

Array Automation Release Notes

Table of Contents

About This Document	4
Trademarks	4
Array Automation 9.14	4
Release Date: Jan-2024	4
Supported Operating Systems	4
New Features	4
Resolved Issues	5
Known Issues	5
Array Automation 9.12 Hotfix 2	5
Release Date: Mar-2021	5
Supported Operating Systems	5
New Features	5
Resolved Issues	5
Known Issues	5
Array Automation 9.12 Hotfix 1	5
Release Date: Feb-2021	5
Supported Operating Systems	5
New Features	6
Resolved Issues	6
Known Issues	6
Array Automation 9.9	6
Release Date: September, 2018	6
Supported Operating Systems	6
New Features	6
Resolved Issues	7
Known Issues	7
Array Automation 9.8 Hotfix 1	7
Release Date: Oct-2017	7
Supported Operating Systems	7
New Features	7
Resolved Issues	7
Known Issues	7
Array Automation 9.8	8
Release Date: May-2017	8
Supported Operating Systems	8
New Features	8

Resolved Issues	8
Known Issues	8
Array Automation 9.7 Hotfix 3	8
Release Date: Mar-2017	8
Supported Operating Systems	8
New Features	8
Resolved Issues	9
Known Issues	9
Array Automation 9.6	9
Release Date: May-2016	9
Supported Operating Systems	9
New Features	9
Resolved Issues	9
Known Issues	9
Array Automation 9.5	10
Release Date: Nov-2015	10
Supported Operating Systems	10
New Features	10
Resolved Issues	10
Known Issues	10
Array Automation 9.4	10
Release Date: Oct-2015	10
Supported Operating Systems	10
New Features	10
Resolved Issues	11
Known Issues	11
Array Automation 9.1	11
Release Date: Jul-2012	11
Supported Operating Systems	11
New Features	11
Resolved Issues	11
Known Issues	11
Array Automation 9.0	11
Release Date: Jan-2012	11
Supported Operating Systems	11
New Features	12
Resolved Issues	12
Known Issues	12
Array Automation 8.2	12
Release Date: Sep-2011	12
New Features	12
Resolved Issues	12
Known Issues	12

Array Automation 8.2	12
Release Date: Feb-2011	12
New Features	13
Resolved Issues	13
Known Issues	13
Array Automation 8.2	13
Release Date: Oct-2010	13
New Features	13
Resolved Issues	13
Known Issues	13
Array Automation 8.2	13
Release Date: Apr-2010	13
New Features	13
Resolved Issues	14
Known Issues	14
Array Automation 8.1	14
Release Date: Jul-2009	14
New Features	14
Resolved Issues	14
Known Issues	14
Array Automation 8.0	14
Release Date: Jun-2008	14
New Features	15
Resolved Issues	15
Known Issues	15
Array Automation 2.0b	15
New Features	16
Resolved Issues	16
Known Issues	16
Array Automation 2.0a	16
New Features	16
Resolved Issues	16
Known Issues	17
Array Automation 2.0	17
Resolved Issues	17
New Features	17
Array Automation Installation Directories	19
Array Automation Files	19
How to Contact Us	19

About This Document

This document contains a revision history of Array Automation, including new features that may not be included in the User's Guide, resolved issues, and known issues.

Trademarks

Microsoft, Internet Explorer, and Windows are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

ToolBook is either a trademark or registered trademark of SumTotal in the United States and/or other countries.

Semprex is either a trademark or registered trademark of Semprex Corporation in the United States and/or other countries.

PerkinElmer is either a trademark or registered trademark of PerkinElmer, Inc. in the United States and/or other countries.

Sadtler and SearchMaster are trademarks of Bio-Rad Laboratories, Inc. in the United States and/or other countries.

Bruker and OPUS are either trademarks or registered trademarks of Bruker Optics, Inc. in the United States and/or other countries.

All other trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries.

Array Automation 9.14

Release Date: Jan-2024

Supported Operating Systems

- Windows 10 64-bit
- Windows 11 64-bit

New Features

None

Resolved Issues

None

Known Issues

None

Array Automation 9.12 Hotfix 2

Release Date: Mar-2021

Supported Operating Systems

- Windows 10 64-bit

New Features

None

Resolved Issues

Security issue when saving data file

It has been noted that after collecting a set of well plate data the file is not saved correctly in the OMNIC secured folder.

Known Issues

None

Array Automation 9.12 Hotfix 1

Release Date: Feb-2021

Supported Operating Systems

- Windows 10 64-bit

New Features

None

Resolved Issues

Fix error messages when used with Raman software

Incorrect messages were shown by Array Automation software when used with the Raman software.

Turn off Raman auto calibration during collection

Raman auto calibration was being executed during the Array Automation collects. This has been turned off during the collection.

Error conditions when setting up array conditions

Some types of entries can cause error conditions that are difficult for the user to work around, This has been improved along with improvement in the calculation of the rotation of the array.

Improve rotation calculation

In some conditions the rotation calculation did not produce the correct result.

Known Issues

None

Array Automation 9.9

Release Date: September, 2018

Supported Operating Systems

- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8.1 64-bit
- Windows 10 64-bit

New Features

None

Resolved Issues

None

Known Issues

Array Automation and OMNIC Data Security

When the customer collects an array with the iS50 Raman, the array file is not saved in the protected folder, shown in Security Administration. Instead it is saved c:\my documents\OMNIC\array. No option to set the secure directory for Array Automation is available in the Security Administration program. In addition, Array data that is split from the Array measurements goes into the Array directory. In a secure system the user cannot normally navigate to the Array directory to open the split out spectra (*.spa files).

Array Automation 9.8 Hotfix 1

Release Date: Oct-2017

Supported Operating Systems

- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8.1 64-bit
- Windows 10 64-bit

New Features

None

Resolved Issues

Instrument calibration starting during Array Automation run

A problem where the instrument calibration can be initiated in between the measurements of an Array Automation run has been fixed.

Known Issues

None

Array Automation 9.8

Release Date: May-2017

Supported Operating Systems

- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8.1 64-bit
- Windows 10 64-bit

New Features

None

Resolved Issues

None

Known Issues

None

Array Automation 9.7 Hotfix 3

Release Date: Mar-2017

Supported Operating Systems

- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8.1 64-bit
- Windows 10 64-bit

New Features

None

Resolved Issues

Crash when using known sequence and going to methods tab of Array setup

When selecting a grid in each well for all wells, closing the array setup, and then re-entering the setup and selecting the methods tab the software crashes.

Crash when canceling an array collect, and then starting and canceling again

When collecting an array of samples, cancel the collection. Then start another collection and immediately cancel the collection again and it will crash.

Known Issues

None

Array Automation 9.6

Release Date: May-2016

Supported Operating Systems

- Windows XP SP3 32-bit
- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8.1 64-bit

New Features

None

Resolved Issues

None

Known Issues

None

Array Automation 9.5

Release Date: Nov-2015

Supported Operating Systems

- Windows XP SP3 32-bit
- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8.1 64-bit

New Features

None

Resolved Issues

None

Known Issues

None

Array Automation 9.4

Release Date: Oct-2015

Supported Operating Systems

- Windows XP SP3 32-bit
- Windows 7 32-bit
- Windows 7 64-bit
- Windows 8.1 64-bit

New Features

None

Resolved Issues

None

Known Issues

None

Array Automation 9.1

Release Date: Jul-2012

Supported Operating Systems

- Windows XP SP3 32-bit
- Windows 7 32-bit
- Windows 7 64-bit

New Features

None

Resolved Issues

None

Known Issues

None

Array Automation 9.0

Release Date: Jan-2012

Supported Operating Systems

- Windows XP SP3 32-bit

- Windows 7 32-bit
- Windows 7 64-bit

New Features

None

Resolved Issues

None

Known Issues

None

Array Automation 8.2

Release Date: Sep-2011

New Features

Added support for 64-bit Windows

Resolved Issues

None

Known Issues

None

Array Automation 8.2

Release Date: Feb-2011

New Features

None

Resolved Issues

Updated the Stage Control dialog Z motor display to be consistent with OMNIC For Dispersive Raman.

Known Issues

None

Array Automation 8.2

Release Date: Oct-2010

New Features

Added support for Windows 7 compatibility

Added 3 new configurations to the list of default templates

Resolved Issues

None

Known Issues

None

Array Automation 8.2

Release Date: Apr-2010

New Features

Template Calibration

When template calibration is being done on a DXR SmartRaman spectrometer with a well plate holder installed in the UPS accessory, a window is displayed showing spectra collected at the current position of the well plate

holder.

Resolved Issues

Move to Well

On entry, the Move to Well dialog would occasionally indicate that it was at the wrong well.

Known Issues

None

Array Automation 8.1

Release Date: Jul-2009

New Features

Microscope objective selection

When Array Automation is being used with an Almega spectrometer or a DXR *Raman Microscope, the Objective control in the Methods tab of Array Setup now displays the name of the objective whose calibration is selected in the Select Calibration dialog accessible from the System Configuration dialog in μ View software or OMNIC Atlas software. If this is incorrect, use the latter dialog to select the correct one. If OMNIC for Dispersive Raman 8.1 is being used, the Objective control in the Bench tab of Experiment Setup can also be used to specify the currently installed objective.

Resolved Issues

None

Known Issues

None

Array Automation 8.0

Release Date: Jun-2008

New Features



For additional details about the new features in this version of Array Automation consult the new on-line help file accessible via the Array Help Topics item in the Array menu.

Spectral Autofocus

Because the new Autofocus before collect operation in OMNIC for Dispersive Raman is more flexible than the Spectrum Autofocus operation in Array Automation, if this is desired during Collect Array, it must be specified on the Advanced tab of Experiment Setup rather than in the Methods tab of Array Setup.

Multivariate Curve Resolution

Multivariate Curve Resolution (MCR) has been added as a reanalysis method for Array data sets.

Split Array

The Split Array function in the Array menu which allows Array data sets to be split into separate .spa files has been enhanced to allow any camera images saved with the data set to be saved in separate .bmp, .jpg or .tif format image files. The naming of the output files from Split Array has also been made more flexible.

Create Array

A new command has been added to the Array menu which allows creation of Array data sets from individual .spa files and combination of Array data sets into a larger data set. The resulting .srs files can be opened and analyzed using the metrics available to the Reanalyze function.

LIMS Operation

The format of the LIMS command file has been expanded to allow individual spectra collected during Collect Array to be saved in separate .spa or .csv format files in addition to being added to the .srs file.

Resolved Issues

Thermo Security Administration

If the Require Signature When Saving Spectrum policy in Thermo Security Administration is enabled, signatures will be requested for all files saved by Array Automation. These include the .srs files saved by Collect Array, Create Array and Save Array As and the .spa files that are created by Split Array. Before this version it was necessary to use the Sign Files command to sign these files.

Known Issues

None

Array Automation 2.0b

New Features

None

Resolved Issues

zscalefactor in OMNIC_mc.ini

It is no longer necessary to remove the zscalefactor parameter from the OMNIC_mc.ini file.

Known Issues

Thermo Security Administration weakness

Even if the "Disable delete, rename and right-click in file dialog boxes" feature of Thermo Security Administration is enabled, users are allowed to do these operations and change directories when saving Array Automation data.

Array Automation 2.0a

New Features

Ability to use Video autofocus with FT-Raman View Stage and Microstage

Previously the Video autofocus option in the Methods tab of Array Setup was available only with the Prior stages used on Nicolet Almega systems. This option is now also available for the stages used on FT-Raman systems. With any stage, if this option is selected, a message box is displayed advising you that the current objective must be selected via the System Configuration dialog of μ View or OMNIC Atlas, and the objective must have been calibrated for Autofocus. Consult the μ View or OMNIC Atlas Help Topics for instructions.

Ability to use smart background and auto exposure in Collect Array

When Array Automation is used with OMNIC for Almega, the latter's new smart background and auto exposure options can be used for spectra collected by Collect Array. When auto exposure is used, no Approximate collection time is displayed in the Methods tab of Array Setup since there is no way of knowing what the collection time per spectrum will be.

Resolved Issues

Occasional loss of spectra during Collect Array

When doing a Collect Array with Grid mode specified for one or more wells in the plate, there was an occasional skipping of grid positions leading to spectra being assigned to incorrect wells in the well display. (The titles of the spectra were correct.)

Similarity scroll bar for Group and Cluster reanalysis

After doing a Cluster or Group reanalysis of an Array data set, if the similarity level is changed in the Cluster Analysis Results or Group Analysis Results dialog, the position of the Similarity scroll bar in the Open Data Set

window display is now set accordingly.

Known Issues

Warning message when μ View is run if OMNIC Atlus is installed

If OMNIC Atlus is installed on your system, when μ View is run, a message box is shown saying that "OMNIC Atlus is currently running. This may cause conflicts with video displays." This is to warn you that you cannot use μ View and OMNIC Atlus simultaneously to display the video camera image.

μ View or OMNIC Atlus must be used to configure the system before Array Automation is used

After installing Array Automation, the System Configuration command in μ View program (MicroVw.exe) or OMNIC Atlus must be used to make sure that the correct microscope and stage are selected and correctly configured. Consult the μ View or OMNIC Atlus Help Topics for instructions.

Upgrading OMNIC 7.2a with Array Automation to OMNIC 7.3.

After upgrading these systems it is necessary to edit the OMNIC_mc.ini file residing in the directory C:/My Documents/OMNIC. Find the line zscalefactor=-10 and comment out this line by placing a semicolon <;> in front of it. Save this file, exit the editor and restart OMNIC. Failure to implement these steps will cause the z axis movement to reverse in the newly upgraded 7.3 relative to the movement in 7.2a.

Array Automation 2.0

Resolved Issues

Unnecessary background collects during kinetics data collection

When doing a kinetics collect using an Almega system, a new background was collected before each collection of spectra from the samples in the plate. The extra background collections have been eliminated.

New Features

Provisions for collecting spectra from samples in capillary tubes in addition to well plates

Available from Thermo Fisher Scientific Customer Support is a holder for eight or twelve capillary tubes that can be used in place of a well plate. Templates for this holder have been added to the master template file. When one of these templates is selected for use in Array Setup, the sample positions in the Wells tab, in the Move to Well dialog, and in the Collect Array and Array view windows are represented by horizontal or vertical bars instead of circles or squares. Each bar corresponds to a capillary.

The ability to save video camera images of the samples with the spectra

A button labeled "Save video images" has been added to the Methods tab of Array Setup. If it is checked, during a subsequent Collect Array operation, video camera images of the sample will be saved for each spectrum. These will be added to the .srs file which contains the sample spectra, and will be displayed when

the spectra are examined later using Array: Open Data Set. **NOTE:** Each image adds approximately 0.5 Mbytes to the size of the .srs file.

The ability to use the ratio of two peak heights or areas as the metric during Collect Array

The metrics available in the Methods tab of Array setup now include Peak height ratio and Peak area ratio. These metrics were previously only available for reanalysis of a data set.

The ability to use correlation as the metric during Collect Array

The metrics available in the Methods tab of Array setup now include Correlation. To use this metric during a Collect Array, use the "Select Reference" button to choose the spectral file from disk that is to be used as the correlation reference. The spectral resolution of the selected file must match that selected for the data collection.

The ability to normalize the spectra in an data set

Normalize has been added to the functions available in Array: Apply Function.

The ability to use an external spectrum as the reference for a Correlation reanalysis

In addition to using a spectrum from the data set as the reference for a Correlation reanalysis, it is now possible to use an external spectrum as the reference. The spectrum may be copied from an OMNIC window and pasted into the Array: Open Data Set window or the new Select Reference button may be used to open a spectrum file from disk and load it into the latter window.

Additional metrics for reanalysis of Array Automation data sets

Group analysis, Cluster analysis, and Principal component analysis are new metrics available for reanalysis of Array Automation data sets. The first two sort the spectra in the data set into groups of similar spectra. The last lets you find spectral variance in terms of its principal components. Consult the on-line Help for details about using these metrics.

The ability to sign Array sequence and data set files

If OMNIC DS is installed on the system, the Save Sequence dialog will contain a checkbox allowing sequence files to be signed. The Sign Files item in the Files menu can be used to sign Array Automation data sets after they have been collected.

The ability to control Array Automation data collection via LIMS

A new Array menu item named Enable LIMS activates the software to accept instructions from a LIMS-generated file that specifies which wells in a plate are to be measured during a Collect Array operation and how the spectra are to be collected and analyzed. A description of how to use this feature is contained in the LIMS in AA.pdf file.

The ability to save spectra obtained during and Array: Collect Array in JCAMP-DX format

If regedit is used to specify a new string parameter named JCAMPDirectory in the Registry in the HKEY_LOCAL_MACHINE/SOFTWARE/Nicolet Instrument/OMNIC/DLLs/ArrayDLL key, and if it is defined as a valid (writable) directory on the system, all spectra collected during subsequent Collect Array operations will be saved in JCAMP-DX format in the defined directory, in addition to being saved in the Array data set (.srs) file. Each spectrum will be saved in a separate file whose name is derived from the data set title and the well from which it was obtained.

Array Automation Installation Directories

When you install Array Automation, the folders into which its files are copied depend on where OMNIC or OMNIC for Dispersive Raman has been installed on your system. The default folders are C:\My Documents\OMNIC for data files and C:\Program Files\OMNIC for program (executable) files and Help files.

Within the data file folder, a new folder named Array will be created as the default location for Array Automation data sets generated by Collect Array operations.

Array Automation Files

The Array Automation install program installed the following files on your hard disk drive.

If you are using OMNIC:

OMNIC384.dll, omarr_enu.chm	in the Program Files\OMNIC directory
templaf.cfg	in the My Documents\OMNIC\Array directory
DemoIR.ary, DemoFTR.ary	in the My Documents\OMNIC\Param directory

If you are using OMNIC for Dispersive Raman:

OMNIC384.dll, omarr_enu.chm	in the Program Files\OMNIC directory
templaf.cfg	in the My Documents\OMNIC\Array directory
DemoVR.ary	in the My Documents\OMNIC\VRParam directory

How to Contact Us

Current contact information is located at <https://www.thermofisher.com>

Select the "Contact Us" icon at the top of the screen