ZS XPLORER SOFTWARE: v1.50 (PSS0048-08)
SOFTWARE UPDATE NOTIFICATION

Introduction

This document details the release of **Zetasizer XPLORER software version 1.50** (PSS0048-08) for the Zetasizer Advance range of instruments. Here forward it is referred to as ZS XPLORER.

This release supports the Zetasizer Advance range of systems instruments only and is not compatible with the Zetasizer Nano series of instruments (Nano S90, Nano ZS90, Nano S, Nano ZS, Nano ZSE, Nano ZSP, Zetasizer μV and Zetasizer APS) nor can it read the *.dts file format from the Classic Zetasizer series software 8.00 or earlier. However, it is possible to have both the ZS XPLORER software and the Zetasizer software 7.02 or above installed on the same computer.

Installation

It is assumed that you have authority to install or update software within your company's SOPs. If you do not have this authority, please consult with your I.T. support department before proceeding.

It is assumed that you have Administrator rights for the computer. This is required by the installation process. For ZS XPLORER software, Windows 10 and later will not allow an installation if the user does not have administrator access. This is in line with Microsoft's Logo policy and is standard practice.

IMPORTANT:
Before installation of the software, the instrument should be switched off and disconnected.

Recommended System Requirements

The recommended computer system requirements for running this software are highlighted in table 1 below.

Table 1 Recommended system requirements for ZS Xplorer software.

Feature	Specification
Processor Type	4th Gen+ Intel Core i7 Processor (or equivalent)
Memory	16 GB RAM
Hard Disk Storage	1 TB free hard disk space,
Display Resolution	1920 x 1080 full HD screen resolution
Connectivity	2 free USB2.0 or higher ports
Operating System *	Windows 10 64 bit. * The ZS XPLORER software is not compatible with 32-bit Operating Systems

Supported operating systems

ZS XPLORER is compatible with Windows 10. Only 64-bit Professional versions are supported.

Supported Languages

· English

Installation Instructions

Installation process

The software suite is available both as a web download and on an auto-loading CD-ROM. Inserting the CD into a system configured to auto-run a CD will run the installation program automatically. If your system does not support this feature run the setup program from the root directory of your CD drive.

During the installation process, you will be prompted with the following message (*Figure 1*) if the Zetasizer is still connected to the PC.
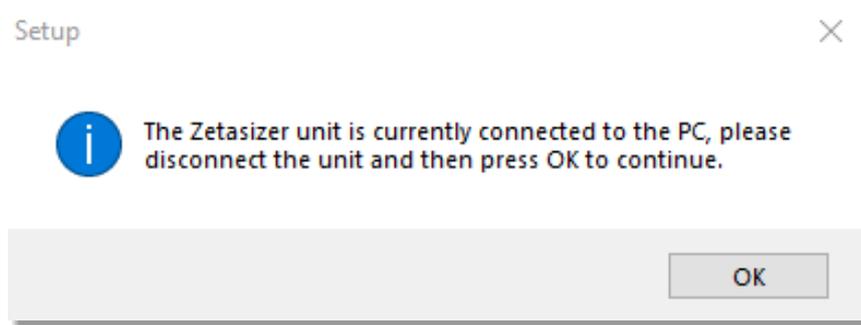
Figure 1: "Disconnect Zetasizer Unit" message

Note:
You must unplug the USB cable from the computer or Zetasizer and then press OK. If you press the OK button without performing these previous steps, then the installation will not continue.

Microsoft .Net Framework and Microsoft C++ Redistributable

The Microsoft .Net Framework 4 (version 4.6.2 or greater) and the Microsoft Visual C++ Redistributable must be installed for the ZS XPLORER software to run. This is installed during the ZS XPLORER software installation progress and under certain circumstances can involve the computer needing to restart. Completion of this stage of the installation can take a few minutes and can take over 10 minutes. Whilst these components are being installed a window such as below will be displayed, figure 2.

Software Update Notification for ZS XPLORER software v1.50 (PSS0048-08)
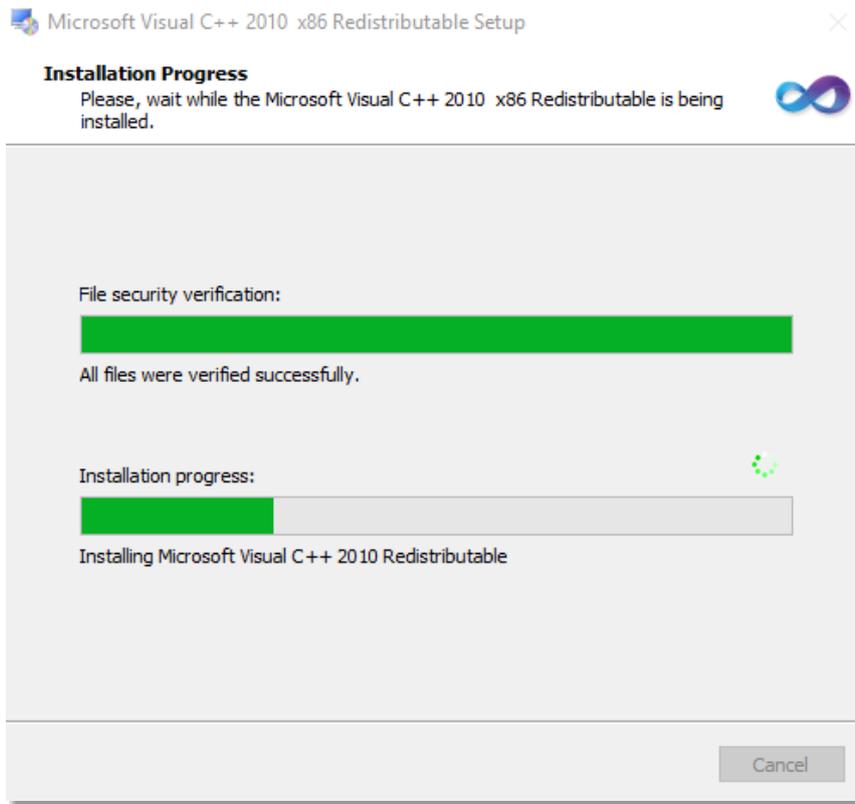
Figure 2: Microsoft Visual C++ Redistributable Installation Window

USB Driver Installation

During the installation of the USB drivers you may be prompted several times with a message as shown in *Figure 3*.
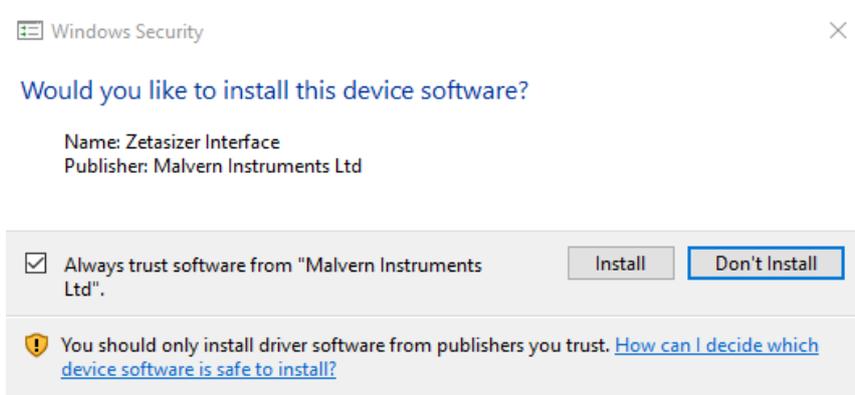
Figure 3: Install USB window

This warning can safely be ignored as the software installation has been fully tested on Windows 10. Press **Install** to continue installation of the USB drivers.

Connecting the Zetasizer Advance to the computer

When the software has been installed and the instrument has been connected via the USB port, and switched on, the ZS XPLORER software may need to upgrade the firmware on the Zetasizer, in which case the status icon on the lower right of the software screen will indicate such (see *Figure 4*).

Figure 4 instrument firmware updating status icon

Users should not disconnect or power off their PC or instrument during normal firmware updating. In some rare occasions the firmware may fail to update correctly, in such circumstances a notification will be displayed indicating the issue – please restart the instrument and software to reset and repeat the firmware upgrade process.

With the correct firmware version installed the Zetasizer should connect to the instrument. A successful connection is indicated with an icon in the corner of the software (see *Figure 5*) showing green and with a tick.

Figure 5: Instrument connected icon

Uninstall Procedure

The software can be uninstalled using the standard Apps & Features panel in Windows Settings.

Running the installer with the ZS XPLORER software running

If the installer is run whilst the software is running, the window in *Figure 6* will display.
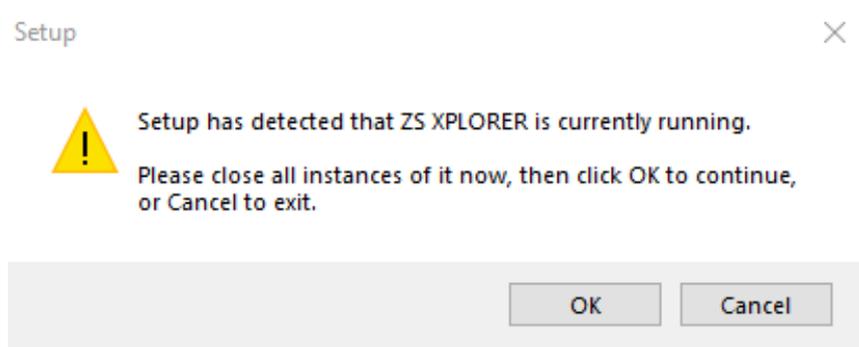
Figure 6: Running installer with software open

Connecting the MPT-3 Titrator to the PC

Ensure the computer is turned on and connected to a Zetasizer Advance system.

Connect the MPT-3 Autotitrator to the computer using the USB cable provided, ensuring that it is turned on. Click on the settings button in the top left corner of the ZS XPLORER software. See *Figure 7*.
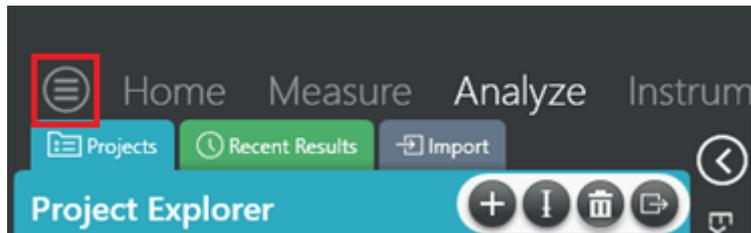
Figure 7 Software options

Click Options and navigate to the Titrator tab as seen in *Figure 8*.

Figure 8 Titrator options page

On the COM Port drop down menu, select USB Serial Port (COMXX) as shown in figure 8. (Note that the COM port number and description may vary). If the titrator has been detected on this port, then a green tick will be visible See *Figure 9*.

Figure 9 Titrator successfully detected

If the titrator is not detected on the selected COM port, then a red exclamation icon will be displayed with a message. See *Figure 10*.

Figure 10 Unable to detect titrator

Once the titrator has been detected, click to save the settings.

Once the settings are saved an icon and a saved message will appear next to the saved COM port as shown in *Figure 11*.

Figure 11 COM port saved

The titrator icon at the bottom right of the screen should turn green indicating that the titrator is successfully connected as shown in *Figure 12*.

Figure 12 Titrator successfully connected

New Features

Start Measurement tooltip specifies missing feature

The Start Measurement button tooltips on the Measurement page now specify the required feature(s) that are missing from the connected instrument that is preventing a user running the method (when the run button is disabled). See figure 13 for an example.
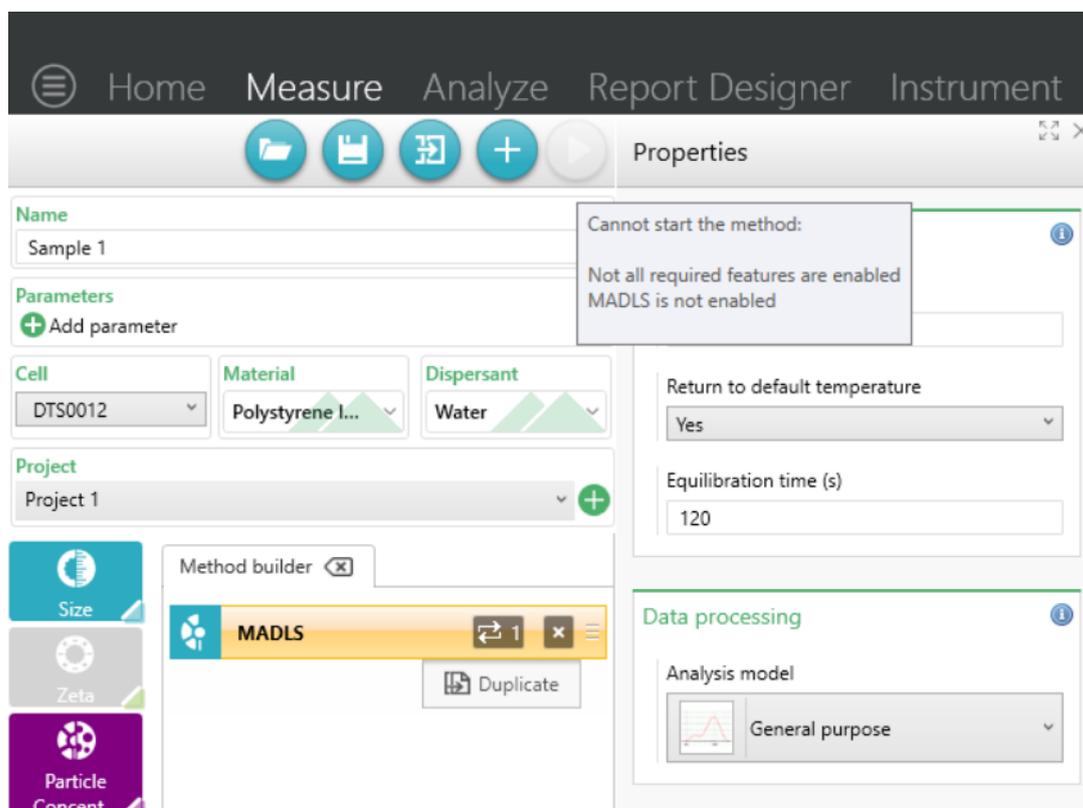
Figure 13 example tooltip text explaining why a measurement requiring unavailable features is prevented from running

Shared Local Measurement Repository

A new configuration option allows multiple users of a PC, logging on with their own Windows accounts, to share a single measurement repository.

All users logging into the PC and using ZS Xplorer will see the same measurement results when this option is enabled.

The default option continues to be that all users see only their own results. This is a global setting which applies to all users of the system. Users who wish to migrate data between shared and individual user repositories will need to first export their data and then re-import once the setting has been changed.

The setting can be found in the options menu under "storage options". See figure 14.

Figure 14 Options page illustrating where users can change between individual and shared data repositories

Measurement Records IDs are now preserved when import and exporting records

Measurement records now have their unique ID field preserved when imported or exported. This means that the ID can be used to identify records even when they have moved between instances of ZS Xplorer, shared with others or backed up using the export functionality. The system will now use this ID to detect when duplicate records are being imported to the repository. In this case the user is given the option to import the records and assign a new ID or stop importing the duplicate records, see figure 15.
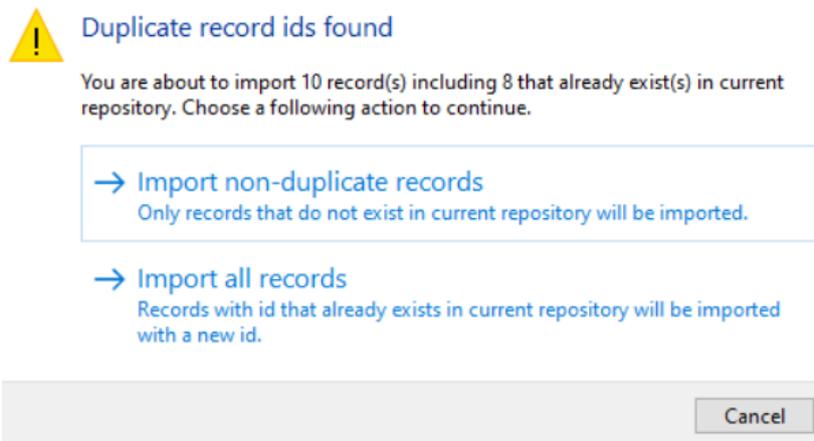
Figure 15 Warning dialog with options to import all records (new IDs generated for duplicate records) or only import non-duplicate records

Support for Zetasizer Advance portfolio

Version 1.5 of ZS Xplorer is the first version to fully support the new Zetasizer Advance range of instruments, their use and configuration.

Improvements in stability of instrument communications

Changes to software to reduce/prevent software drops in communications and improve overall stability.

Changes and fixed issues

The main changes and issues fixed in this release of the software are listed in table 2. Note that many changes are in preparedness for the introduction of a 21 CFR part 11 regulated mode and will no be visible or available in this release for most users.

Table 2 changes and fixed issues in version 1.5 ZS Xplorer software

Reference	Issue	Type
AVN-130	Crash closing ZS Xplorer causes automated tests to fail	Bug
BLE-1024	Shared local measurement repository	Story
BLE-1289	ZS Xplorer: Share available access rights from application	Story
BLE-787	ZS Xplorer - Software crashed when setting deny delete on working file directory	Bug
BLE-1664	Shared local measurement repository - Permission controlled	Story
BLE-1693	ZS Xplorer: MPAC access rights file is generated automatically	Story
BLE-1691	Determine and test directory permissions for a regulated environment	Story
BLE-1716	ZS Xplorer: Integration test with MPAC to check access rights configuration works as intended	Story
BLE-1025	Retain original measurement record ID	Story
BLE-1800	ZS Xplorer software will not load when restricted permissions are set on the cells database	Bug
BLE-1828	Regulated Environment - Crash - Aborting multiple run measurement	Bug
BLE-1831	Regulated environment folder/file created using a none regulated environment build	Bug
BLE-1658	ZS Xplorer: View measurement result audit trail	Story
BLE-1801	ZS-Xplorer software will not load when restricted permissions are set on the materials and dispersants databases	Bug
HEN-405	Top left menu - Unable to select tabs after selecting top left menu	Bug
HEN-303	Regulated Environment - User without access to opening/loading methods can load Self Installer methods	Bug
HEN-254	Project Explorer - Selecting multiple results and switching between projects can cause an InvalidOperationException error	Bug
HEN-145	Implement new capability reporting interface in Firmware	Story
HEN-193	Technical Debt - Improve the application file handling performance	Story
HEN-416	Implement changes to prevent blank xaml file being saved on custom view	Bug
HEN-325	Method step availability is updated when the system is notified of a change in capabilities	Story

HEN-328	Cell availability is updated when I change the selected dispersant type	Story
HEN-326	Cell availability is updated when the active method step changes	Story
HEN-298	Method/Report files are not always replaced when deleted and the App is re-started	Bug
HEN-471	App crashes if you load a zeta measurement, then add a new measurement and click on the previously loaded zeta measurement	Bug
HEN-497	Zeta measurements can be disabled when selected from the method list on the right	Bug
HEN-484	Capabilities and Features get stuck in current state on instrument connection/disconnection	Bug
HEN-478	Default measurement angle based on size measurement capabilities	Story
HEN-411	Running ZS Xplorer first time as Admin leads to crash	Bug
HEN-476	Tool-Tips on start measurement button to reflect new reasons why a measurement can't proceed	Story
HEN-456	Instrument not recognized as disconnected	Bug
HEN-535	Zeta step can be added with an incompatible dispersant	Bug
HEN-410	Investigate strategic approach to Development/Build speed improvements	Story
HEN-531	Updated integrated help for 1.5 release	Story
HEN-557	pH Titrations, first measurement point always reports as pH 7	Bug

Known Issues

The following software bugs have been discovered within the software and will be investigated as part of a future release. Please follow the suggested work-around where they are provided.

Table 3: Known issues in ZS Xplorer version 1.5.

Reference	Severity	Issue	Workaround
HEN-400	Minor	Stopping measurement - Pressing Cancel on abort dialog after measurement has finished will close the software	Restart the ZS Xplorer application. If the measurement is near the end, then don't try to cancel the measurement. If you do, then let the measurement run and allow the data to be stored before cancelling and closing the software.
HEN-386	Normal	Run button disabled when connecting instrument during method creation	Adding another measurement or updating options should prompt the software to update

HEN-380	Major	Editing a size record that uses a non-zeta capable dispersant crashes the software if the dielectric constant needs to be calculated.	Add a dielectric constant value to the dispersant in question to prevent the crash on editing
HEN-377	Normal	Software locks up if you cancel a size measurement when setting up the instrument for different scattering positions	End the ZS Xplorer task to close the software and restart it.
HEN-312	Major	Measurement time increases slightly on measurement completion	No workaround
HEN-312	Medium	Analyze - Relaxation Times Distribution chart can crop data with long relaxation times	Export data to re-plot in 3rd party graphing program if required.

Error Reporting

Should persistent problems occur contact the local Malvern Panalytical Helpdesk. To speed up response time include all the following.

A full-screen screen shot of any error message and everything behind it.

Full description of what was happening at time of issue and ideally leading up to it.

Instrument serial number (e.g. MAL1060289), instrument serial number can be found inside the sample cell basin and on the instrument back panel.

The software version, which can be found as described in a section below.

The log information described below.

And, if relevant and possible, export the relevant measurement data as described in the last section below.

Extracting log information

If an error occurs, further information about the error can be found from the Windows Event Viewer.

Click the Windows Start Button.

Type Event Viewer and press enter.

Navigate to Applications and Service Logs/Zetasizer All Events.

The window will display the most recent errors that have occurred with the ZS XPLORER software.

Error information can be selected and then exported with the Save selected Events button allowing this information to be passed to the Malvern Panalytical team for troubleshooting.

The contents of the measurement log window are logged to file at *Documents\Malvern Instruments\ZS XPLORER\logs*

Software version

The Software Version is vital to determining the cause of problems. To retrieve the version number:

Click on **Application Menu** button (*Figure 16*)
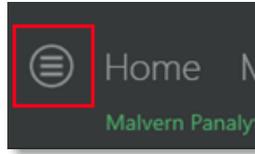
Figure 16 Application Menu button

Click on the **About** button

Read version number (Figure 17)
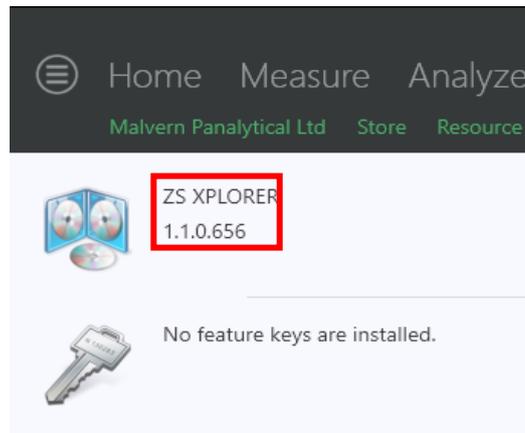
Figure 17 : Software Version Number

Extracting measurement data to send

In situations where the errors appear to be related to a specific record or records, the affected records can be exported from the software by selecting them and pressing the export icon, *see Figure 18*, and send the *.zmes file to the Malvern Panalytical team for investigation.
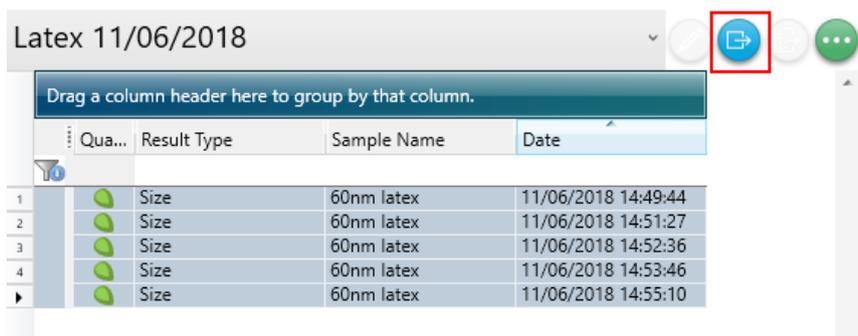
Figure 18 Exporting selected record

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