage Variation statistic: Option for 99% limit added
- ☺ Additional firmware image V2.0.4 for support of device HW revision "Ox" and later
- ✓ Device firmware: Gaps in recordings of full cycle RMS frequency (16.66/20ms) fixed
- ✓ Measurement initialization did not work from non-administrative Windows accounts

Details of Changes from V1.7.12 => V1.9.4

Changes from V1.9.0 => V1.9.4 (FW V1.3.22 + FW V2.0.4)

New Features / Improvements:

- ☺ EN50160: Event Statistics table for event classification by duration and residual voltage
Note: this option can also be applied afterwards to already downloaded PQ Analyze data file
- ☺ Additional firmware image V2.0.4 for device HW revision “Ox” and later

Bug Fixes (Device Firmware):

- ✓ Gaps in recordings of full cycle RMS frequency (16.66/20ms): fixed, frequency is now recorded correctly

Changes from V1.8.9 => V1.9.0 (FW still V1.3.17)

New Features / Improvements:

- ☺ EN50160: New option for Slow Voltage Variations to select between 95% and 99% limit for statistic evaluation
Note: this option can also be applied afterwards to already downloaded PQ Analyze data file

Changes from V1.8.8 => V1.8.9 (FW still V1.3.17)

Bug Fixes (Software PQ Analyze):

- ✓ Measurement initialization did not work from non-administrative Windows accounts (Windows VISTA / Windows7)

Changes from V1.8.7 => V1.8.8 (FW V1.3.16 => V1.3.17)

Bug Fixes (Device Firmware):

- ✓ DHCP lease expiration at begin of 2010 for auto assigned IP addresses fixed

Changes from V1.8.5 => V1.8.7 (FW V1.3.15 => V1.3.16)

Bug Fixes (Software PQ Analyze):

- ✓ F1760: buttons for erase and compress data now hidden.
- ✓ Program start: some files were not copied to My Documents and Application Data correct correctly.
- ✓ Start menu: check button USB removed.

Bug Fixes (Device Firmware):

- ✓ Advanced Settings/ Change Hostname: long timeout removed

Changes from V1.8.4 => V1.8.5 (FW V1.3.14 => V1.3.15)

New Features / Improvements:

- ☺ Measurement method updated for compliance with IEC61000-4-30 Ed.2:
Resynchronization of 150/180 cycles aggregation (~3sec) at 10min boundaries similar to resynchronization of 200ms intervals
- ☺ Network configuration info of the device is written to USB stick / CF card log file (added to get this info without direct interface connection to the device)
- ☺ Excel Export improvements:
cos phi / lambda diagram y-axis changed [-0..1..0] like in PQA
Chart sheet names are more informative now
Step chart for average values (like in PQA)

Bug Fixes (Device Firmware):

- ✓ Transient trigger is limited to >0.8% of effective transient range (~50V for 6kV standard sensor at scale 1.0) to avoid noise triggers
- ✓ Updated time zone information (e.g. daylight savings time period recently shifted in the USA)

Bug Fixes (Software PQ Analyze):

- ✓ Local PC data file size is now limited to 2GB (data was lost if it grew bigger by circular storage in previous versions); download to a new data file is suggested in case the limit would be exceeded
- ✓ Table Text Export took very long on big data chunks (LF=>CR/LF translation has been optimized)
- ✓ Excel macro update/fixes:
Slovakian date format caused problems
Auto scaling didn't work properly in Office2000
Page Setup didn't work without a printer installed
10 lines of measurement description caused crash (Word export)

Changes from V1.8.3 => V1.8.4 (FW still V1.3.14)

Bug Fixes (Software PQ Analyze):

- ✓ Chinese Language: Chinese text was truncated on some occasions, esp. in dialog buttons
- ✓ Chinese Language: some messages were changed on request from Chinese customers

Changes from V1.8.2 => V1.8.3 (FW V1.3.13 => V1.3.14)

New Features / Improvements:

- ☺ Auto Trigger F1760: Change amount of trigger levels has been increased (quicker reaction to changes in measured values); applies only if new templates (*.vdf) are used for a measurement

- ☺ Auto Trigger Topas 1000: Recording modes panel now shows the correct parameters (for information only, taken from TP1000 FW sources)

Bug Fixes (Device Firmware):

- ✓ Dynamic over- / underload LEDs for current sensors: LEDs are only activated for I* type sensors on initialization (inputs 4...8 only; did not work correctly in V1.8.2)
- ✓ FW Topas 1000: Over- / Underload LED blinking now works correctly in case of AUTO sensors

Bug Fixes (Software PQ Analyze):

- ✓ Event summary tables in EN50160 data presentation: Long interruptions were counted as short interruptions (bug was introduced in V1.8.1)
- ✓ Excel export: Legacy library for MS Office 2000 was missing in macros
- ✓ OS Win2000: PQ Analyze could not be started because of library version mismatch between OS and program (in V1.8.2)
- ✓ Recording Modes settings for Topas 1000: recording length was limited by F1760 setting (100ms), it is now again possible to set it ≥ 5 ms (32 samples)

Changes from V1.8.1 => V1.8.2 (FW V1.3.12 => V1.3.13)

New Features / Improvements:

- ☺ Alarm Output Status: status window (Service menu) shows current state of digital alarm inputs and outputs
- ☺ Auto-Trigger mode: it is now possible to change recording settings for Ripple Control and Free interval; it is also possible to edit trigger settings for Ripple Control and Time trigger; for Time Trigger, all recordings are possible (this may influence Auto Trigger event recording density – Memory Management)
- ☺ In Change Settings it is possible to modify trigger parameters for Ripple Control and Time Trigger even if Auto Trigger is enabled
- ☺ Over- / Underload LEDs for current sensors on input 5...8 get their limits dynamically from the connected/selected sensor range (120% and 10%, 0.5% hysteresis)
- ☺ Save template for .vdf uses the same directory from which the last .vdf was loaded
- ☺ Optimization of Change Settings: only the trigger levels that were changed by user are sent to the device (reduces configuration time and configuration storage size in device)

Bug Fixes (Device Firmware):

- ✓ Progress bar for Change Settings now shows “Change” instead of “Initialize”

- ✓ No more erroneous events on measurement initialization (oscilloscope, rms)

Bug Fixes (Software PQ Analyze):

- ✓ Selection frame in Alarm Setup panel is now visible (multi-selection by click-and-draw-rectangle)
- ✓ Memory Management panel showed all zeros when it was opened from Change Settings
- ✓ TP1000 trigger setup: Ripple Control frequencies >3200Hz were folded back in filter graph, is now limited

Changes from V1.7.12 => V1.8.1 (FW V1.3.10 => V1.3.12)

New Features / Improvements:

- ☺ Support for Alarm Outputs: set by selected events, optionally auto-reset after time period or by input (one input mapped to two outputs each)
- ☺ Auto-Trigger now has a low limit beyond which the level isn't adjusted (band of +/-5% of EN50160 limit around nominal value)
- ☺ VISTA compatibility: only user rights are necessary to run PQ Analyze (personalized settings are kept in Users local directories; every User keeps his own settings – language, export settings, window positions, ... => concurrent multi-user support; Administrator is still required to install the program)
- ☺ New command line switch: /noping suppresses initial network “ping” request before opening connection to device (for firewalls which block “ping”)
- ☺ External CF cards / USB sticks without partition table (plain FAT volume) can also be used for data download
- ☺ Topas 1000: Multi-selection for data delete from local data files (cross section between multi-mask and multi-collection selection)
- ☺ Last data download path & file name are preserved (even if nothing is downloaded when only device index bars are checked)
- ☺ Explanation picture for sine wave trigger improved
- ☺ Less CPU usage on PC (improved handling for hint text of Windows controls)
- ☺ For Change Settings the action button now shows “Change” instead of “Initialize”
- ☺ Change Settings: it is now possible to switch triggers individually ON or OFF (by right-click on their level) even if they were not enabled initially

Bug Fixes (Device Firmware):

- ✓ Device's Data Transfer LED now behaves as explained in manual (yellow blinking on data transfer)

- ✓ Events firing during Change Settings potentially caused abort of respective trigger/recordings (also on device restart)
- ✓ Changing a measurement more than 9 times caused data download to fail
- ✓ After a measurement was deleted by holding button near CF card slot on power up/down, a delete/stop of measurement by Advanced Settings later failed (wrong file access rights)
- ✓ A device name longer than 49 characters (up to 63 were possible in Advanced Settings) caused connect to fail
- ✓ Oscilloscope sine wave trigger fired on missing zero crossings (e.g. noise with level far below trigger limit)

Bug Fixes (Software PQ Analyze):

- ✓ Negative free memory was possible for Memory Management settings when settings for triggered recordings or connection system was changed => potential abnormal measurement termination on CF card full => data download failed after reboot
- ✓ Reserved CF card space was too small, when >95% of data was filled, measurement was terminated abnormally => same problem as above
- ✓ Potential problem in Flicker calculation fixed
- ✓ Potential fatal error on “Cancel” in File Open dialog fixed
- ✓ Online oscilloscope display crashed when Un trace was set to “OFF”
- ✓ Double-click on Freq Over-/Underdeviation/Change event showed RMS trace erroneously
- ✓ New progress bar control avoids occasional ActiveX errors (happened infrequently on some PCs)
- ✓ Single 10min intervals were not displayed correctly in data bar display
- ✓ Memory Management Panel: the day increment control for Free Interval did not work correctly
- ✓ Selection of harmonics order in menu: *Oscilloscope- ... - Phasor View* always selected DC additionally
- ✓ F1760: Change Settings was possible even if measurement was stopped => erroneous behavior of device
- ✓ Excel Export: now supports “Letter” format on printout; error handling on Custom Charts improved

Limitations / Requirements:

- ! OS Windows versions: from V1.8.1 up, PQ Analyze requires minimum OS Win2000 Service Pack 3, Win XP or Windows Vista