

# Thermo Scientific Orbitrap Exploris Series 1.1 SP1 Release Notes

This document lists installation notes, new features and improvements regarding the Thermo Scientific Orbitrap Exploris Series 1.1 SP1 Instrument Software release. For information regarding the installation, features, functionality, and use of this product, refer to the following sources of information:

- *Orbitrap Exploris 480 Operating Manual*

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## Installation Notes

## Supported Target Systems

Thermo Scientific Orbitrap Exploris 480 mass spectrometer

## System Requirements

The minimum hardware and software configurations required for Orbitrap Exploris Series 1.1 SP1 operation are as follows:

System	Requirements
PC	3.0 GHz Quad Core Intel™ Processor 32 GB RAM 512 GB SSD Hard Drive Display Monitor Resolution of 1920 × 1080 Two Network Interface Cards (NIC), 1000 MBit/s
Software	Microsoft™ Windows™ 10 Enterprise 2016 LTSB Thermo Scientific Xcalibur 4.3

**Tip** The Orbitrap Exploris Series 1.1 SP1 Instrument Software was only tested within the delivered composition.

## Installation

**Tip** Prepare the computer in advance of any new installation.

This guidance addresses a standard installation of a Windows computer acting as an access point for Orbitrap Exploris 480 based instruments. The current software version is 1.1 SP1. The guidance is valid at least up to this version. There are differences between nearly all computers, so even if you have a receipt of installation, be aware that the operating system or language settings are different. The current explanations have Microsoft Windows 10 Enterprise LTSB 2016 and English in focus.

Thermo Fisher Scientific does not accept any warranty claims about the completeness of this instruction list. Consulting a Thermo Fisher Scientific support team member of Orbitrap Exploris Series instruments is highly recommended for setting up a new PC.

## Technical Requirements

Choose a PC equipped as described at [“System Requirements”](#) on [page 1](#).

## Operating System Language

English is the only tested language. It is recommended to switch to English language before installation. This installation instruction refers to names of English operating systems.

## Network Setup

At least two NICs must be present in the system. The one connected to the instrument must not be connected to the regular Internet connection. Only the instrument to be driven by this particular PC may be connected to the PC using a 1 GBit switch or hub. Additional devices like autosampler or LC or GC systems may be connected to that switch, too.

Configure the IPv4 interface as follows:

- address 172.16.0.101
- network mask 255.255.0.0
- manual DNS selection with empty fields

### Physical Links

Use at least a Cat 6 patch cable. Double-check the quality of the cable, if errors occur.

## Virus Scanner and Firewall

Disable virus scanner and firewall during installation. Virus scanning can happen in advance and may stay turned on, if it is guaranteed that the firewall is turned off. The installation program informs only the built-in firewall of Windows properly. Other firewalls have to be informed that the program Thermo Exploris Core Service (file locations see below) needs access to incoming and outgoing network traffic. Remind that the dedicated NIC is usually considered to be a “public network.” Firewall and virus scanner can be turned on after installation. Reboot the instrument to be sure that everything works.

## Software Installation

**Tip** Do not start the software installation before the network setup has been completed. See “[Network Setup](#)” on [page 2](#).

### File Locations

The default installation folder on the computer is C:\ProgramData\Thermo\Exploris.

This instruction list uses C:\ProgramData\Thermo\Exploris for easy reading, but depending on the installation package like Orbitrap Exploris Series Instrument Software kit or Chromeleon, this may be different.

When the Orbitrap Exploris Series software has been installed on a system, the folder of the previous installation will be reused.

### Backup

Several files and folders require a backup for later installation, either for crash recovery or for replacing the computer. The backup can be performed during normal operation.

These files and folders (see “[File Locations](#)” on [page 2](#)) should be saved if present:

- C:\ProgramData\Thermo\Exploris\instrument\msx\_instrument\_files
- C:\ProgramData\Thermo\Exploris\Licenses.txt
- C:\Thermo\Instruments\Exploris\1.1\System\Database

Setup of a new computer without any backup requires assistance of the Orbitrap Exploris support team of Thermo Fisher Scientific. The computer may require licenses or some extra configuration files.

### Uninstalling

The Installer will automatically remove outdated versions prior to the installation of a new version.

### Installation

Install using the ISO image or a copy of its content by executing the installation program OrbitrapExplorisFullSetup.exe. Use the regular way of installation for best results. It detects several problems, if they exist at all.

### Restoring a Backup

This step is not needed, if the installation was just an upgrade of the Orbitrap Exploris Series software. All present configuration settings remain on uninstalling.

For setting up a replacement computer or after a disk crash, the restore procedure needs to be performed. The procedure requires administrator privileges. The restore procedure should happen after installation of the new software.

The installation place in the backup may be different to that of the present installation. Either use Instrument Configuration and look where files are located or check the folders appearing at “File Locations” on page 2.

**Tip** It is important to stop the only program that interacts with the files coming from the backup. That is Thermo Exploris Core Service.

❖ **To stop Thermo Exploris Core Service**

1. In Windows 10 desktop, open **Computer Management** (<Ctrl> + <X>).
2. Select **Computer Management (Local) > Services and Applications > Services > Thermo Exploris Core Service**.
3. Right-click it and select **Stop**.  
Keep the dialog open.
4. After a new installation, the instrument already created the msx\_instrument\_folder with default content. Replace the content of that folder by the files from the backup.
5. Use the open dialog to start the **Thermo Exploris Core Service** again. Alternatively, reboot the computer. In doubt, contact the Orbitrap Exploris support team of Thermo Fisher Scientific.

**Operation**

Set the power setting to maximal performance.

**Tip** Automatic updates of any kind, those of the operating system in particular, are usually set to **automatic**, but this may disturb instrument data acquisition. To not disturb your data acquisitions by automatic updates, we strongly recommend setting all updates to **manual** and checking for updates regularly.

Put the computer to sleep: Never (Control Panel\Hardware and Sound\Power Options\Edit Plan Settings)

Table 1 lists improvements and defect fixes in the Orbitrap Exploris Series 1.1 SP1 Instrument Software release that were implemented since the Orbitrap Exploris Series 1.1 Instrument Software release. For details, please refer to the Online Help or the Software Manual.

**Table 1.** Changes from Orbitrap Exploris Series 1.1 Instrument Software to Orbitrap Exploris Series 1.1 SP1 Instrument Software

Improvements		
ID	Title	
8053	Instrument Configuration: Check box “Enable Minimum Gas Flow Requirement for Ion Source” replaces the previous text field.	
8348	System Calibration: Improved Bent Flatpole RF calibration.	
8162	System Calibration: Improved Quad Transm./Rod Config Calibration.	
8115	System Calibration: Removed checkpoint after quadrupole isolation calibration.	
Defect Fixes		
ID	Severity	Title
8128	4-Low	Alerts Console: Low OT temperature readback raises “Temperature too high” failure.
8297	2-High	Chromleon: MS Tuning ePanel: Passed calibration file is named as Failed.
8180	3-Medium	Instrument Status: Electronics does not recognize readbacks being outside possible set range.
8284	3-Medium	Instrument Status: Threshold for warning “UHV gauge not ignited” is too high.
8070	2-High	Method Editor: System Templates: SureQuant method is not fully functional.
8031	3-Medium	Method Editor: TopN with multiple outcomes and ddSIM: Method Editor closes after appending a Targeted Mass Filter.
8040	2-High	System Calibration: Wrong threshold used in IF Low m/z RF Calibration.

Table 2 lists new features, improvements and defect fixes in the Orbitrap Exploris Series 1.1 Instrument Software release that were implemented since the Orbitrap Exploris Series 1.0 Instrument Software release. For details, please refer to the Online Help or the Software Manual.

**Table 2.** Changes from Orbitrap Exploris Series 1.0 Instrument Software to Orbitrap Exploris Series 1.1 Instrument Software

New Features		
ID	Title	
7538	System Calibrations must provide improved user experience. User Story 4140—Tune: Diagnostics provide single-component sub procedures of system calibration. User Story 6961—Tune Calibration: System calibrations are resume-able. Intermediate results are saved as checkpoints. This allows for optimizing spray conditions or refilling the syringe.	
365	The user must be able to define favorite scan settings for easy access to sets of parameters. User Story 748—Tune: Favorites pane: System Settings: Favorite settings for ESI source provide default ion source and define scan properties for calibration and diagnostics procedures.	
7084	The Dynamic Exclusion filter must support a global list option (exclusion across experiments and outcomes). User Story 819—Method Editor: Dynamic Exclusion Filter provides global functionality across all experiments in the method time line (new property “Share dynamic exclusion list with other selected dynamic exclusion filters”).	
7126	Method Editor: Must have import list functionality from QE exported lists. User Story 7339—Method Editor: Import of Exactive Series mass lists (CSV files) into Orbitrap Exploris Series 1.1 mass list tables is supported. <ul style="list-style-type: none"> <li>Exactive Series global inclusion lists can be imported into Orbitrap Exploris Series mass list tables of scans (tMS2, Product Ion Scan, SIM Scan) and filters (Targeted Mass Filter).</li> <li>Exactive Series global exclusion lists can be imported into Orbitrap Exploris Series Targeted Mass Exclusion Filter.</li> </ul>	
762	The instruments must be able to interface with Chromeleon Software. User Story 3174—Chromeleon: Tune and Method Editor are integrated in Chromeleon 7.2.10 (please install Chromeleon 7.2.10 hotfix files from <a href="http://thermo.flexnetoperations.com">thermo.flexnetoperations.com</a> or from <a href="http://support.thermoinformatics.com">support.thermoinformatics.com</a> ).	
Improvements		
7297	FAIMS: Acquisition sequence will pause if system recognizes a DV drop. This gives the opportunity to run a DV Check or DV Tune procedure before resuming the sequence.	
7538	System Calibrations must provide improved user experience. User Story 6227—Tune Diagnostics: improved bake-out procedure. User Story 6228—Tune Calibration: System calibrations are improved regarding robustness. User Story 7167—Tune Diagnostics: improved ICS calibrations (EASY-IC option). User Story 7295—Tune Calibration: Additional calibration information is displayed in gray box. User Story 7328—Tune Diagnostics: “FlexMix Solution Evaluation” procedure to check for contaminated FlexMix.	
7231	Tune Diagnostics: improved ion optics maintenance check.	
7587	Tune Alert Window: improved messages about instrument status, calibration/check and diagnostics.	
371	Users must have access to user manuals and online Help. User Story 756—Online Help: Links to Help files for Tune and Method Editor are available.	
7098	Updated system templates must be applied User Story 7420—Method Editor: Templates tab provides updated system templates for all application modes with Orbitrap Exploris 480.	
Defect Fixes		
ID	Severity	Title
6490	3 - Medium	Tune: APCI Source Optimization: Pos and Neg ion discharge current not supported.

6493	2 - High	Tune: APPI Lamp of APPI ion source not controlled.
6733	3 - Medium	Chromeleon: Data Acquisition via MS Tune panel is not supported.
6736	4 - Low	Chromeleon: Instrument Status ePanel needs to be configured manually.
6760	3 - Medium	Chromeleon: Anomaly on first sequence acquisition in a series of sequences.
6790	4 - Low	Chromeleon: User mode selection anomaly.
6799	3 - Medium	Instrument needs to be set to standby manually after reboot.
6812	3 - Medium	ME and Tune GUI allows isolation low being higher than 2500.
6817	3 - Medium	User does not always get a message when vacuum is not ready for instrument electronics to be set to "On" or "Standby."
6819	3 - Medium	Tune: Define Scan: Collision Energy Mode: Stepped CE is not supported.
6821	3 - Medium	PDF Reports: Diagnostics: Quadrupole Maintenance Check Plot not included.
6850	4 - Low	Tune: Status Pane: Peripheral Devices: "Turbo Pump 1" show Status "Not Connected" although turbo pump is connected.
6877	3 - Medium	Data Acquisition via Method: Source type "ESI" not supported.
6929	4 - Low	After boot, Orbitrap Supply throws a warning (Device Limit exceed and Status-Warn), which can be ignored.
6930	3 - Medium	Sometimes system calibration can fail due to unstable spray.

## Known Issues

Table 3 lists all known issues that exist in the Orbitrap Exploris Series 1.1 SP1 release.

**Table 3.** Known Issues

ID	Severity	Title
5418	3 - Medium	Tune: Display imperfect on 4k monitor.
5532	3 - Medium	Divert valves need to be configured for USB control.
6605	3 - Medium	ME: Audit trail shows wrong number of dependent scans.
6697	3 - Medium	Tune: Define Scan: RF Lens: Scan Range (m/z) may apply false parameters when hotlink is active.
6904	3 - Medium	Uninstallation reports an error, when a PC restart is required. Restart the PC and call the uninstall procedure again.

## Trademarks

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