

README

QuantStudio™ Real-Time PCR Software v1.3

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OVERVIEW

The QuantStudio Real-Time PCR Software v1.3 supports the ViiA™ 7 Real-Time PCR System, QuantStudio™ 6 Flex and QuantStudio™ 7 Flex Real-Time PCR Systems. The QuantStudio Software allows the user to open and analyze experiments generated with the ViiA7 System, QuantStudio 6 Flex, and 7 Flex Real-Time PCR Systems. The software also enables the user to set up experiments, send experiments to the instrument, control the thermal cycling process, collect data and analyze the collected data from these platforms, all in an integrated and streamlined fashion.

FEATURES

- Ability to connect to three different instrument types in the instrument console: ViiA7 Real-Time PCR System, QuantStudio 6 Flex and QuantStudio 7 Flex Real-Time PCR Instrument Systems
- Setting up experiments for both novice and advanced users
- Customizable optical filter selection for more complex applications, such as multiplexing

UPDATES

Version 1.3

- Added more options to customize export in ViiA7 format (control number of rows and columns).
- Added sorting feature in well table and persist the sorting in export table and exported file.
- Allow the user re-order the column in Export table and persist the column order in exported file.
- Allow the software connect to the instrument that has firmware v1.0.3 (QS7) and v1.2.3 (ViiA7) or later.

Version 1.2

- User may toggle manual analysis with F5 key or Analyze button
- Improved editing of SNP assay workflow for Genotyping experiments
- User may enable or disable the “new export set” message when opening an old experiment file
- User may open the example files and templates directly from the menu bar
- User may save the template file to a .eds file with the "Save As" button
- Allow user default the Data/Import/Export folder to the last used location
- Increased tooltip duration on plots for better user experience
- Enabled zoom in and zoom out function on Right click in Analysis Plots
- Standardized the label and format of “Quality” in Report, Well Table, and Export for Genotyping experiment
- Enabled Clipped Data in 7900 export format
- Enabled "Auto Adjust" and "Fixed Range" options for Y-axis of Amplification plot
- Enabled "Auto" and "Manual" analysis feature for Amplification plot
- The C_{rt} (relative threshold) analysis method algorithm updated to harmonize processing workflow between our online C_{rt} analysis module and the desktop software.

Version 1.1

- Removal of BASE license requirement. SAE and HRM still require licensing
- Auto baseline will start at cycle 3 or earlier
- Improved reliability of saving a run file to a network drive
- Improved error logs for network issues
- Improved handling of temporary files and memory that may cause software to crash
- Improved file management within Windows® such that only the login user’s home directory will require read/write access
- Added Target option as filter in Amplification Curve view
- When Touchscreen is in secure mode, remove access to change time, date, network information or instrument name, firmware upgrade/downgrade as well as restore settings
- Print report layout is improved

FIXED DEFECTS

Version 1.3

- Fixed sample name not fully displayed in report.
- Fixed Passive Reference not persists in edt file.
- Fixed open file permission.
- Fixed import of SDS/SDT file.

Version 1.2

Compatibility with Remote Viewing Application

- Improved WebEx and Remote Desktop display quality

Instrument Run

- Allow runs to proceed after click Start Run from template file

Experiments

- In a Genotyping experiment, the edited information in the SNP Assay will persist after reopening the file

Analysis

- Allow user to view RQ value for all the Biological group
- Standardize the sorting method for target option and well table
- Displays correct curve and threshold line in Amplification plot for the selected target
- Displays correct SNP Assay when moves the slider to different cycles
- Allow user opens the experiment file when the cycle number is more than 40
- Displays correct tooltip for the Amplification plot
- Persist number format for the Y-axis of Amplification plot
- Display Crt values correctly for all the target

Export

- Enable "Use Last File Location" function for the Export in Study
- Display correct calibration status in export file

E-signature

- Allow user save the e-signature and retract or signs the signature for second time
- Fixed the software hung issue when user sign the meaning of "Review and Approve Results"

Version 1.1

Compatibility with Automation Controller software

- User selected password can be used
- Prevent user from closing the software when Automation Controller software is running

Setup

- For Standard Curves, under Define and Set Up Standards, allow setup for multiplex targets

Import

- Experiments that import 7900 setup files can be ran on instrument without error

Analysis

- Plot settings will persist even after selecting different wells

Export

- Unselected export tabs will not auto-export
- Fixed incorrect default file name of export
- Fixed Quick Start function when SAE is enabled
- Ct values are exported as number instead of text
- Undetermined Ct results will not be empty
- Melt Curve Raw tab is consistently available
- Fixed reports for results using Crt
- Allow export of Comparative Ct (ddCt) in 7900 Format
- Slope, Y-Intercept and R2 values are available in 7900 Format for Standard Curves
- Multicomponent files are exported in 7900 Format

Report

- Print preview is available immediately after run
- Fixed incorrect timestamps

Calibration

- Verification run can be opened when downloaded from Instrument Console

LICENSE

See accompanying *End User License Agreement* for details. Users must agree to the terms of the license before installing or using the software.

COMPATIBILITY

- This software can be installed as new installation or an upgrade from QuantStudio Real-Time PCR System Software v1.0 onwards
- This software can open template and run files created with the ViiA7 System Software, QuantStudio 6 and 7 Flex Real-Time PCR System Software or QuantStudio Real-Time PCR System Software
- The software can import setup files created by 7900 SDS v2.3

ONLINE HELP

- Any changes not mentioned in the Online Help are covered in Release Notes and/or User Bulletin

KNOWN ISSUES

Calibration

- The Close button in the Calibration workspace is not functional when the connection to the instrument is lost during a calibration run. Select the Cancel button to return to the Main page of the Calibration workspace
- Wells that failed or Caution QC are not highlighted to the user in the plate layout. Navigate to Well Table to view calibration results
- In Background calibration, wells that missed QC mark are not highlighted to user in the plate layout. Click the wells in the plate layout to view the QC mark

Export

- After run, auto exported files will not open automatically if the checkbox is selected
- Exported data in 7900 Format is not sorted the same way as 7900 Software export

Instrument Run

- Changing the target dye during the run will cause Amp Curve to show incorrect data
- Due to high utilization of the instrument CPU resources during an instrument run, the Melt Curve Plot will not be able to copy properly during the last 15 minutes of the instrument run. It is advisable to copy the Melt Curve plot only after an instrument run has completed
- If a run is terminated during an infinite hold, the system incorrectly labels experiment with status of "Run Terminated," rather than "Run Completed". The system is still able to open and analyze these files correctly
- For a High Resolution Melt test, it is recommended that users save the run file under analysis before concurrently opening another run file

Connecting to the Instrument

- The status of the instrument remains as "READY" in the Instrument Console after Auto Discovery has been disabled from the eGUI. Restart the software after changing Auto Discovery settings from the eGUI to update the instrument status
- The status of the instrument remains as "Not Connected" in the Instrument Console after the IP address of the instrument has changed. Restart the software or refresh the My Instrument list after changing the IP address of an instrument

Performance

- Software can continue operation for at least 3.5 days. However, we recommend that you re-launch the software application after 3.5 days of continuous operation for optimal performance

Notifications

- Email notification operation does not function correctly with SMTP encryption enabled. Uncheck the 'Encryption Required?' option in Preferences for SMTP Settings to allow notifications
- User is required to contact their corporate IT for help if using corporate smtp server for email notification

Genotyping Experiments

- The initial view of the allelic discrimination plot does not show the different colors for each of the genotypes. Click on the empty region of the plot to see the genotype colors

High Resolution Melt Experiments

- For a High Resolution Melt experiment, manual calls cannot be made in the Variant Call column in the Well Table. To make a manual call, double-click a well in the Plate Layout tab and select the control from the Control drop-down list
- For a High Resolution Melt experiment, the Derivative Melt Curve plot in the Run area is empty. To view the derivative melt curve, click Analysis, then HRM Plots
- Exporting with more than 65,536 rows is not supported by the Excel® 2003 format. To export such data use either the Text format or the Excel® 2007 format
- Recommended hard drive space available when performing an instrument run for a High Resolution Melt experiment is 50MB
- The software is not able to properly analyze an HRM experiment file when the target dye added to the plate is “SYBR” in the “Define” tab but the reagent selected is MeltDoctor™ and the run protocol contains a PCR stage in the “Experiment Properties” tab. Please select “Other” as the reagent in the “Experiment Properties” tab and ensure you have done an HRM calibration for that dye

Experiments

- If the user opens more than 10 experiments at the same time, the bottom right arrow to move the tab becomes invisible. Close some experiments to access the hidden ones.
- Software prompts user to save unchanged changes when user opens a ViiA7 file containing email notification settings even when no changes are made
- The software is not able to analyze the experiment file if the selected dye has not been calibrated on the instrument. Workaround: Override the calibration data in the experiment file with that of an experiment file containing calibration data for the missing dye. The calibration has to be from the same instrument and block type

Security and Auditing

- Disabling audit and e-signature settings in a secured environment does not hide / disable the Audit section in the Experiment Menu

Study

- Gene Expression study files created in this software will not be supported in legacy Data Collection Software

SYSTEM REQUIREMENTS

The computer hardware and operating system requirements for the QuantStudio Real-Time PCR System Software v1.3 are:

- Windows® 7 (32-bit or 64-bit) or Windows® XP with Service Pack 3
- Pentium® 4 processor or compatible, with minimum 4 GB of RAM and 500 GB of hard drive capacity
- Minimum monitor resolution of 1280x1024
- One open Ethernet port for connecting to the instrument directly
- Internet Explorer® 6.0 or higher
- Excel® software

INSTALL SOFTWARE

IMPORTANT - To help prevent data loss, it is strongly advised that all user data is backed up before upgrading the software.

- Log on to the Windows® system with *Administrator* privileges
- Obtain the software installation package. Double click on the installer application to start the installation
- Agree to the *End User License Agreement* (EULA) when prompted and complete the installation
- The software will be installed, by default, to “C:\Program Files\Applied Biosystems\QuantStudio Real-Time PCR Software” (referred to as the home directory of the QuantStudio Software)
- A program group, “QuantStudio Real-Time PCR Software” will be created during installation. In addition, a short cut to the application, “QuantStudio Real-Time PCR Software” will be installed on the computer desktop
- When a previous version of the software is detected on the system, the installer will perform an upgrade. The user will be prompted to proceed with the upgrade or to cancel the operation

UNINSTALL SOFTWARE

IMPORTANT: To prevent data loss, it is strongly advised that all user data is backed up before uninstalling the Software.

- From Windows® “Start” button, find the “QuantStudio Real-Time PCR Software” program group
- Click on “Uninstall QuantStudio Real-Time PCR Software”
- In the wizard, follow the instructions and complete the uninstall operation
- Optionally, rename or delete the home directory of the QuantStudio Real-Time PCR Software application. This ensures a clean environment for the next installation

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