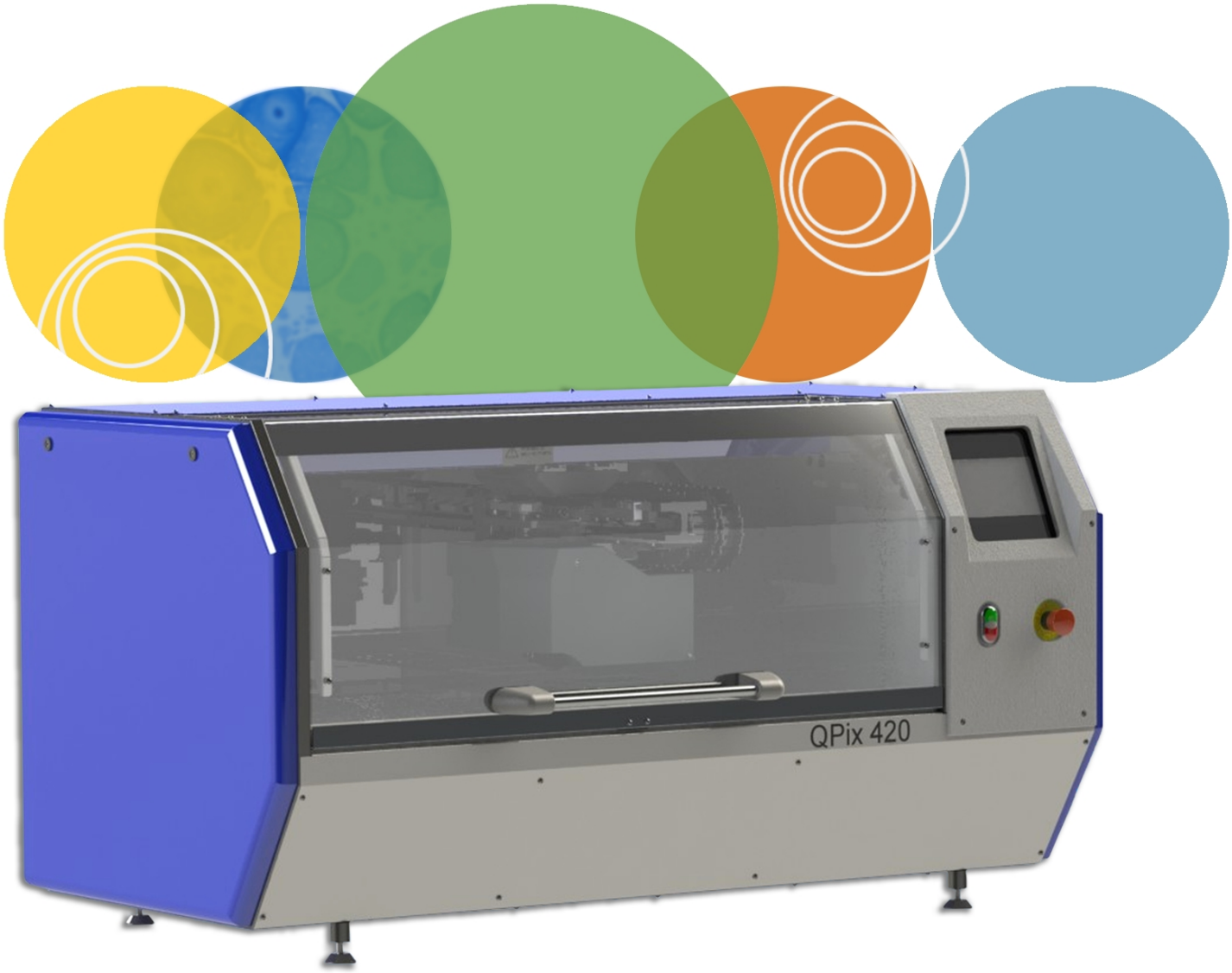



# QPix™ 420 Colony Picking Software

## Software Release Notes

MOLECULAR DEVICES

QPix 420 Software v2.4.52 Release Notes
July 2016

Product manufactured by Molecular Devices, LLC.
1311 Orleans Drive, Sunnyvale, California, United States of America 94089.
Molecular Devices, LLC is ISO 9001 registered.

# Contents

# Chapter 1: QPix 420 Software General Information


The QPix™ 420 Colony Picking Software controls the QPix™ 420 Colony Picking Systems.

The following topics are included in this chapter:



## Computer System Requirements

The QPix 420 Software version 2.4 upgrade requires the following computer specifications:

**Table 1-1: Minimum Computer System Requirements**

| Item | Description |
|---|---|
| Operating system | Windows 7, 32-bit (x86)<br>The software has not been validated on the Windows 7, 64-bit (x64) operating system. |
| Memory | 2 GB RAM |
| Data Connection | 10/100 Ethernet port |
| Camera Connection | USB 2.0 port |

## Starting the System and the Software

Before starting the system and the software confirm the following conditions:

- The **Emergency Stop** button on the front panel of the instrument is pulled out. The instrument will not start if this button is pushed in.
- The instrument bed is clear of obstructions and loose items.
- All motor tracks are free of obstruction.
- There are no obstructions to movement of the head.
- The instrument door is fully closed.

### Power-Up Procedure

To power-up the system:

1. Turn on the power supply to the compressor.
2. Push the green **Start** button on the front panel of the instrument.
   The **Power On** light illuminates on the front indicator panel. If the power to the system does not turn on, it is possible that the door is open or the **Emergency Stop** button is pushed in.

   The instrument cycles through various start-up processes indicated on the front indicator panel.
3. Check that the **Air Pressure OK** icon illuminates on the front indicator panel.
4. Switch on the computer and wait for it to finish initializing.

**Note:** Every time the instrument is used, the three axes sequentially run through their **Initialize drives** routine. This enables the drives to find their respective home positions. The system must complete this routine without interference to ensure that there is no damage to the instrument or its auxiliary equipment.

## Backing Up the Existing Software Configuration

Before upgrading the software, you must back up the existing software configuration in case you need to reinstall it later.

To run **Configuration Backup:**

1. Click **Start > All Programs > Molecular Devices > QPix 420 > Configuration Backup**.
2. In the **Fusion Configuration Manager** dialog, click **Backup Current Configuration**.
3. Wait until the backup process ends, and the **Config Folder** reference is displayed in the Configuration backup list under **Date Created > Type > Comment**.
4. Close the dialog.

## Backing Up the Software Database

Before upgrading the software, you must back up the existing software database in case you need to restore it later.

To back up the software database:

1. Start the software.
2. From the **New Process** tab of the **Navigation** window, click **Database Management**.
3. From the **Backup and restore** tab, click **Backup**.
4. When the file name you created appears in the **Restore** list field, click **Close** to return to the **Navigation** window.
5. If QPix version 2.x software is installed on your computer, skip to Uninstalling the Previous Version of the Software on page 7.

## Uninstalling the Basler Pylon SDK

**CAUTION!** This procedure only applies if you are upgrading your software from QPix version 1.x software.
Do not uninstall the Basler Pylon SDK if QPix version 2.x software is installed on your computer. Skip to Installing the New QPix 420 Software on page 8.

To uninstall the Basler Pylon SDK:

1. Click **Start > Control Panel > Programs > Uninstall a program**.
2. From the list of programs, select **Basler pylon SDK x86 2.3.5.2633**, and click **Uninstall**.
3. Follow the on-screen instructions to finish uninstalling the software, and accept any warnings or messages that display.
4. If prompted, restart the computer.

## Uninstalling the Previous Version of the Software

Before installing the new version of the **QPix 420** software, you must uninstall the old version currently installed on your computer.

To uninstall the QPix software:

1. Click **Start > Control Panel> Programs > Uninstall a program**.
2. From the list of programs, select **QPix 420**.
3. Click **Uninstall**.
4. Follow the on-screen instructions to finish uninstalling the software, and accept any warnings or messages that display.
5. If prompted, restart the computer.

## Installing the New QPix 420 Software

The new version 2.4 software is available by download. Contact Technical Support for instructions. See Obtaining Support on page 16.

**CAUTION!** Backup your configuration and database before installing the new software, because your system will be unrecoverable if an installation error occurs. See Backing Up the Existing Software Configuration on page 6.

To install the new QPix 420 Software:

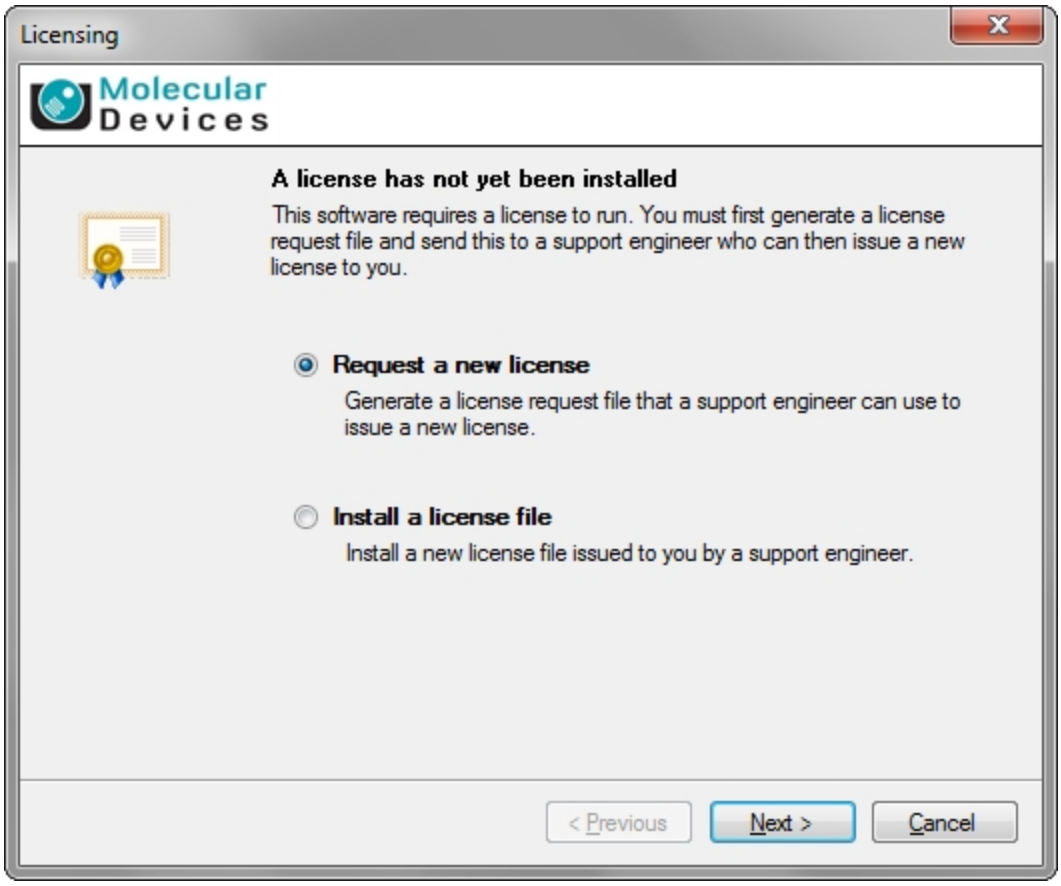
1. Download the new 2.4 software installation file to the system computer.
2. Unzip the 2.4 software installer files.
3. If you started with version 2.0 or newer of the software installed on your computer, skip to step 9.
4. Double click the **dotNetFx40_Full_x86_x64.exe** file to begin the **.Net 4.0 Framework** installation.

   **Note:** If **.Net Framework 4.0** is already installed on your computer, the **Microsoft .NET Framework 4 Maintenance** dialog appears, click **Cancel** to end the process, and continue to the next step.

5. To let the installation complete, accept any warnings or messages that are displayed. If prompted, restart the computer.
6. Double click the **Basler pylon SDK x86 3.2.3.3215_EN_.exe** file to begin the **Basler Pylon SDK** installation.
7. Follow the on-screen instructions for the default **(Typical installation)** settings.
8. To let the installation complete, accept any warnings or messages that are displayed. If prompted, restart the computer.
9. Double click the **QPix 420 v.2.4.xx.x.msi** file to start the installation.
10. Follow the on-screen instructions for the default **(Typical installation)** settings.
11. To let the installation complete, accept any warnings or messages that are displayed. If prompted, restart the computer.
12. You must now request a license file before the software can be used.

## Obtaining a License for the Software

The first time that you start the software after completing the installation, the software prompts you for a license.



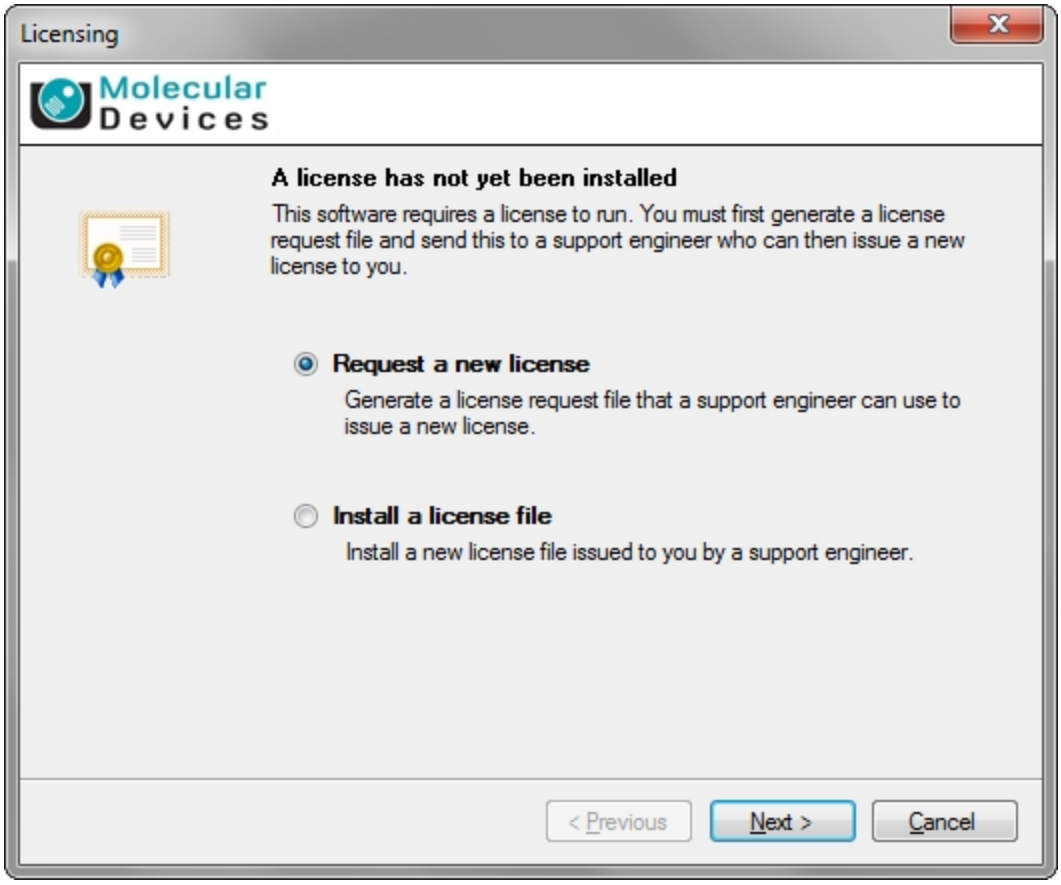

Follow the **Licensing** procedures in order:

1. Request a new license. See Requesting a Software License, see page 10.
2. Install a license file. See Installing the Software License, see page 12.

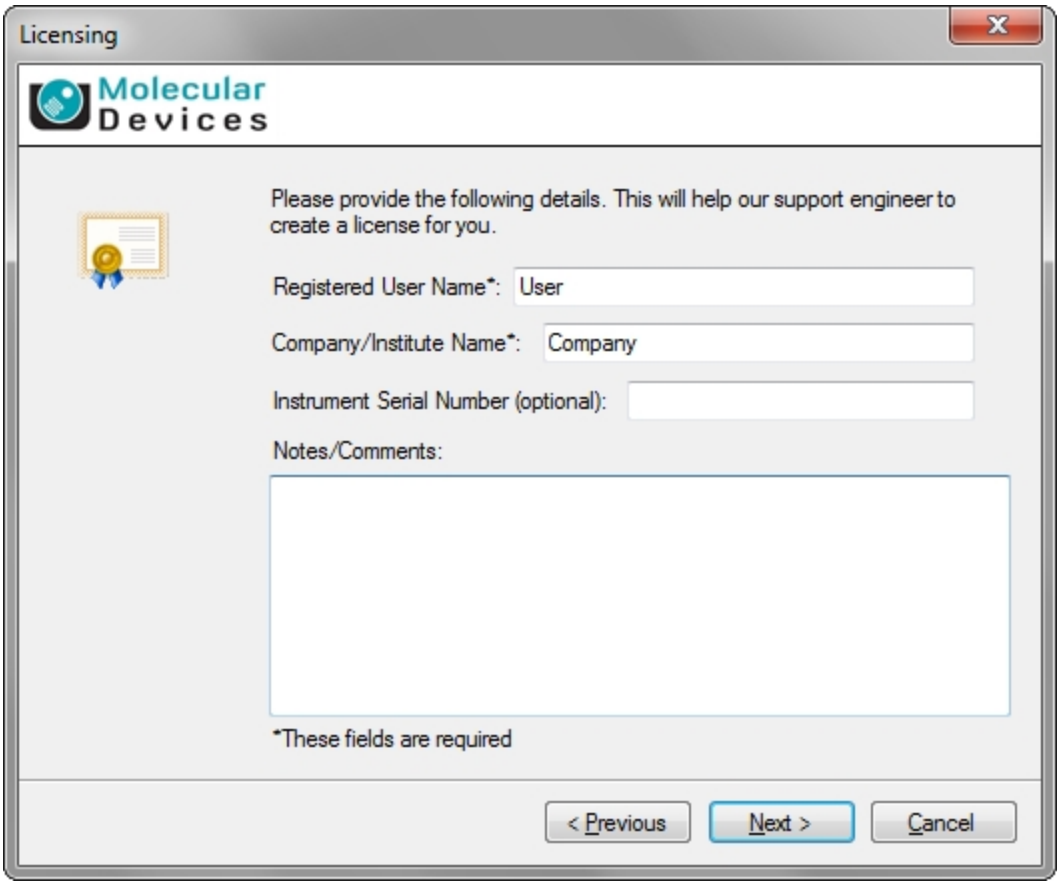
## Requesting a Software License

To request a software license:

1. From the desktop, double-click the icon to start the software.



2. In the **Licensing** dialog, click **Request a new license** and then click **Next**.

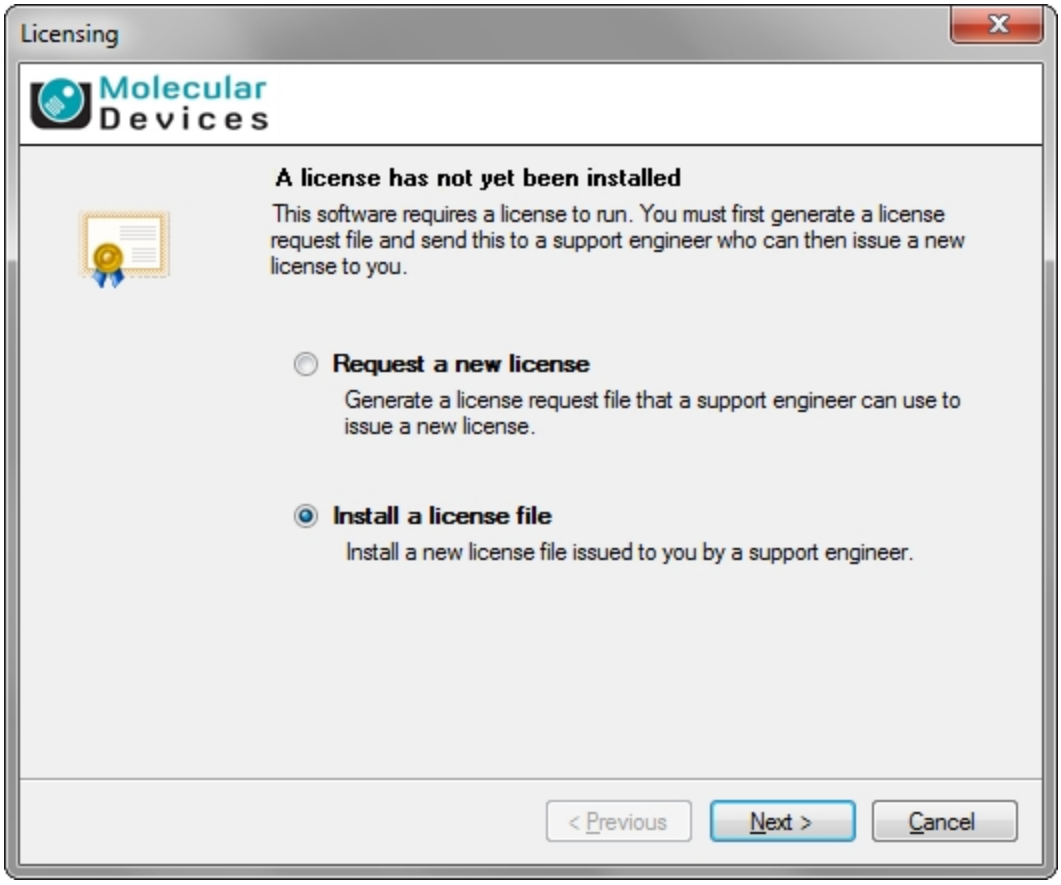



3. Type the requested information in the dialog fields and then click **Next**.
4. Click **Save**.
5. In the **Save the request to a file** dialog, enter a file name and then save the file in a location where it is easy to find again.
6. Contact technical support to get a valid license file. See Obtaining Support on page 16.
7. After you receive the license file, save it on the System computer where it is easy to find.

## Installing the Software License

To install the software license:

1. From the desktop, double-click the icon to start the software.



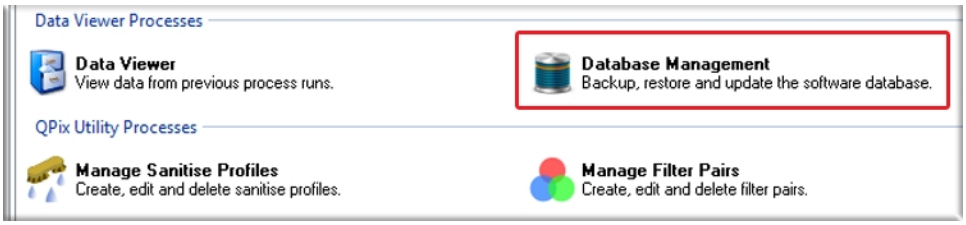

2. In the **Licensing** dialog, click **Install a license file** and then click **Next**.
3. Click **Open**.
4. In the **Select the License File to install** dialog, locate and select the license file you previously saved, and then click **Open**.
   The license file installs automatically
5. Click **Finish** to close the **Licensing** dialog.
6. If you are upgrading your software from QPix version 1.x software, you must now update the database before the software can be used. Continue to Updating the Database on page 13.
   If you are upgrading your software from QPix version 2.x, QPix 420 Software version 2.4 is now ready to use.

## Updating the Database

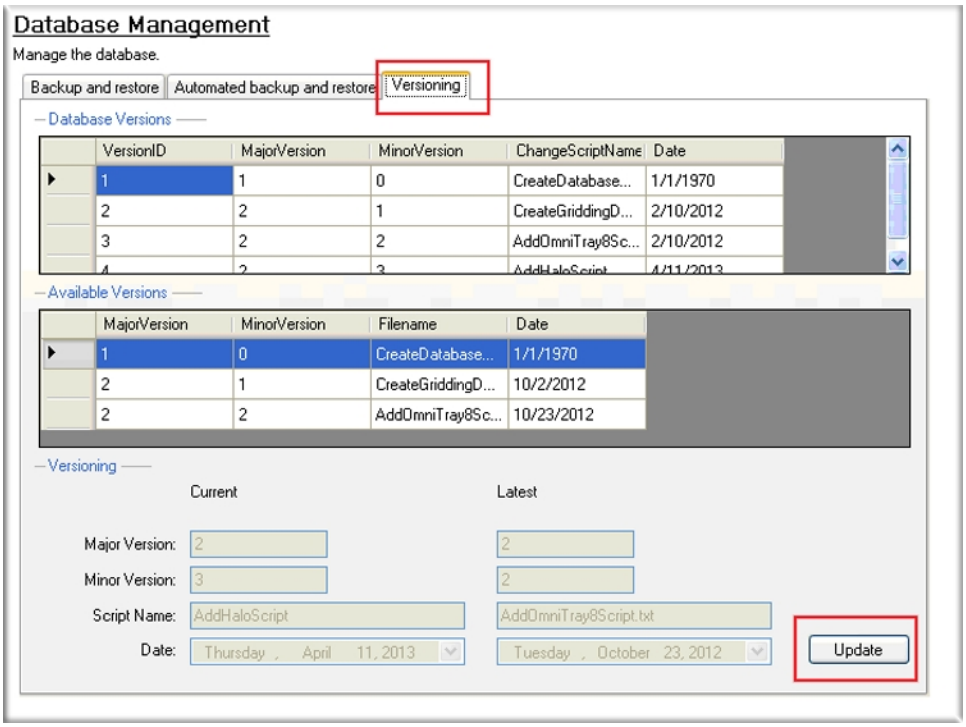
After updating from software version 1.x, the database update process must be run before using software version 2.4 for the first time.

To update the database:

1. From the desktop, double-click the icon to start the software.
2. Under **Data Viewer Processes**, double-click **Database Management**.




3. Click the **Versioning** tab, and then click **Update**.




4. After the update finishes, click **Close**.

QPix 420 Software version 2.4 is now ready to use.

## Re-Installing the 1.x Software

To downgrade software version 2.x. to software version 1.x:

1. Uninstall software version 2.x.

   **Note:** You do not need to backup the configuration for this version.

   - Click **Start > Control Panel > Programs > Uninstall a program**.
   - From the list of programs, select **QPix 420**, and click **Uninstall**.
   - Follow the on-screen instructions to finish uninstalling the software, accept any warnings or messages that are displayed. If prompted, restart the computer.

2. Uninstall **Basler pylon SDK x86 3.2.3.3215**.
   - Click **Start > Control Panel > Programs > Uninstall a program**.
   - From the list of programs, select **Basler pylon SDK x86 3.2.3.3215**, and click **Uninstall**.
   - Follow the on-screen instructions to finish uninstalling the software, accept any warnings or messages that are displayed. If prompted, restart the computer.
3. Insert the Recovery DVD or locate the downloaded installation file for software version 1.x .
4. Start the installation program and follow the on-screen instructions to re-install software version 1.x.
5. Install **Basler pylon SDK x86 2.3.5.2633** from whichever software version 1.x installation file source was used in step 3.
6. Click **Start > All Programs > Molecular Devices > QPix 420QPix > Configuration Manager**.
7. In the **Fusion Configuration Manager**, click **Restore From File**.
8. Locate and select the backup file that you saved in Backing Up the Existing Software Configuration on page 6.
9. Click **Open**.
10. After the configuration is restored, close the **Fusion Configuration Manager**.
11. If prompted, start and license the software. See Obtaining a License for the Software on page 9.
12. Start software version 1.x.
13. From the **New Process** tab of the **Navigation** window, click **Database Management**.

14. From the **Backup and restore** tab, in the **Restore** list field, select the backup file name you created before installing QPix software version 2.x then click **Restore**. See Backing Up the Software Database on page 7.
15. Click **Close** to return to the **Navigation** window.

## Ordering Information

The following software and consumable are recommended to operate the QPix instrument with Software Version 2.4 or newer.

**Table 1-2: Available Products**

| Part Number | Description |
|---|---|
| **Software** | |
| SL9400-A06 | QPix™ Chroma Colorimetric Colony Selection Software License. Blue/White Colony Selection Software License for QPix 420 Colony Picking Systems |
| SL9400-A07 | Zone of Inhibition Detection Software License for QPix 420 Colony Picking Systems. |
| SL9400-A08 | QPix™ 420 Software Version 2.0 or Newer Upgrade |
| **Consumables and Kits** | |
| X1101 | QPix™ Chroma Filter, thin film optical filter for Blue/White colony selection, qty 1 |
| X1102 | QPix™ Chroma Filter, thin film optical filter for Blue/White colony selection, qty 25 |
| X1103 | QPix™ Chroma Colorimetric Colony Selection Software Kit.<br>Blue/White Colony Selection Software Kit for QPix 420 Colony Picking Systems.<br>Includes software license and 2 QPix™ Chroma Filters (X1101). |
| X9401 | 1 Way Adjustable Petri Dish Holder<br>Plate diameter compatibility: 138 mm to 141 mm |
| X9402 | 2 Way Adjustable Microplate Holder<br>Plate diameter compatibility: Any ANSI/SLAS 1-2004 microplates |
| X9403 | 4 Way Adjustable Petri Dish Holder<br>Plate diameter compatibility: 97 mm to 100.5 mm |
| X9404 | 5 Way Adjustable Petri Dish Holder<br>Plate diameter compatibility: 87 mm to 90.5 mm |

## Obtaining Support

Molecular Devices is a leading worldwide manufacturer and distributor of analytical instrumentation, software, and reagents. We are committed to the quality of our products and to fully supporting our customers with the highest possible level of technical service.

Our support web site, www.moleculardevices.com/support, has a link to the Knowledge Base with technical notes, software upgrades, safety data sheets, and other resources. If you do not find the answers you are seeking, follow the links to the Technical Support Service Request Form to send an email message to a pool of technical support representatives.

You can contact your local representative or contact Molecular Devices Technical Support by telephone at 800-635-5577 (North America only) or +1 408-747-1700. In Europe call +44 (0) 118 944 8000.

To find regional support contact information, visit www.moleculardevices.com/contact.

Please have your instrument serial number or Work Order number, and your software version number available when you call.

For more information about QPix™ instruments and accessories visit: www.moleculardevices.com/qpix-sw2.0

# Chapter 2: QPix 420 Software Version 2.4.52: Software Release Notes

2

The QPix 420 Colony Picking Software version 2.4.52 update is a minor release. The following is a summary of the changes incorporated in this revision as compared to version 2.4, the last general release of the software. Detailed usage procedures can be found in the user guide for your instrument model. Contact Technical Support for additional information. See Obtaining Support on page 16.



## Issues Addressed in QPix 420 Software v2.4.52

The following issues were addressed in QPix 420 Software version 2.4.52.

### Incorrect Destination Plate Diagram in Picking

Tracking ID: 5039

In **Picking**, when a multiple plate source with **Limit Max. Number Of Features Per Position** and **Reserve Wells For Positions** is selected, and then continuing to pick from another source plate, the number of and location of the partially filled and any additionally required destination plates are displayed in the destination diagram in the wrong positions.

#### Resolution:

The number of required destination plates and their positions displayed in the destination diagram is now accurate.

#### Impact of fix:

This fix has no impact on current workflow or data.

### Unidentified Valid Picks From 96-Well Custom Plate in Regional Picking

Tracking ID: 5041

In **Regional Picking**, when using a 96-well custom plate with the **Limit Max. Number Of Features Per Region** set to 1 or 2 features per well, results in **Feature Counts** for the **Pickable** counts to display valid colonies, but 0 is displayed in the corresponding **Picking** counts for most of the wells in the **Feature Selection** screen.

#### Resolution:

The **Picking** counts now match the **Pickable** counts in the **Feature Selection** screen when using a 96-well custom plate with the **Limit Max. Number Of Features Per Region** set to 1 or 2 features per well for **Regional Picking**.

**Impact of fix:**

This fix has no impact on current workflow or data.

# Chapter 3: QPix 420 Software Version 2.4: Software Release Notes

3

The QPix 420 Colony Picking Software version 2.4 update is a minor release. The following is a summary of the changes incorporated in this revision as compared to version 2.3, the last general release of the software. Detailed usage procedures can be found in the user guide for your instrument model. Contact Technical Support for additional information. See Obtaining Support on page 16.



## New in QPix 420 Software v2.4

The following new major features are included in QPix 420 Software version 2.4.

### Option to Change the Pin-Firing Speed for Re-Arraying

Reducing the pin-firing speed can prevent cross-contamination due to occasional splashing that can occur with normal pin-firing speed. However, this significantly increases the amount of time required for the Re-Arraying process.

To reduce the pin-firing speed in a Re-Arraying process, in the **Source** window, select the **Slow Pin Fire** check box. To use the normal pin-firing speed, clear this check box.

Tracking ID: 5011

### Option to Change the Head Before Starting Camera Alignment

After you start the camera alignment process, you can change the head to a standard 96-pin picking head without the need to close the process.

If you do not have a standard 96-pin picking head installed, then click **Move to Load Position**. After you have installed the standard 96-pin picking head, click **Move to Park Position** and then click **Next**.

Tracking ID: 5014

### Offset Settings for Gridding

If the pins do not align correctly with a QTray or Omni Tray destination during Gridding, adjusting the offset can help align the pins with the destination.

The Gridding offset is part of the instrument configuration. Contact your Field Service Engineer to change this offset value setting for your system. See Obtaining Support on page 16.

Tracking ID: 5030

## Modification Made to QPix 420 Software v2.4

The following modification was made to QPix 420 Software version 2.4.

### Modify Regional Tray Definitions

In addition to creating and removing regional tray definitions, the software allows modifying and copying the definitions.

To modify a previously created regional tray:

1. From the **Navigation** window under **Picking Processes**, double-click the **Manage Regional Trays** icon.
2. Click the **Manage Previously Created Trays** tab.
3. From the **Defined Trays** list, select the name of the tray that you want to modify.
   - To modify the existing definition, edit the parameter fields on the left side of the window using the manufacturer's specification document and then click **Save Regional Tray**.
   - To make a copy of the existing definition, type a new name for the regional tray in the **Regional Tray Name** field and then click **Save Regional Tray**.
   - To delete the existing definition, click **Remove**.
4. In the confirmation message, click **Yes**.
5. Click **Close** to return to the **Navigation** window.

Tracking ID: 5015

## Issues Addressed in QPix 420 Software v2.4

The following issues were addressed in QPix 420 Software version 2.4.

### Using Custom Plates in a Saved Regional Picking Routine Causes the Software to Stop

Tracking ID: 5008

An error in Regional Picking when using more than one custom source plate causes the software to stop.

#### Resolution:

Regional Picking with multiple custom source plates completes successfully.

#### Impact of fix:

This fix has no impact on current workflow or data.

### Picking Fails After Imaging in the Control Plate Creation Process

Tracking ID: 5022

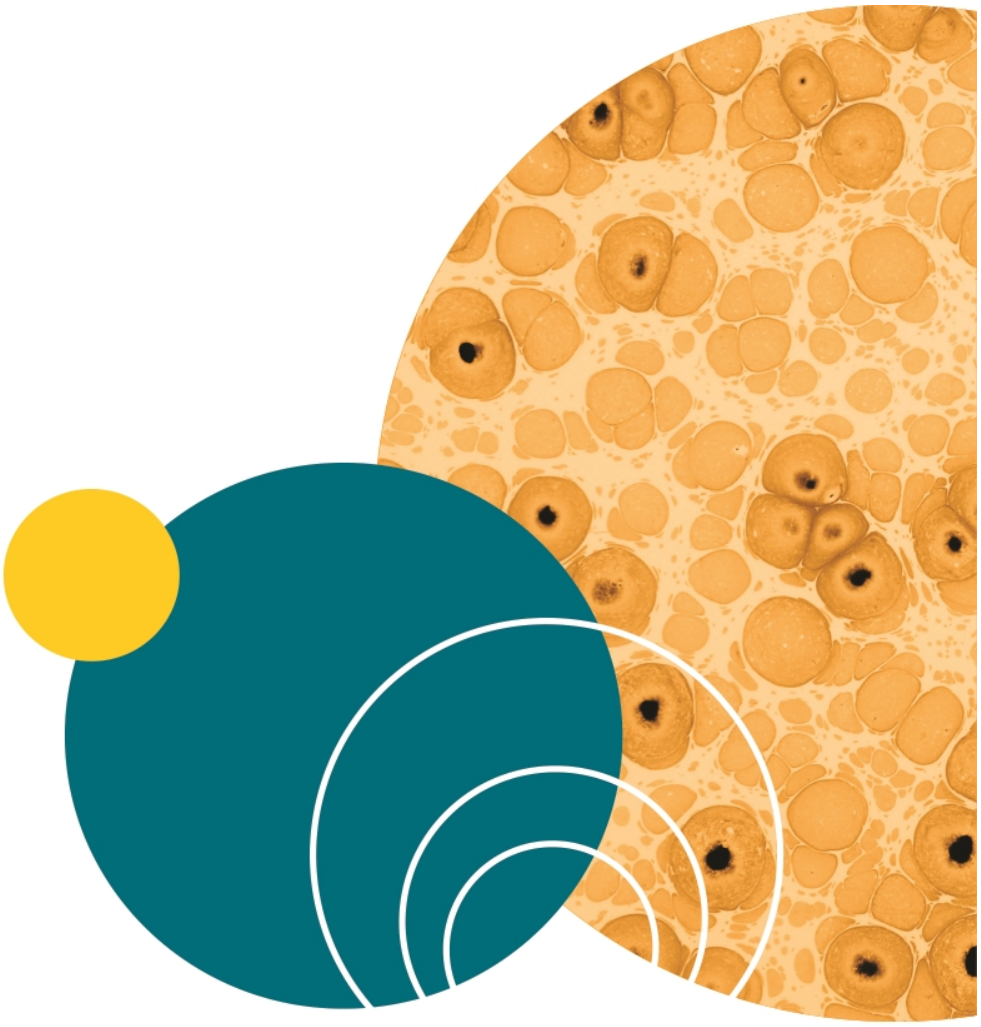
In the Control Plate Creation process, if the number of pickable items is less than the number of assigned wells, then the software stops after imaging.

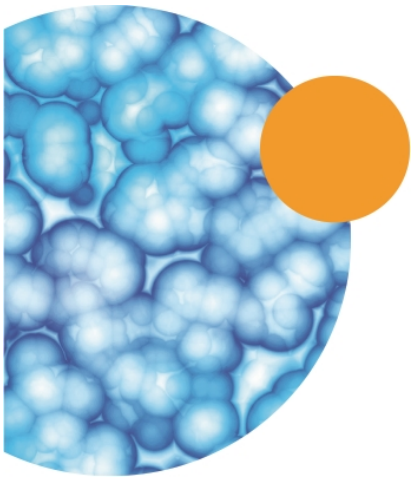
#### Resolution:

If the number of pickable items is less than the number of assigned wells, the software picks and deposits the available items in the assigned wells and leaves the remaining wells in the destination empty.

#### Impact of fix:

This fix has no impact on current workflow or data.





# Chapter 4: QPix 420 Software Version 2.3: Software Release Notes

4

The QPix 420 Colony Picking Software version 2.3 update is a minor release. The following is a summary of the changes incorporated in this revision as compared to version 2.2, the last general release of the software. Detailed usage procedures can be found in the user guide for your instrument model. Contact Technical Support for additional information. See Obtaining Support on page 16.



## Modifications Made to QPix 420 Software v2.3

The following modifications were made to QPix 420 Software version 2.3.

### Selection Menu for Manually Entered Source Plate Barcodes in Rearraying

In the **Failed to read barcode screen** in Rearraying, a menu of selectable barcodes replaces the manual barcode entry field.

Tracking ID: 4892

### Option to Specify the Number of Sources per Destination

Added an option to specify two to five picking positions per new destination plate in pickings from a multi-position source such as a 4-way Petri dish. Available in the Picking Processes, the Blue-White Picking Processes, and the Zone of Inhibition Detection Processes.

Tracking ID: 4926

### Editable Number of Colonies Picked After Imaging

In the Picking Process, the number of colonies picked from each source Petri dish after imaging is editable using the **Edit Picking Counts** button.

Tracking ID: 4935

## Issues Addressed in QPix 420 Software v2.3

The following issues were addressed in QPix 420 Software version 2.3.

### Wells Contaminated by Fast Pin-Firing During Rearraying

Tracking ID: 4652

Well contamination in the Rearraying Process occurs from fast pin-firing splashing.

**Resolution:**

The pins now fire before slowly lowering into the wells.

**Impact of fix:**

This fix has no impact on current workflow or data.

### Regional Picking Stuck in Washing and Inoculation Loop

Tracking ID: 4790

In Regional Picking when more than 97 pickable features are detected, selecting the option to limit the number of features per region intermittently causes a loop between the wash and inoculation cycles.

**Resolution:**

Limiting the number of features per region during Regional Picking now works as expected.

**Impact of fix:**

This fix has no impact on current workflow or data.

### Regional Picking Only Deposits in Columns

Tracking ID: 4943

During Regional Picking, colonies only deposit in columns despite row selection.

**Resolution:**

Colonies can now deposit in rows during Regional Picking.

**Impact of fix:**

This fix has no impact on current workflow or data.

## Known Issues in QPix 420 Software v2.3

The following known issues exist in QPix 420 Software version 2.3.

### Error When Cancelling Source Plate Selection in Rearraying

Tracking ID: 4961

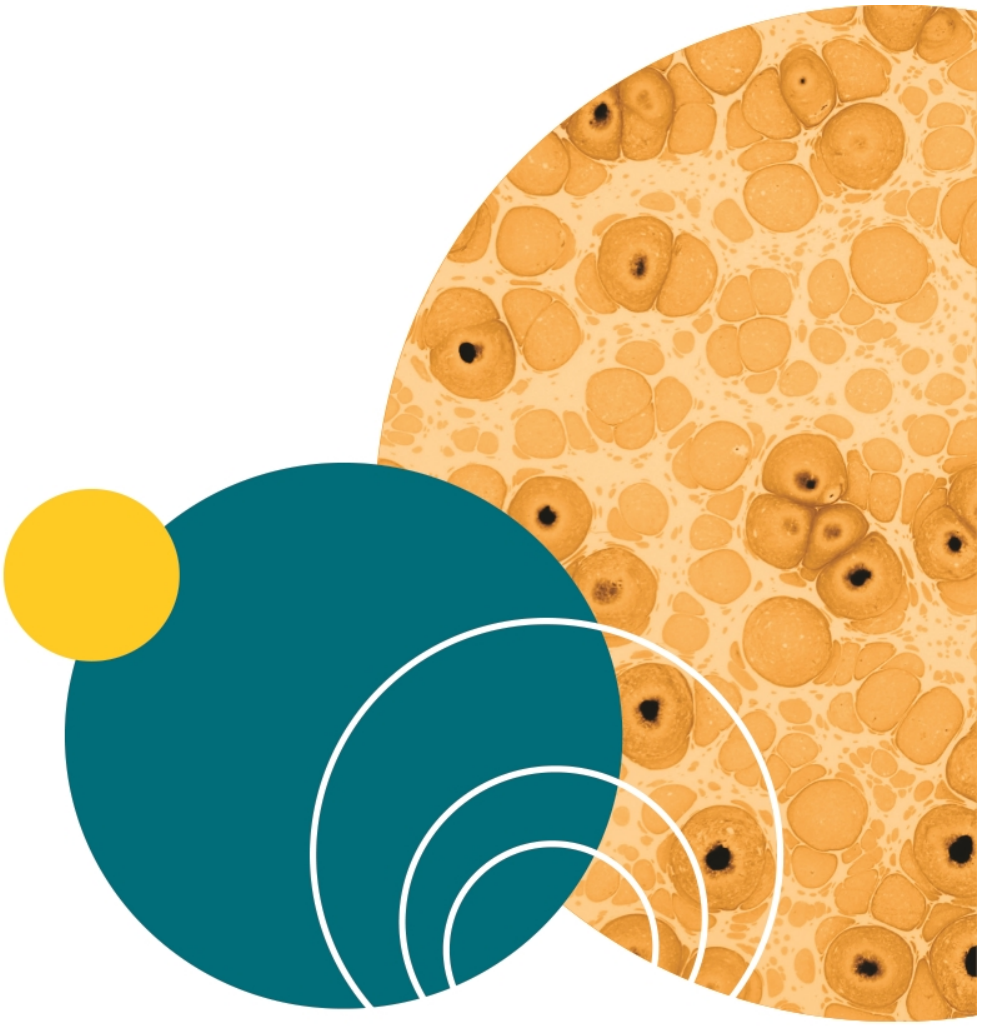
In Rearraying, when using multiple source plates, clicking **Cancel** during the selection of source plate barcodes displays an Unhandled Exception error.

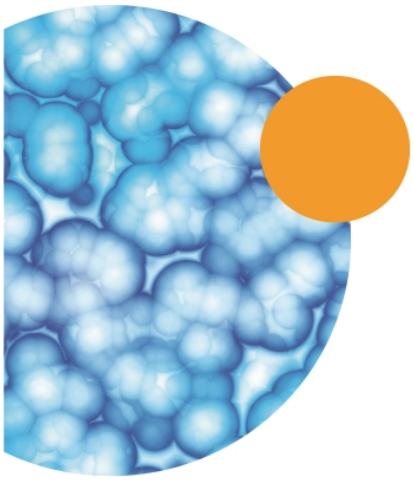
#### Workaround:

None.

#### Planned Resolution:

This will be corrected in a future release of QPix software.





# Chapter 5: QPix 420 Software Version 2.2: Software Release Notes

5

The QPix 420 Colony Picking Software version 2.2 update is a minor release. The following is a summary of the changes incorporated in this revision as compared to version 2.1, the last general release of the software. Detailed usage procedures can be found in the user guide for your instrument model. Contact Technical Support for additional information. See Obtaining Support on page 16.



## Modifications Made to QPix 420 Software v2.2

The following modifications were made to QPix 420 Software version 2.2.

### Manual Selection of Colonies

The addition of the manual colony selection button on the **Feature Selection** screen has been added to all of the picking processes to provide the ability to selectively change the preset items to be picked and discarded. The ability to remove all of the manually selected or deselected colonies is also available. Both of these new icon control buttons are located to the right of the **Delete Polygon** control.

Tracking ID: 3758

### View Pixel Intensity on the Image Map When Hovering

The option to display the gray scale pixel intensity values of a targeted point on the image map has been added to the cursor movement during any picking process from the **Test Image** screen. To enable this feature, position your cursor over the image map, right-click and select **Intensity**. As you move your cursor over the image map, pixel intensity values are displayed. You can take note of various intensity values in order to manually determine a detection threshold value.

Tracking ID: 4026

### Auto Generating Barcode

**Auto Generate** assigns a random barcode when there is a barcode reading failure during an automated routine. In the **Barcodes** settings step, **Read Failure Action > Auto Generate** has been added as an option to keep an automated routine from stopping when there is a barcode read error.

Tracking ID: 4371

## Issues Addressed in QPix 420 Software v2.2

The following issues were addressed in QPix 420 Software version 2.2.

### Inconsistent Interior Light On/Off Status

Tracking ID: 3743

The status bar displays that the interior light is turned on when it has actually been turned off.

**Resolution:**

The status of the interior light is now synchronized correctly.

**Impact of fix:**

This fix has no impact on current workflow or data.

### Test Image Picking Location is not Shown on map

Tracking ID: 3746

When the first test image during the picking process is taken the position of this image is not marked red on the tray map. The position is only marked red when the position of the camera is changed to take another test image.

**Resolution:**

When entering the Test Image screen for Picking and Regional Picking, the location of the displayed image is now highlighted in the tray map.

**Impact of fix:**

This fix has no impact on current workflow or data.

### Export Image from Custom Object Creation is Misaligned

Tracking ID: 4574

Alignment and stitching errors with images exported using a custom regional tray.

**Resolution:**

Alignment and stitching errors with images exported using a custom regional tray are now fixed.

**Impact of fix:**

This fix has no impact on current workflow or data.

## Data Viewer Crashes with Long Barcodes

Tracking ID: 4594

A barcode of more than 25 characters used for a receptacle crashes the software during the Data Viewer process.

### Resolution:

A barcode of more than 25 characters can now be used for a receptacle.

### Impact of fix:

This fix has no impact on current workflow or data.

## Deleting the Only Gridding Pattern Results in an Unhandled Exception

Tracking ID: 4607

When the only saved gridding pattern is deleted, the software displays unhandled exception error.

### Resolution:

Fixed

### Impact of fix:

This fix has no impact on current workflow or data.

## The Back Button Fails in the Sanitization Step for Replication and Rearraying

Tracking ID: 4651

During the Replication and Rearraying Processes, in the Sanitization step, clicking Back results in an unhandled exception error.

### Resolution:

Fixed

### Impact of fix:

This fix has no impact on current workflow or data.

## Agar Picking Depth Setting of 0.75 or Less Fails

Tracking ID: 4712

An error message displays when the agar picking depth is set to 0.75 or less.

### Resolution:

Fixed

### Impact of fix:

This fix has no impact on current workflow or data.

# Chapter 6: QPix 420 Software Version 2.1: Software Release Notes


The QPix 420 Colony Picking Software version 2.1 update is a minor release. The following is a summary of the changes incorporated in this revision as compared to version 2.0, the last general release of the software. Detailed usage procedures can be found in the user guide for your instrument model. Contact Technical Support for additional information. See Obtaining Support on page 16.



## Modifications Made to QPix 420 Software v2.1

The following modifications were made to QPix 420 Software version 2.1.

### Picking Head Returns to Park After Picking Cancellation

The picking head returns to the park position to make it easier to remove the test bed receptacle after completing a **Test Image** and then clicking **Cancel** during a picking routine.

Tracking ID: 3744

### Change Head Process Step

To help you when you may have started a process with an incorrect head installed on the instrument, the **Change Head** window now displays as a process step after the **Settings Summary** window. Without this new optional process step of opportunity,you must quit the active process, go to **Instrument Utilities > Change Head**, change the head, then restart the aborted process.

Tracking ID: 3747

### Picking Process Feature Selection Window Back Button

During a **Picking Process** ,after the **Imaging** step, the **Back** button is now active on the **Feature Selection** window so that you can return to the **Test Image** window to make **Imaging** adjustments.

Tracking ID: 4201

### Automatic Picking Log Export

Your system can be configured to automatically export a .csv format log file to a system folder of your specification after running a picking process. The export file contains all features found during imaging, all pickable features, and all features picked. Contact your Molecular Devices Service representative to enable this functionality.

Tracking ID: 4571

### Gridding Process Supports Omni Tray Usage

Omni Trays can be used in a Gridding Process.

Tracking ID: 4591

### Corrected Process Flow in Gridding, Replicating, and Rearraying

In the QPix 420 software, in the Gridding Process, the Replicating Processes, and the Rearraying Process, some of the routines were being processed in the wrong order.

Tracking ID: 4613

## Issues Addressed in QPix 420 Software v2.1

The following issues were addressed in QPix 420 Software version 2.1.

### If a Distance Sensor Fails, a Minimum Picking Height Sets

Tracking ID: 3594

In rare situations, when a distance sensor fails, the software uses the minimum picking height setting, causing the potential for pins to crash into the trays or plates.

**Resolution:**

The new default minimum source tray picking height setting for the system now protects against the potential for pins to crash into the trays or plates if a distance sensor fails.

**Impact of fix:**

This fix has no impact on current workflow or data.

### Long Picking Head Error When Doing Multi-dips in Picking Routines

Tracking ID: 4145

If a long picking head is used with multi-dipping, an unhandled exception error displays.

**Resolution:**

Multi-dips with a long pin head into a deep well plate during picking no longer cause an error.

**Impact of fix:**

This fix has no impact on current workflow or data.

## No Sanitising Pins After Cancelling Rearraying

Tracking ID: 4323

If the Rearraying Process is canceled while the pins are already contaminated with cells or liquid, the instrument skips the Sanitise process and moves the head directly to the park position.

### Resolution:

The **Sanitise** process is now included in the cancellation routine for a **Rearraying** process canceled while the pins are contaminated with cells or liquid.

### Impact of fix:

This fix has no impact on current workflow or data.

## Skips Head Pins Washing Before Control Plate Creation

Tracking ID: 4475

In the QPix 420 software, washing the head pins is skipped before the Control Plate Creation process begins.

### Resolution:

Control Plate Picking now washes the head pins before the first item is picked.

### Impact of fix:

This fix has no impact on current workflow or data.

## Incorrect Gridding Data in the Data Viewer

Tracking ID: 4595

The Gridding Processes data maps incorrectly in the Data Viewer.

### Resolution:

The data for the Gridding Process maps in the Data Viewer as expected.

### Impact of fix:

This fix has no impact on current workflow or data.

## Unhandled Exception Picking Using Customized Filter Pair

Tracking ID: 4614

Running a white light and fluorescent picking process using a customized filter pair causes an unhandled exception error to display.

### Resolution:

The white light and fluorescent picking processes using a customized filter pair functions as expected.

### Impact of fix:

This fix has no impact on current workflow or data.

## Unhandled Exception Rearraying Multiple 384-Well Source Plates

Tracking ID: 4616

In the QPix 420 software, rearraying with more than one 384-well source plates causes an unhandled exception error to display.

### Resolution:

Rearraying with more than one 384-well source plates in the QPix 420 software functions as expected.

### Impact of fix:

This fix has no impact on current workflow or data.

# Chapter 7: QPix 420 Software Version 2.0: Software Release Notes


The QPix 420 Colony Picking Software version 2.0 update is a major release. The following is a summary of the changes incorporated in this revision as compared to version 1.5, the last general release of the software. Detailed usage procedures can be found in the user guide for your instrument model. Contact Technical Support for additional information. See Obtaining Support on page 16.



## New in QPix 420 Software v2.0

The following new major features are included in QPix 420 Software version 2.0.

### Adjustable Petri Dish and Microplate Holders

New Petri dish and microplate holders now accommodate labware with a greater size variation using spring-loaded pins that secure the labware into the holders.

- The one-way Petri dish holder holds Petri dishes with diameters that vary in size between 138 mm and 141 mm.
- The four-way Petri dish holder holds Petri dishes with diameters that vary in size between 97 mm and 100.5 mm.
- The five-way Petri dish holder holds Petri dishes with diameters that vary in size between 87 mm and 90.5 mm.
- The microplate holder accepts any two microplates that meet the ANSI/SLAS 1-2004: Microplates — Footprint Dimensions standard.

In addition, the new holders have a black finish to enhance optical imaging by reducing light scattering and reflections.

The improved fit and finish add flexibility to dish or plate selection while decreasing possible image aberrations. The adjustable holders are compatible with software version 2.0 and higher.

For ordering information, see Ordering Information on page 15.

Tracking ID: 3478

## Manage Petri Dish Holders

The **Utility Processes > Manage Petri Dish Holders** utility allows you to set either an original source-holder tray or a new spring-loaded adjustable holder tray as the default source-holder tray per source holder tray type, such as OmniTray, 1-way, 4-way, or 5-way petri dish holders. Only one style per holder type can be set as the default, either the original style, or the adjustable style.

Tracking ID: 3478

## Zone of Inhibition Detection Software

Zones of Inhibition Detection Software is a useful tool for antibiotic drug resistance screening or adaptive evolution studies. The functionality lets you select and pick colonies producing Zones of Inhibition (ZOI), sometimes referred to as halos, on agar based on the following phenotypic parameters:

- Colony size
- Zones of Inhibition (ZOI) diameter
- Colony diameter
- Axis ratio
- Compactness

Colonies exhibiting zones of inhibition can be detected in white light .

ZOI detection and picking follows the regular picking process, but is available only through the purchase of the optional software license that is compatible with QPix software version 2.0 and higher.

After activating the software license, detection is enabled using the **Picking Processes > Zone of Inhibition Detection** function.

To purchase the optional software license, see Ordering Information on page 15.

Tracking ID: 3434

## QPix Chroma Colorimetric Colony Selection

### Blue/White Colony Selection Software

The accurate and robust screening function enables colorimetric colony detection and selection in white light. The Blue/White Colony Selection Software License enables automated monitoring of plasmid transformation and vector insertion efficiency based on the expression on LacZ gene. Rare expressing white, blue and 'powder' blue colonies can now be picked with high confidence in white light.

A QPix™ Chroma Filter must be used with the **Blue-White Picking** process module to enable the selection of multiple ranges of bacterial colony color intensities. This enables a wide array of options in the colorimetric type of bacterial selection for picking. This thin-film optimal filter is placed on the imaging bed of the instrument under a source plate receptacle hosting the biology of interest and is approved for up to 10 uses. Petri dishes and microplates should be securely enclosed in a plate holder. Molecular Devices recommends using the Adjustable Petri Dish and Microplate Holders (X9401, X9402, X9403 or X9404).

The **Blue-White Picking** can be used in both the regular picking process and the regional picking process. The functionality is available only through the purchase of the optional software license that is compatible with QPix software version 2.0 and higher.
QPix Chroma Filters and Adjustable Petri Dish and Microplate Holders are required for high quality results.

After activating the software license, detection is enabled using the **Picking Processes** > **Blue-White Picking** > **Blue-White Picking Type: Blue/White** function.

For ordering information, see Ordering Information on page 15.

Tracking ID: 3443

## Add New Plate Definitions

For use with the software, the **Add New Consumable** dialog now includes a **Wellplates** option for creating new **Edit Configurations > Microplates > My New Plate** Consumables types. The instruments currently support plate types with 96-wells or 384-wells. recommends using the manufacturer's data sheet for the creation of all new plate type settings because the data sheet includes exact measurements for the plate. Otherwise, careful measurement with a vernier is required.

**CAUTION!** Failure to input correct plate dimensions can result in damage to the picking head and pins.

Tracking ID: 4235

## Create New Regional Tray

The **Create New Regional Tray** functionality has been added to allow you to define new custom trays to be picked from using the OmniTray holder in **Regional Picking**.

Tracking ID: 4170

## Modifications Made to QPix 420 Software v2.0

The following modifications were made to QPix 420 Software version 2.0.

### Create Log-Ins in SQL Server for Windows Accounts After SQL Configuration

You can now set up additional users to operate the software with different SQL log-ins, and bypass Windows security to run the software as an administrator.

Tracking ID: 3589

### Manually Adjustable Agar Depth Settings

Manual adjustment of the **Agar Depth** can now be made using the added **Depth** tab within the **Test Image** screen that shows the detected **Agar Height** and the **Maximum Agar Height**.

When running in **Enhanced Imaging** mode, different picking depths can be set for each receptacle. Otherwise, the specified picking depth is used for all receptacles.

Tracking ID: 4025

### Lid Removal Warning Message

To prevent pin damage, a warning message reminds you to select the proper plate, position the plate, and to remove the lids from all loaded QTrays and Petri Holders, as required.

Tracking ID: 4236

### SQL 2012 Support

Added SQL 2012 compatibility in anticipation of the SQL 2008 support end date in July 2014.

Tracking ID: 4355

### Uses Any Specified Database Name

The previously only worked with databases named ReceptacleVault. In software version 2.0, any specified database name works.

Tracking ID: 4372

### Camera Alignment Refinements

Improved camera alignment user interface and process.

Tracking ID: 4494

### Configuration Warning Message

To avoid potential damages to the instrument by making configuration changes, a warning message appears after selecting **Tools** > **Configuration**.

Tracking ID: 4449

## Issues Addressed in QPix 420 Software v2.0

The following issues were addressed in QPix 420 Software version 2.0.

### Missing Gridding Motion Profiles

Tracking ID: 4232

After an instrument upgrade to include gridding, an exception error occurred when the head moved to the bath position.

#### Resolution:

If the gridding motion files are missing after a software upgrade, software version 2.0 detects and creates the missing profile files.

#### Impact of fix:

This fix improves current workflow or data.

### Colony Recognition Lost Using Manual Threshold

Tracking ID: 4320

Manually adjusting **Threshold** settings causes all colony recognition to be lost post-processing.

#### Resolution:

Manually adjusting **Threshold** settings work as expected.

#### Impact of fix:

This fix improves current workflow or data.

### Sanitize Skipped During Replicate

Tracking ID: 4417

During a **Library Replication** of 384-well plates using a 96-pin head with **Copy** set to 2, the same stack option selected, and **Sanitise** > **False** between copies set. The first copy of each source plate and the source plate itself both get contaminated because the **Sanitise** wash between each offset of the plates fails.

#### Resolution:

The **Sanitize** settings during **Library Replication** now work as expected.

#### Impact of fix:

This fix improves current workflow or data.

## Plaques not Being Recognized Nunc Omni Position 3 and 4

Tracking ID: 4436

Using Nunc OmniTrays with plaques, the software fails to recognize any plaques in positions 3 and 4. Only positions 1 and 2 are recognized. Imaging only position 3 and 4, skipping 1 and 2, yields the same result, no plaques are recognized. This does not happen when yeast is used in Nunc OmniTrays; only plaques fail to be recognized.

### Resolution:

Plaques used in Nuc OmniTrays are recognized in all positions as expected.

### Impact of fix:

This fix improves current workflow or data.

## Regional Picking Regions Missing on the 8-Region Omni Tray

Tracking ID: 4444

Using **Picking Processes > Regional Picking**, if the 8-region OmniTray is selected, the regions are missing.

### Resolution:

Regions now appear on the illustration for the 8-region OmniTray selection within **Picking Processes > Regional Picking**.

### Impact of fix:

This fix improves current workflow or data.

## Invalid Value Error When Picking with Fluorescence

Tracking ID: 4460

Using **Picking Process > Picking > Picking Type > White Light And Fluorescent** causes the error **Value of '0.449999988079071' is not valid for 'Value'**.

### Resolution:

Using **Picking Process > Picking > Picking Type > White Light And Fluorescent** now works as expected.

### Impact of fix:

This fix improves current workflow or data.

### Consumable File Corruption

Tracking ID: 4477

After a picking run, if the properties of a consumable plate are changed, the consumable configuration file becomes corrupt. This results in the software failing to load the next time it is started.

**Resolution:**

The problem is now resolved and the software works as expected.

**Impact of fix:**

This fix improves current workflow or data.

## Known Issues in QPix 420 Software v2.0

The following known issues exist in QPix 420 Software version 2.0.

### If a Distance Sensor Fails, a Minimum Picking Height Sets

Tracking ID: 3594

In rare situations, when a distance sensor fails, the software uses the minimum picking height setting, causing the potential for pins to crash into the trays or plates.

**Workaround:**

None. Contact Molecular Devices Technical Support.

**Planned Resolution:**

This will be corrected in a future release of QPix software.

### No Sanitising Pins After Cancelling Rearraying

Tracking ID: 4323

If the Rearraying Process is canceled while the pins are already contaminated with cells or liquid, the instrument skips the Sanitise process and moves the head directly to the park position.

**Workaround:**

Sanitize the pins using the **Instrument Utilities > Sanitise** process.

**Planned Resolution:**

This will be corrected in a future release of QPix software.

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