



## Release Notes for QX Manager Software

### Version 2.2

May 2024

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## Introduction

QX Manager Software, when connected to your QX200™ Droplet Reader or QX600™ Droplet Reader, provides the necessary functionality to create, run, and analyze Droplet Digital™ PCR (ddPCR™) experiments on your samples.


## Supported Operating System

QX Manager Software is supported on 64-bit Windows 10 and 64-bit Windows 11 operating systems.

## Upgrading to New Versions

This section explains how to download and install Standard Edition. If you are using Premium Edition, contact Bio-Rad Technical Support. You must check the firmware version before you upgrade the software.

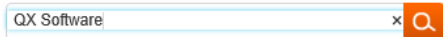
### To check the firmware version for compatibility

1. Open QX Manager Software.
2. From the left pane, select the  tab to display the software information window.
3. Click the link stating the current name and version of the software (for example, QX Manager Standard Edition Version 2.2.0.67) to display a table containing all system specifications, including the firmware version.

**Important:** For the QX600 Droplet Reader, QX Manager Software, Version 2.2, is compatible only with firmware versions 1.5 and later. *To upgrade your firmware, contact Bio-Rad Technical Support.* Version 2.2 is compatible with all QX200 Droplet Reader firmware versions.

### To upgrade the software to the current version

4. Open [bio-rad.com](http://bio-rad.com) and enter QX Software into the Search field.



5. Click the search icon to display the search results.
6. Click QX Software to open the corresponding page.
7. Scroll to the Download section and under QX Manager Software Standard Edition for the current version, click Log in to download software.
8. Log into the website with your Bio-Rad™ username and password.
9. In the Software Download window, select the *I agree with the compliance requirements* checkbox, and then click Download.
10. A zip file is downloaded and appears in your Downloads folder. The download process can take a few minutes.
11. Open the Downloads folder on the computer and select the QXManagerStandard\_v<x.x> zip file.
12. Right-click and select Extract All.
13. Select a destination folder and then select the *Show extracted files when complete* checkbox, and then click Extract.
14. Open the folder containing the extracted files and locate the .exe file.
15. Double-click the file to begin the installation.
16. Follow the prompts to install QX Manager Software Standard Edition.

## New Features and Improvements

QX Manager Software, Version 2.2, has been enhanced with the features described below. For more information, see the user guide for your installed software edition.

### EcoTank Expiration Warnings

To prevent QX200 instrument contamination or ddPCR performance deterioration, QX Manager Software also tracks the approach of the EcoTank expiration date and the time from installation, and prompts you to change the container when expired, or at a maximum of 6 months past the installation date.

### Browsing for Templates

After you add a plate, you can browse for template files (.ddplt, .ddpltapf, and .csv) directly from the Plate Information tab as part of the plate setup. QX Manager no longer restricts template storage to the Templates folder defined in User Preferences or System Settings; therefore, you are not required to move the templates to a prescribed location before you can navigate to template files.

### Data Recovery

If a run fails on your QX200 or QX600 Droplet Reader, you can use the Data Recovery tab in System Data to recover data that was saved to a temporary file. For information, see the QX200 Droplet Reader and QX Manager Software User Guide, or the QX600 Droplet Reader and QX Manager Software User Guide.

### New Software Settings Tab

To address image rendering issues on systems with Intel Iris Xe graphics cards installed, a new Software Settings tab, featuring an alternate rendering method, has been added to QX Manager Software.

**Important:** Because the issue is associated with certain graphics cards only, do not change the setting unless advised to do so by Bio-Rad Technical Support.

### Change in Maximum Accepted Droplet Count for QX600 Droplet Reader

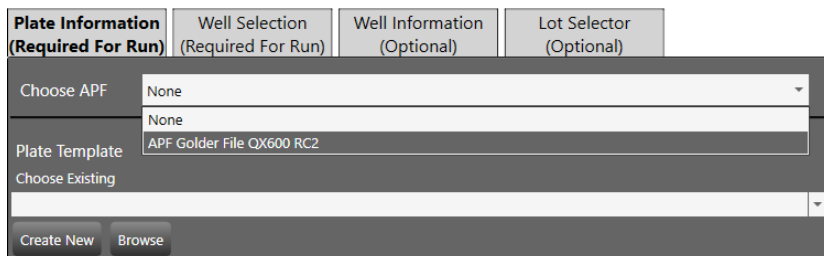
With extensive testing, Bio-Rad has found that the QX600 Droplet Reader can produce reliable data on wells containing up to 28,000 accepted droplets. Therefore, the number of accepted droplets is increasing from 25,000 to 28,000 in QX Manager Software Version 2.2, and the change is visible in the Data Table during and after the run. If a well contains between 25,000 and 28,000 accepted droplets, the Well Status field now reads OK instead of CHECK after auto-analysis. The data collected has not changed and you can still manually modify threshold values.

**Important:** The accepted droplet threshold has not changed for the QX200 Droplet Reader.

## Assay Protocol File Support Changes (Premium Edition only)

The following changes were made to Assay Protocol File support:

- The drop-down list to select an Assay Protocol File (APF) has been moved from the Add Plate window to the Plate Information tab in the Configure Plate window. You must add the plate before you can select an APF.



- To avoid confusion when running and recording APF information, you cannot import an APF package that has the same name as an existing APF package.

## Fixed Issues

The following issues are fixed in this software version:

- The application failed to warn the user that two thresholds are required to successfully cluster data from a Double Drop-Off assay. QX Manager Software now displays an advisory message that prompts you to select two thresholds.
- When reprocessing data, the file name displayed in the progress pop-up varied from the final filename applied to the reprocessed file.
- When using file and/or path names that exceeded 259 characters, an error occurred.
- After applying a standard deviation (SD) threshold to data that had previously been calculated by automatic threshold, the well data table and well selector still reflected auto rather than manual as the method.
- For the Advanced Classification Method assay type, after manual clustering with the lasso tool, some well data was not updated with positive/negative droplet counts, and the concentration was not calculated.
- During analysis, when viewing multiple wells in the 1D Amplitude tab and using a Fixed scale, the chart did not render as expected; instead, there was a loss of divider lines and incorrect X scaling.
- QX Manager Software sometimes crashed when you generated a report, and then changed a threshold for the data.
- In some cases, a completed run did not generate a .ddpcr file. This defect was concurrent with instances of single wells missing a supermix assignment. At the beginning of the run, QX Manager Software now checks every active well for a supermix assignment. If a supermix is found, you are prompted to remove and reload the plate to prevent a failed run. If this prompt persists after multiple attempts, contact Bio-Rad Technical Support.
- To protect the instrument, the Prime, Flush, and Prime and Flush actions are disabled when the instrument is in an error state.

**For Premium Edition customers using APFs, the following issues are fixed in this software version:**

- When multiple wells were selected while modifying the Plate Layout with unique Sample IDs, and the Sample Description or Sample Type was modified for those wells, the Sample IDs were erased. This occurred for plate setup before a run, and as part of creating or editing a plate template.
- If you modified custom variable values in the APF Management tab, and then selected the APF to reanalyze the ddPCR data, the Audit log did not reflect the changes to the custom variable values.
- When you prompted a report that included an APF Results table with four or more columns, the report failed to generate.
- In the APF Results display, multiple wells that shared the same Sample ID were mistakenly required to also share the same Sample Description.
- In some cases, when a run with an APF applied was in progress, you could delete the APF package from the APF Management tab.

## Known Issues

The following issues might occur when using QX Manager Software:

- When the EcoTank is installed on the QX200 Droplet Reader, the status icon in the Instrument Status header row in QX Manager Software might disappear for a few seconds at a time. No data is lost and runs are completed successfully.
- Analysis reports might not display Thresholds if SD Threshold is selected.  
**Workaround:**
  1. Select SD Threshold to add threshold to the display.
  2. Select the Manual thresholding view without adjusting the threshold.
  3. Generate a report. The report includes the SD thresholds.
- During Analysis, if the Dashboard view is configured to include 1 row and 1 column, the well selector is zoomed in on all analysis tabs and some wells are not accessible.  
**Workaround:** Configure the Dashboard to restore default view or select the Well Data view.
- Outlines of threshold boxes, lassos, and hand-drawn thresholds are not visible in the report.
- Multiple amplitude charts are displayed in the dashboard view, but when the chart Axis is set to Dye rather than Channel, you might encounter issues with exporting or printing charts.  
**Workaround:** Print or export charts individually or change the chart Axis to Channel.
- When collecting Troubleshooting Logs, some information might be missing from the firmware logs in rare cases.  
**Workaround:** Before collecting troubleshooting logs, delete all the contents in the folder C:\ProgramData\Bio-Rad\QXMgrStandard\Logs or C:\ProgramData\Bio-Rad\QXMgrPremium\Logs to clear the logs cache. This ensures that all firmware logs stored on the instrument are correctly transferred to the computer without any data loss during troubleshooting data collection.

- If you install QX Manager on a computer where the default language is set to a language other than English, the installation might fail due to a missing Users profile in local groups.  
**Workaround:**
  1. In the Windows Search field (lower-left corner), enter Computer Management.
  2. Select LocalUsers and Groups, and then double click Groups.
  3. Verify the Users profile is missing from the list.
  4. In the left panel, right click Groups and select New Group.
  5. For Group Name, enter Users and click Create.
  6. Restart the computer and then reinstall QX Manager Software.
- After generating a report encrypted with a password, you can open the report within the same instance of QX Manager Software without entering a password. When opening with a third-party PDF reader, the password is still required.
- Before QX Manager Software will accept an imported APF, the APF Display Name must be different from the APFs that were already imported.  
**Workaround:** Do one of the following:
  - Delete the previous version of the APF from QX Manager Software and then import the APF
  - Open the APF in QX Designer and change the display name, and then generate a new version.

## Documentation

Information about the instrument and software is available in the following resources:

- QX200 Droplet Reader and QX Manager Software, Standard Edition, User Guide
- QX200 Droplet Reader and QX Manager Software, Premium Edition, User Guide
- QX600 Droplet Reader and QX Manager Software, Standard Edition, User Guide
- QX600 Droplet Reader and QX Manager Software, Premium Edition, User Guide

## Contacting Technical Support

The Bio-Rad Technical Support department in the U.S. is open Monday through Friday, 5:00 AM to 5:00 PM, Pacific time.

**Phone:** 1-800-424-6723, option 2

**Email:** [Support@bio-rad.com](mailto:Support@bio-rad.com) (U.S./Canada Only)

For technical assistance outside the U.S. and Canada, contact your local technical support office or click the Contact Us link at [bio-rad.com](http://bio-rad.com).

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