

Xcalibur 4.7 Release Notes

These release notes briefly list changes in the Xcalibur™ 4.7 software, fixes to previously reported issues, and known issues still existing in the Xcalibur 4.7 software release.

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For information on installing the Xcalibur 4.7 application, refer to the DVD insert. For information on using the Xcalibur 4.7 software, refer to the manuals available as PDF files or the application Help.

Features

This release is a minor version release that integrates Xcalibur with the Ardia Platform and incorporates a number of new and enhanced features and resolved bugs listed in [Resolved issues](#).

New features in this release include the following:

- Integration with the Ardia platform
 - Ability to connect Xcalibur to the Ardia platform (Ardia registered users)
 - Save RAW files to the local instrument computer and to the Ardia platform
 - Save RAW files to new or existing sequence folders on the Ardia platform
 - Save each RAW file to a unique location in the Ardia repository
 - Real time Acquisition and Upload status when Xcalibur is connected to the Ardia platform
 - Direct access to the Ardia platform's Data Explorer from Xcalibur when connected to the Ardia platform
 - Ability to download RAW files acquired through Xcalibur on the Ardia platform to the local instrument computer
 - Ability to cancel the sequence upload to the Ardia platform and save the RAW files to a user-defined default folder on the local instrument computer
- Updated AcquireX detection algorithms (AcquireX and AcquireX Ab)

System requirements

The following are the minimum required and *recommended* data system computer hardware and software configurations for operation of the Xcalibur 4.7 application.

Important information

System	Requirements
Hardware	• (Recommended) 3.1 GHz Quad core processor with 16 GB RAM • Video card and monitor capable of 1920 × 1080 resolution • 1 TB hard drive • DVD drive
Software	• Microsoft™ Windows™ 10 × 64 IoT Enterprise LTSC 2019 OS or Windows 10 × 64 IoT Enterprise LTSC 2021 OS (Windows 11 is not supported) • .NET Framework 4.8 • Thermo Foundation™ 3.1 SP9 or later • LibreOffice 6.2.5.2 or Microsoft Office^a • Operating system: US English • Adobe™ Reader™ DC

^a Required if using XReport™ or Quan Browser

General

Xcalibur 4.7 does not require a license key but is still subject to the End User License Agreement (EULA). You can install Xcalibur 4.7 on systems running Windows 10 (see [System requirements](#) for details).

(For users of Thermo Foundation Auditing only) Xcalibur provides the option to use a Microsoft Access database or an Oracle Network Server database (if Oracle is installed and configured) to store audit trail entries. Microsoft has identified security vulnerabilities with Microsoft Access that could be exploited by someone to gain access to the database. Thermo Fisher will remove the Microsoft Access database option in a subsequent service pack.

Installation

You must have administrator rights to install Xcalibur software on your computer.

Xcalibur 4.7 installs Thermo Foundation™ version 3.1 SP9 (3.1.335), Xcalibur 4.7 (4.7.69.37), and FreeStyle™ 1.8 SP2 QF1 (1.8.65.0). Any older versions of the above applications are removed prior to installation.

See below for detailed installation instructions.

- [To perform a new installation of Xcalibur 4.7](#)
- [To upgrade an existing installation of Xcalibur 4.4, Xcalibur 4.5, or Xcalibur 4.6](#)
- [To upgrade an installation of Xcalibur 4.3 and earlier*](#)

❖ To perform a new installation of Xcalibur 4.7

1. Select **ThermoLauncher.exe**.
2. Select **Adobe Reader 20.9** to install the Adobe Reader application.
3. Select **Xcalibur 4.7**.

Xcalibur 4.7 installs on the data system computer and includes Foundation 3.1 SP9 and FreeStyle 1.8 SP2 QF1 (1.8.65.0) software. During installation, the installer may have to install .NET 4.8, which requires a computer restart. After the computer restarts, Xcalibur installation should continue; if not, double-click on the installer again.

4. (For users of mzVault™ with FreeStyle only) Select **mzVault 2.3 SP1** to install the Thermo mzVault 2.3 SP1 application.
5. (For users of NIST with FreeStyle only) Select **NIST** to install the AMDIS, MS Search, and the NIST™ 2023 tandem MS library.
6. For the data acquisition system, verify and install compatible instrument drivers such as the MS driver, SII for Xcalibur, and/or LC devices software. It is recommended to contact your field service engineer for the correct version.
7. (For users of Ardia platform only) Uncheck the **Internet Explorer 11** option in Windows Features.

Note The Ardia platform only supports Edge and Chrome browsers.

❖ **To upgrade an existing installation of Xcalibur 4.4, Xcalibur 4.5, or Xcalibur 4.6**

1. Using the Foundation Instrument Configuration window, remove all configured instruments.
2. Select **ThermoLauncher.exe**.
3. Select **Adobe Reader 20.9** to install the Adobe Reader application.
4. Select **Xcalibur 4.7** and proceed as follows:
 - a. Follow the installer instructions and uninstall older versions of FreeStyle, Almanac, Xcalibur, and Foundation. Continue installing Foundation 3.1 SP9, FreeStyle 1.8 SP2 QF1 (1.8.65.0), and Xcalibur (4.4, 4.5, or 4.6).
 - b. When prompted, restart the data system computer.
5. (For users of mzVault™ with FreeStyle only) Select **mzVault 2.3 SP1** to install the Thermo mzVault 2.3 SP1 application.
6. (For users of NIST with FreeStyle only) Select **NIST** to install the AMDIS, MS Search, and the NIST™ 2023 tandem MS library.
7. (For users of Ardia platform only) Uncheck the **Internet Explorer 11** option in Windows Features.

Note The Ardia platform only supports Edge and Chrome browsers.

❖ **To upgrade an installation of Xcalibur 4.3 and earlier***

1. Using the Foundation Instrument Configuration window, remove all configured instruments.
2. For a data acquisition system, uninstall the following items from the Control Panel:
 - MS driver
 - SII for Xcalibur / LC device driver
 - TraceFinder (optional, if installed)
 - Xcalibur
3. Uninstall Foundation.
4. When prompted, restart the data system computer.
5. Install Xcalibur 4.7 by following the procedure [To perform a new installation of Xcalibur 4.7](#).
6. Install any compatible updated MS drivers and LC Devices driver/SII for Xcalibur.

* It is recommended that a Thermo Fisher Scientific field service engineer performs this upgrade.

Note Microsoft ended Windows 7 support on January 14, 2020. Because Microsoft is no longer issuing security updates and fixes, Thermo Fisher Scientific no longer formally supports Xcalibur under Windows 7.

Resolved issues

Table 1 describes the defects that were resolved in the Xcalibur 4.7 release. This table excludes Help issues and any cosmetic fixes. In some cases, the abstract has been amended or extended from the original to better describe the reported issue. Both an engineering fix and follow-up testing (verified by our product evaluation department) have resolved these issues.

Table 1. Resolved issues

Item ID	Abstract	Severity
346030	Enhanced AcquireX reduction process so that all inclusion items matching a precursor are now transferred to exclusion list.	Medium
349205	AcquireX/AcquireX Ab is able to run with Xcalibur 4.7 and SII for Xcalibur with methods using time-dependent mode of Positive and Negative spray voltage.	High
351863	Set AcquireX Ab Exclusion and Inclusion new MS Noise Level Minimum to 1.00e+2.	Medium

Known issues

Suggested recovery actions

- For some issues, restarting the application is the appropriate recovery action.

- In some cases (particularly issues that arise during data acquisition), restarting applications such as the Home Page might not ensure complete recovery. Typically, restarting the PC resolves issues, or opening and then closing the Foundation Instrument Configuration, but some devices with error conditions might require power cycling.
- Before launching the Xcalibur Installer, all Windows updates need to be successfully installed and the PC must be rebooted. Additionally, the user might need to recheck and reinstall any Windows updates and reboot the computer after a successful installation.
- In some instances, QuanBrowser might disappear from Xcalibur under Microsoft Windows 10. This is a result of a missing or incompatible universal C runtime library from Microsoft. To resolve this issue, install Windows 10 SDK b26624 with all of the default options enabled.
- During the Orbitrap Tribrid MS software installation, Thermo Scientific TNG's Common Library, Script Library, and Orbitrap Tribrid Series MS software might fail to install. To resolve this issue, stop Thermo Foundation Acquisition Services in Windows Services, then relaunch the Orbitrap Tribrid Series MS Software Installer and select **Repair** to complete the installation.
- Instrument Configuration might not open if more than one Windows user account is active. Sign off from additional Windows user accounts to open Instrument Configuration.
- Submitting sequences that contain a large number of injections into Ardia will take more time than submitting them to the local instrument computer.
- In some instances, the Acquisition and Upload Status view will not update properly. To resolve this issue, close and reopen the Acquisition and Upload Status view. Alternatively, sign out from Ardia and sign back in.
- In some instances, users might encounter sequence submission errors due to pending Microsoft Windows updates. To resolve this issue, install the updates and reboot the instrument computer.
- The progress bar in the Acquisition and Upload Status view might not be reliable due to inconsistent Internet bandwidth.
- If the vial is missing during the pre-acquisition step for SII 1.7, Xcalibur will remain in Waiting for Contact Closure status. To resolve this issue, select **Stop Analysis** to stop the sequence, then select **Start Analysis** to resume the acquisition and skip the missing vial.
- When configuring instruments under Xcalibur 4.7 for the first time after a clean installation, the user might encounter the message "Acquisition service is not running". This can be resolved by rebooting the data system.
- Xcalibur requires Microsoft Office 2013 to export reports to Microsoft Excel format. Office applications from other vendors and Office 365 are not supported.
- Due to changes in Microsoft Windows, the Xcalibur installation cannot associate RAW files with FreeStyle. This must be changed manually by the user.
- If power is lost during AcquireX acquisition, the system will revert to running the sequence without data processing related automation. Reboot the system and restart the acquisition.
- AcquireX uses port 28400 to listen for incoming connections. Ensure port 28400 on the Xcalibur data system is enabled for AcquireX to work properly.
- In some instances, the Processing Setup might quit. This is a result of a missing or incompatible universal C runtime library from Microsoft. To resolve this issue, install Windows 10 SDK b26624 with all of the default options enabled.
- If Xcalibur is installed on a data system PC that shares the same name as another on the domain, an error message might pop up during installation. Select **OK** to close the error message, and the installation will then continue and complete. Ideally, the computer name should be unique in the domain.
- If selecting a tab in the Processing Setup application results in a MBCS error, open the Windows 10 Control Panel regional settings, and from the Change System Locale dialog box, clear the **Beta: Use Unicode UTF-8 for worldwide language support** check box, and then restart the data system.

Note Refer to Windows 10 documentation for details on how to access the Windows regional settings, if needed.

Feature requests and other removed items

- Issues are excluded when there is insufficient information logged to successfully reproduce the reported problem.
- Feature requests are not listed as software issues regardless of the reported significance or severity of the request. Product managers evaluate logged feature requests for future releases.
- Only discrepancies in the documented software are reported as known issues.

Terminology

Table 2 describes the terms and meanings of the severity levels used in this document. Table 3 describes the terms and meanings of the risk levels used in this document.

Table 2. Severity level terminology

Severity	Interpretation
Critical	A problem that renders the system unusable because either an entire function is unusable and no workaround exists, or use of the current system compromises data integrity or results in data loss. Catastrophic problems also include significant and non-obvious quantitative errors, and all human and instrument safety issues.
High	A serious issue that does not affect data integrity (meaning data loss, corruption of data, or the wrong answer), but affects the customer's ability to use the product as designed. It can be a failure, design issue, or documentation error or omission. A workaround might or might not exist.
Medium	A minor error or poor behavior of a product feature. There is probably a workaround.
Low	An issue that has a limited effect on customer usage of the product; for defects with visibility so low that a customer might never see it; or for ease of use issues or other items not causing any performance degradation.

Table 3. Risk level terminology

Risk	Interpretation
High	Occurrence is likely to happen and can compromise operation.
Medium	Occurrence is uncommon, but could compromise operation if it occurs.
Low	Issue is minor; however, the software could operate differently from a user's expectations. A workaround might be available.
No Risk	This issue causes no problem but is commonly an inconsistency or cosmetic issue.

Known defects

Table 4 contains known software defects identified by ID number, a brief abstract, and severity level. The Item ID is the internal number assigned to each issue. Product management assesses risk, which can differ significantly from the reported severity.

Table 4. Known defects

Item ID	Abstract	Risk
251447	Print option is not available from the sequence view.	Low
150890	Incorrect method is referenced in AcquireX error message during submission failure.	Low
359409	In some instances after an Xcalibur upgrade, the Foundation Acquisition Service log file stops updating.	High
360769	Instrument Configuration might not open if more than one Windows user account is active.	Low
371320	Long sequences submitted to the Ardia platform might have status refresh issues.	Medium

Trademarks

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