PQSys

Release Notes WinPQ

Version v7.1.1

Overview WinPQ Major Version 7

The major update includes changes to the database structure to ensure full compatibility with WebPQ$_{Visualizer}$

This has the consequence that during the update a conversion of the database is carried out and the update process is prolonged. So a conversion of the timestamps to the UTC time format was done. Due to this, a direct import of legacy databases < 7.0 is no longer supported. We are happy to support you with the migration of archive databases.

We further recommend the following procedure for the update:

- **Database backup before the update (point 2.1 in the database settings of the WinPQ system administrator).**
- **When updating your WinPQ version, please do not perform an intermediate step via other versions, but update directly to version 7.X**
- **Update firmware on all devices to the latest versions matching the hardware versions from the table "Recommended firmware of devices".**
- **For MS-SQL systems, provide enough free memory on the system before performing an update. After the update process, it is recommended to perform a database shrinking by the database representative.**

Recommended device firmware

PQI-D und PQI-DA

PQI-D with DSP 100 MHz

- 8 voltage inputs   *Version 2.1.03 from 02.06.2021*
- 4 current and 4 voltage inputs   *Version 3.1.01 from 07.05.2014*

PQI-D with DSP 200 MHz

- 8 voltage inputs   *Version 4.0.07 from 10.05.2011*
- 4 current and 4 voltage inputs   *Version 5.0.16 from 09.04.2014*

PQI-D with DSP 300 MHz

- 4 current and 4 voltage inputs   *Version 7.0.04 from 07.07.2015*

PQI-DA smart and PQI-DE

PQI-DA smart   *Version 2.14*

PQI-DE   *Version 2.14*

Data Base Patches

Patches for the used database PostgreSQL have to be applied via an independent update process. The patches can be found in the download center in the section "WinPQ" in the category "PostgreSQL Patches" and in the relative program directory /PostgreSQL Update/ in the update folder of WinPQ. The full version of WinPQ system software is always accompanied by the latest version of the database at the time of its creation.

The recommended version as of this update is: **PostgreSQL v14.10 (Patch version available on WebPage)**

V 7.1.1

Improvements and bugfixes

- MappingDB: Fixed irregularities in the datatypes of PQI-D(A) day statistics [16717]

V 7.1.0

News and features

- Addition of dataclass Feeder measurement [15282]
  - **Requirement** Device **FW V 2.14** of PQI-DA smart and PQI-DE
  - A. Eberle Current Feeder Measurement **I-Sense**
- Extension of the voltage/current harmonic reports to include supraharmonic measured values [9 – 20 kHz]
  - **Requirement** Device **FW V 2.14 with feature B1** [15705]

- Extension IEC-61000-2-2 report with supraharmonic measured values [9 – 20 kHz] [15704]
- Extension of database functions with function for comparing existing fault records with reference table [15968]
- Syslog output of the Time Quality Indicator (TQIC) of connected devices [PQI-DA Smart / PQI-DE] [15281]
- Detached FFT display of oscilloscope records in a separate window [15263]
- Extension of automatic system maintenance with additional subdivision points [15262]
- Automatic reporting – interception of unresolvable variables [9221]

WinPQ lite:

- Upload of Wireguard .conf files for simplified VPN tunnel setup to devices [15536]
- Feeder Measurement – measured value selection of the Feeder via parameterization [15506]

Improvements and bugfixes

- PQPara: Harmonization of displayed texts of the dataclass "Daily statistics" [16306]
- Optimization of the fault recorder visualization with binary information for multiple devices [16304]
- Improved update routine for systems with MSSQL databases [16280]
- Improvement RCM/FCM report - Bar scaling is performed with deactivated FCM only for RCM measured values [16230]
- Addition of error handling for manual renaming of database ID's to existing ID's [16197]
- Improved "MySQL online-check" compatibility for systems with very large table sets [16132]
- Improvement of the update routine regarding the handling of time conversion [16065]

- Improved error message for data imports   [15993]

- Improvement of the time format conversion process for PQ-Box measurement data   [15911]

- Adjustment of the maximum permissible number of lines in fault record tables   [15834]

- Improved visualization of load flow reports for time ranges without measurement data   [15737]

- Improvement of data export handling for incomplete measurement data sets   [15713]

- Adjustment of button sizes   [15438]

- Improved compatibility for extended user management on systems with longer response times   [15326]

- Adjustment of the scalability of pop-up windows   [15179]

- Adjustment to the correct display type of selected supraharmonic measured variables – report settings   [15083]

- Extension of the SMTP server setting by a parameterizable HELO/EHLO string   [14947]

- Improvement of the error handling of the PQ Manager processes   [14854]

- Adjustment for correct device group filtering for advanced user management.   [14688]

- Improvement of device grouping Visualization for advanced user management   [14584]

- Improvement of data export - handling of very large tables   [13992]

- Improvement of translations (German, English, Polish)

- Further small improvements

WinPQ lite:

- Adjustment to correctly display the RMS data classes for measurement supervision states   [16368]

- Improvement of the export process for calibration certificates   [15979]

- Adjustment for automatic updating of selected event measurement data   [15883]

- Adjustment to take account of the DST mode for displaying the measurement data   [15845]

- Improvement of the display of the inactivity popup in the focus   [12768]

V7.0.5

Improvements and bugfixes

• Addition of customer specific parameterization templates	[15948]
• Improvement of system compatibility for visualization of program windows with different scaling settings	[15947]
• Improvement of the data conversion process for database switching of PQI-D	[15928]

V7.0.4

Improvements and bugfixes

• Adjustment in the generation of PQ event cumulative reports	[15797]
• Improvement of database conversion process for MS-SQL databases / TRIM command for support MS-SQL 2016	[15631]

V7.0.3

Security-related updates and features

• Database version PostgreSQL 14.8 to fix CVE 2023 & CVE 2455	[15616]

Improvements and bugfixes

• Correction regarding language display	[15550]
• Improvement binary state update on device tiles	[15465]
• Adjustment for message management to restore suppressed messages	[15449]
• Improved compatibility for systems without 3D graphics acceleration	[15431]

V 7.0.2

Improvements and bugfixes

• Deactivation of screen scaling in automatic PQ reporting	[15367]

V 7.0.1

Improvements and bugfixes

• Extension of the update routine with validity check regarding time stamps	[15274]
• Installer - addition of a confirmation window for checking local time	[15222]
• Improvement of the SD data import of special measurement data	[15187]

V 7.0.0

News and features

• Conversion of time stamps to UTC time format	[13248]
• Extension of the reporting of long-term data by a PDF output	[14484]
• Extension of 3D reports by current harmonics - voltage interharmonics	[14364]
• Direct generation of EN-50160 report via selection in interactive heatmap	[14306]
• Addition of energy/power reports to autom. reporting	[13700]
• Display of used devices standard template in EN-50160 report	[13525]
• Extension of sorting options in tables	[15088]
• FCM display show/hide for RCM & FCM report	[14886]
• Extension of database maintenance functions	[14734]
• Display of communication path to measuring device under device properties	[14588]
• Addition of template for FRT to DFR dependent mail dispatch	[14399]
• Extension of measurement table export by SQL transfer format	[14381]
• Addition of a message overview under system status	[14162]
• Database version PostgreSQL 14.7	[15113]
• Silent WinPQ Update	[11550]

WinPQ lite:

• Parameterization: Extension of the basic view by a visual display of RCM parameters	[12404]
• Online display: Extension by indicator regarding capacitive or inductive cos Phi angle	[12802]
• Online diagnosis: Separate "Security Logfile" for documentation of user specific actions (executable from firmware version 2.10)	[12982]

Security-related updates and features

• SSH communication to Smart/DE fully compliant with RFC4253	[12084]
• Protection against bruteforce attacks on the database	[11776]
• Electron Framework update to V18	

Improvements and bugfixes

- FFT - impedance calculation changed — [14938]
- renewal of demo data — [14929]
- Improvement of parameter selection for serial device management — [14899]
- Improvement of wizard for adding new devices — [14791]
- Improved graphical display of WinPQ help under colored WinPQ designs — [14780]
- Improved database handling against tables with few entries [Postgres]. — [14745]
- Adjust handling to new firmware context header of V2.12 — [14738]
- Improvement of read-in behavior for harmonic recorder — [14466]
- Improvement of handling for autom. reporting for binary status changes — [14774]
- Improvement of binary trace for automatic notifications — [14417]
- Improvement of firmware update mass rollout function — [14317]
- Improved display of measured value curves in current-voltage harmonic reports — [14383]
- Adjustment of reports setting regarding acceptance of harmonic limits — [14220]
- Visualization adjustment of maximum allowed number range in interactive heatmap report — [14214]
- Improvement handling of special characters in e-mail subject — [14090]
- ParaExpress - Improvement analog output configuration selection — [13936]
- ParaExpress - Adaptation of templates for UU devices — [13881]
- Improved report generation based on PQ-Box data — [13833]
- Adjustment of the allowed number of characters for device group templates in reports — [13688]
- Adjustment of severity level for firmware version hints — [13616]
- Adaptation of CSV import compatible time formats — [14059]
- Extension of the name of exported CSV files by job names — [13656]
- Comtrade adjustment of phase channel identification naming — [13895]
- Improvement Comtrade import assignment — [13591]
- Improvement Comtrade export for long recording durations — [13588]
- Improvement of the function for cutting groups in PQ-Start — [12810]
- Improved curve display of the noise filters — [12705]
- Designation of analog inputs in visualization — [12300]
- Improvement of handling background graphics in WinPQ-Desktop — [10801]

WinPQ lite:

- Archive/Import: Improvement of measured data handling in case of invalid values [12116]

- Parameterization: Standardization of the measured variable listing for measured value monitoring states [12854]

- Archive/Import: Scaling of conductances and susceptances [13217]

- Archive/Import: Improvement of scaling of unitless measured quantities [13303]

- Online display: Adaptation of the vector diagram to display correct signs of measured angles [13351]

- Archive/Import: Display of THD iE/N in percentage unit [13527]

- Parameterization: Improvement of the check of the allowed IP address range [13922]

- User administration: Deletion of administrative access is prevented [14546]

- Parameterization: Improved response on input of invalid characters [14610]

Wir regeln das.

PQSys

Release Notes WinPQ
Version v6.3.0 11.03.2022

Overview WinPQ Version 6.3.0 – 6.3.1

Note: Please note the update hints from WinPQ versions lower or equal to version 5 to versions > 6 in the lower part of the release notes.

Recommended device firmware

PQI-D und PQI-DA

PQI-D with DSP 100 MHz

- 8 voltage inputs   *Version 2.1.03 from 02.06.2021*
- 4 current and 4 voltage inputs   *Version 3.1.01 from 07.05.2014*

PQI-D with DSP 200 MHz

- 8 voltage inputs   *Version 4.0.07 from 10.05.2011*
- 4 current and 4 voltage inputs   *Version 5.0.16 from 09.04.2014*

PQI-D with DSP 300 MHz

- 4 current and 4 voltage inputs   *Version 7.0.04 from 07.07.2015*

PQI-DA smart and PQI-DE

PQI-DA smart   *Version 2.8*

PQI-DE   *Version 2.8*

Overview WinPQ Version 6.3.2 – 6.3.6

Note: Please note the update hints from WinPQ versions lower or equal to version 5 to versions > 6 in the lower part of the release notes.

Recommended device firmware

PQI-D und PQI-DA

PQI-D with DSP 100 MHz

- 8 voltage inputs   *Version 2.1.03 from 02.06.2021*
- 4 current and 4 voltage inputs   *Version 3.1.01 from 07.05.2014*

PQI-D with DSP 200 MHz

- 8 voltage inputs   *Version 4.0.07 from 10.05.2011*
- 4 current and 4 voltage inputs   *Version 5.0.16 from 09.04.2014*

PQI-D with DSP 300 MHz

- 4 current and 4 voltage inputs   *Version 7.0.04 from 07.07.2015*

PQI-DA smart and PQI-DE

PQI-DA smart   *Version 2.10*

PQI-DE   *Version 2.10*

V 6.3.0

News and features

- Extension reports according to Polish regulations LV/MV/HV
- RCM & FCM report
- Display of RCM measurement data in fault records
- Database version update - PostgreSQL v14.2
- Testing of interference according to SEMI F47-0706 Specification for Semiconductor Processing Equipment Voltage Sag Immunity

<u>WinPQ lite:</u>

- RCM & FCM report for data classes
- Readout of the devices test certificates and calibration certificates from the measuring device

Security-related updates and features

- Setting the password strength for WinPQ passwords
- Improvement of key exchange system compatibility

Improvements and bugfixes

- CSV Import - Improved menu navigation
- PQBox Import - Improvement
- Improvement of WinPQ Installer
- Improvement of PQI-D memory calculation
- Fault record filtering - Increase of parameterizable time range
- Improvement of visualization of trigger conditions
- Improvement of visualization report event network overview
- Improvement of visualization of binary records in fault records
- Improvement - FW update - mass rollout function
- Further small improvements

V 6.3.1

Improvements and bugfixes

- Improvement of visualization of device tiles in graphical user interface
- Adjustment - FW Update - Mass Rollout - Display IP Address / Port
- Adjustment of measuring device parameters representation in Overview table
- Improvement of event values representation
- Improved visualization of disturbance recorder threshold values
- Adjustment of the filter for the disturbance recorder/Event comment function
- Improvement of the preparatory export function for database changes
- Extension and adjustment of translations

V 6.3.2

Improvements and bugfixes

- Improvement of database transfer into harmonized format from WinPQ V5
- Improvement of visualization of mailing at PQAdmin

V 6.3.3

Improvements and bugfixes

- Customization Comtrade Export - SUB sign moved from cfg. File to dat. File
- Improvement of database user permission handling (PostgreSQL)

V 6.3.4

Improvements and bugfixes

- Improvement of the timestamp handling for the update process to future WinPQ versions with adjusted time scheme

V 6.3.5

Improvements and bugfixes

- Adaptation of the file header structure to support future firmware versions
- Improvement of the measurands at PQ-Reports within the measured value statistics

V 6.3.6

Improvements and bugfixes

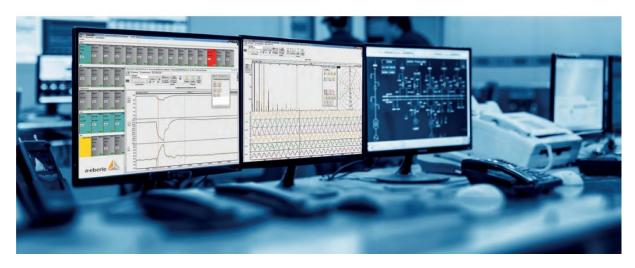- Bugfix of the automatic reporting where no pdf-attachment were sent

Wir regeln das.

PQSys

Release Notes WinPQ
Version v6.2.0 24.01.2022

Overview WinPQ Version 6.2.0

Note: Please note the update hints from WinPQ versions lower or equal to version 5 to versions > 6 in the lower part of the release notes.

Recommended device firmware

PQI-D und PQI-DA

PQI-D with DSP 100 MHz

- 8 voltage inputs   *Version 2.1.03 from 02.06.2021*
- 4 current and 4 voltage inputs   *Version 3.1.01 from 07.05.2014*

PQI-D with DSP 200 MHz

- 8 voltage inputs   *Version 4.0.07 from 10.05.2011*
- 4 current and 4 voltage inputs   *Version 5.0.16 from 09.04.2014*

PQI-D with DSP 300 MHz

- 4 current and 4 voltage inputs   *Version 7.0.04 from 07.07.2015*

PQI-DA smart and PQI-DE

PQI-DA smart   *Version 2.6*

PQI-DE   *Version 2.6*

News and features

- WinPQ is now 64 bit version multithreading capable!
- **New database - PostgreSQL v14** as of version v6.2
- New system requirements (homepage) available - MSSQL 2019 support
- Grid code curves in the disturbance description
- Comtrade display and import
- Calculation of RMS values for Comtrade imports
- CSV import function
- New flexible export function (PQDIF & CSV) of all measured values (time based & manual) with templates
- FW Update - Mass Rollout Function - now also in Security Mode with Logging
- DNS support / address measuring devices via DNS name
- Search function in many interfaces
- Support of WAGO "Table Push Imports (iONS - Multi Outlets)
- mA for residual current measurement RCM + FCM added

WinPQ lite:

- New template for PQI-DA smart and PQI-DE according to the new PQ standard of IEC62749 added
- Files in explorer show function for import function added
- Marker in context menu

Security-related updates and features

- New certificate handling for database connection encryption (MySQL & PostgreSQL)

Improvements and bugfixes

- Grouping now also possible via 109 subgroups in reporting
- Groupings for PQ Desktop extended to unlimited number
- Improvements in the visualization of fault records
- Multiple Comtrade export - group export possible again
- Performance 3D
- CSV export - improvement
- PQ Box imports - improvements in terms of parameters
- Other small improvements

Wir regeln das.

PQSys

Release Notes WinPQ

Version v6.1.0 01.09.2021

Overview WinPQ Version 6.1.0

The WinPQ V6.0 is a new major release. An update to the version transfers the existing database into a harmonized and future-proof database schema. This is a necessary and major step to ensure future-oriented developments with a high backward compatibility in future versions with many open interfaces and new user interfaces.

The harmonization affects the database itself, all existing interfaces and device connections such as PQ-Manager, PQ-Smartmanager, PQ-Box Import, Comtrade Import as well as all reports and exports of WinPQ.

The harmonization of the database structure is automated and carried out directly by the update file of WinPQ (WinPQ_Update_6.1.0_210901.exe). It may take some time (depending on the existing size of the database and the speed of the server).

We further recommend the following procedure for the update:

- **Database backup before the update (point 2.1 in the database settings of the system administrator of WinPQ).**
- **Firmware update on all devices to the latest versions matching the hardware versions from the table "Recommended firmware of devices".**
- **If you are currently using a version lower than v5.0.0 we strongly recommend to update the software to a v5 version first. You can find the v5.2.8 under this link.**

Furthermore, we would be happy to provide you with a corresponding service offer for the major update directly. Please do not hesitate to contact us: vertrieb@a-eberle.de

Possible limitations:

- Possible self-created database interfaces with direct access to the measurement data may not be compatible to the new harmonized database schema of WinPQ!
- Imported PQ-Box data will not be transferred to the harmonized standard, but remain retrievable!
- Duration of the update may take longer than usual due to conversion of the database (for large databases)! Please consider this circumstance when updating the software!
- Identity of configured PQI-DA smart and PQI-DE devices may have to be reconfirmed the first time a connection is established after the software update.

Recommended device firmware

PQI-D und PQI-DA

PQI-D with DSP 100 MHz

- 8 voltage inputs   *Version 2.1.03 from 02.06.2021*
- 4 current and 4 voltage inputs   *Version 3.1.01 from 07.05.2014*

PQI-D with DSP 200 MHz

- 8 voltage inputs   *Version 4.0.07 from 10.05.2011*
- 4 current and 4 voltage inputs   *Version 5.0.16 from 09.04.2014*

PQI-D with DSP 300 MHz

- 4 current and 4 voltage inputs   *Version 7.0.04 from 07.07.2015*

PQI-DA smart and PQI-DE

PQI-DA smart   *Version 2.4.6*

PQI-DE   *Version 2.4.6*

News and features

- Harmonization of the database of reports and all related interfaces
- Update process simplified - updates are stored completely in the database for easy client updates
- Email dispatch possible for messages from system status
- Automatic data export in .PQDIF and as .CSV based on individual profiles
- IEEE519(2014) report added / template for PQI-DE / PQI-DA smart added in WinPQ lite
- Added the power of harmonics
- Load characteristics via reporting
- Counting of EN50160 events in all reports (unbalance and long-term flicker)
- Uniform evaluation of the RVC in terms of U_{max} and U_{SS}
- Suppression of range violation RMS value from PQI-DA smart / PQI-DE as active event
- Explanations and definitions added for all PQ events
- Detection of fault direction in fault records (output before / after measuring point) via Transnostic calculation methodology for all fault records of PQI-DA smart and PQI-DE's added
- DRAG & DROP for measurement types in visualization added
- Group selection of measurands / Predefined measurand groups for easy and fast evaluation and visualization
- Full support of the PQI-DE:
  - Display of differential current (thresholds: warning and alarm) & temperature events
  - Binary inputs
- Comtrade import with mapping via measured variables DB

WinPQ lite:

- Connection to the device is closed automatically when the user is inactive (default value = 10min)
- Online values of the residual current measurement variables
- Online values of binary inputs
- Addition of prefixes of measurement units for power and energy in WinPQ lite
- Display of status of connections for IEC61850 communication visible in device status
- Parameterization of time settings now also directly in UTC (coordinated universal time) possible
- Template regarding IEEE519(2014)
- French user manual added
- Added ripple control group designations
- Added summer/winter time of trigger criterion in recorder treeview
- Calibration with SSH

Security-related updates and features

- New component for encrypted database communication (client / server) with TLS 1.2 (only with MySQL database)
- New SSH module for improved secure connection and communication with PQ devices
  IMPORTANT: Hashes of the fingerprints of the devices must be reconfirmed in the online data!
- Implementation of MySQL v5.7.34
- [WinPQ lite] Update the components of SSH communication
- [WinPQ lite] support setup and beat drive RADIUS protocol with PQI-DA smart and -DE

Improvements and bugfixes

- Mass firmware update: added improvement in case of disconnections.
- Correction of coloring of events in heatmap
- Restart of the device after complete calibration via calibration software (license required)
- Improvement of window sizes on 4K desktops
- Unification of the button sequence
- [WinPQ lite] Return of a message when sending incorrect parameter settings
- [WinPQ lite] reliable detection of disconnected network connection during FW update

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