

OLYMPUS®

Your Vision, Our Future

Virtual Slide System

VS120

Sales Manual

Version 2.9

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Responsibilities for the revision and administration of the contents lie with BC.

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Ver 0.1	11/20/2015	First edition by Olympus Tokyo

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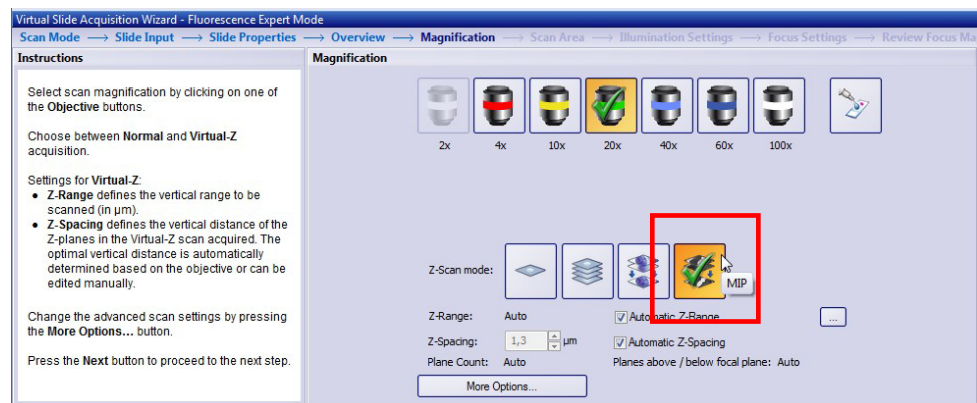
This document provides the information regarding VS120 Version 2.9 for sales activities.

This chapter introduces the new features implemented in Version 2.9.

1-1 Online MIP/EFI for virtual z multichannel scan

A Maximum Intensity Projection (MIP) option is now available in the Virtual Z scan options. Furthermore:

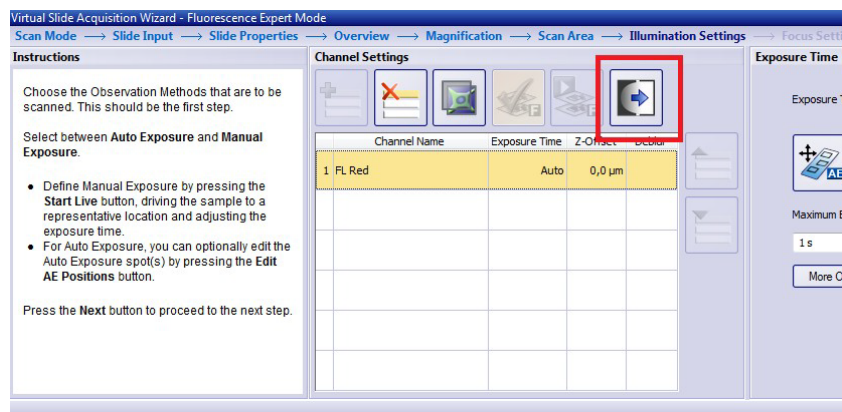
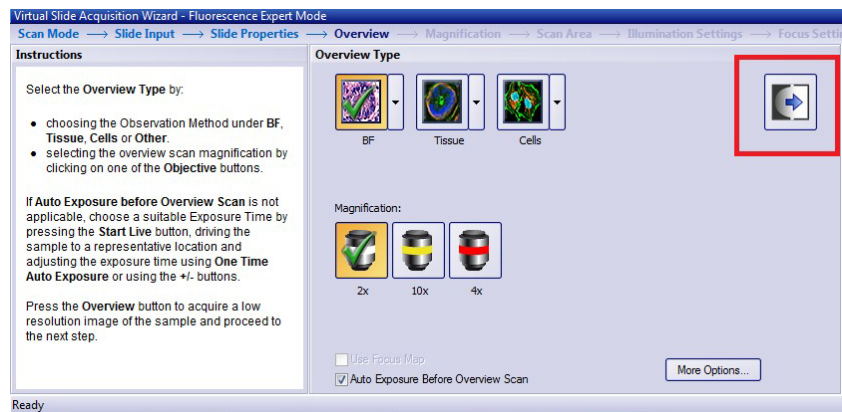
- Extended Focused Image (EFI) is now possible for FL / Special scans as well.
- The GUI was unified for all Z-series acquisition processes (Virtual-Z, EFI, MIP).



1-2 Shading correction calibration is available within VSA wizard for fluorescence scan modes

There is a new button on the Overview settings / Illumination settings page of the VSA-wizard to start the "shading calibration wizard".

- This allows users to recalibrate the shading correction without having to leave the VSA-wizard.
- The button is available on the Overview settings page and on the Illumination Settings page in the Special and Fluorescence Expert scan modes:

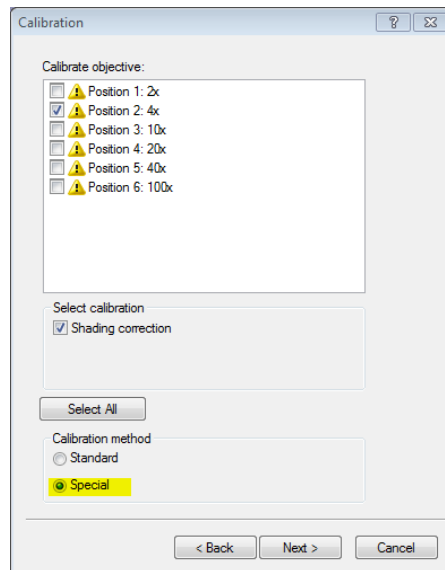


Caution

Please make sure to prepare the restore point described in “1-6 Save and load system restore point” before conduct the calibration.

VS-ASW can keep only 1 shading table inside. Thus by doing the new calibration, old shading table will be overwritten. You have to save and load the system restore point if you would like to recover to the old calibration table.

- The Calibration method can be selected. Standard uses the old algorithm and Special the new tissue based one introduced on V2.8.



1-3 Lumencor SOLA SEII

The LED white light source "SOLA SE II" from Lumencor is now supported by VS-ASW and can be used for the illumination of fluorescent samples. In contrast to "normal", mercury-containing arc lamps, the "SOLA SE II" uses an LED with an expected lifetime of more than 20.000 working hours, virtually no "heating up"-time and "switching times" below 20 μ s.



1-4 XM10-IR

XM10-IR is now supported by OT officially. If user wants to use IR, XM10-IR could be the first choice instead of Hamamatsu ORCA R2.

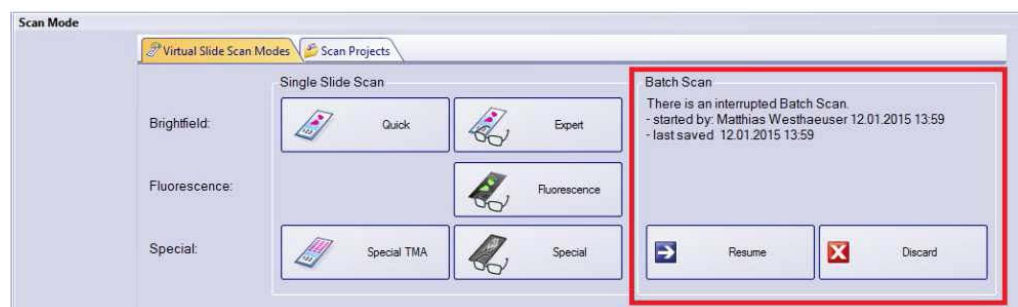
1-5 Priority Scan and Recovery option for Batch Scan modes

The progress of a "Batch Scan" including all "Scan Settings" is now saved automatically after each slide. The user can choose to suspend a running "Batch Scan" mode at any state and select to resume the "Batch Scan" later on.

In the meantime he can conduct any number of "Priority Scans" for a fast intermediate scan with any available single slide scan mode or even shut down the scanning PC completely. The user can then select to resume (or discard) the original "Batch Scan" whenever he wishes.

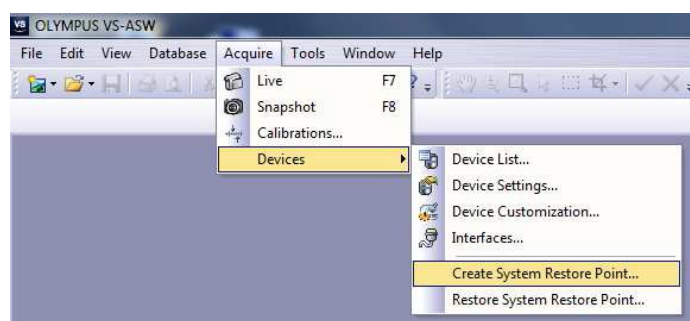


Note: Even in the unlikely event of a forced system restart or shut down of VS-ASW, the Batch Scan can still be resumed.



1-6 Save and load System Restore Point

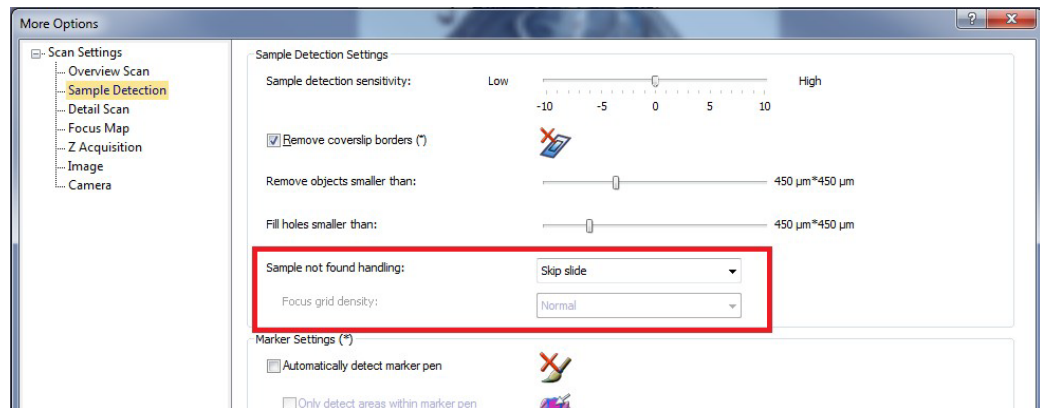
A System Restore Point can be saved creating a backup of all necessary device settings and calibrations. In the rare event of loss of device settings in VS-ASW or if the user wants to 'switch' between different system settings System Restore Points can be restored.



1-7 Improved error handling for "Sample not Found" in Quick Batch Scan modes

In Quick Batch Scan modes, the user can now define how the system shall react if the sample detection could not find a sample on the current slide. The user can choose to either skip the slide or to scan the whole slide with the "Scan and Focus Whole Area" option. In the second case, the user can specify a Focus Grid Density which is used.

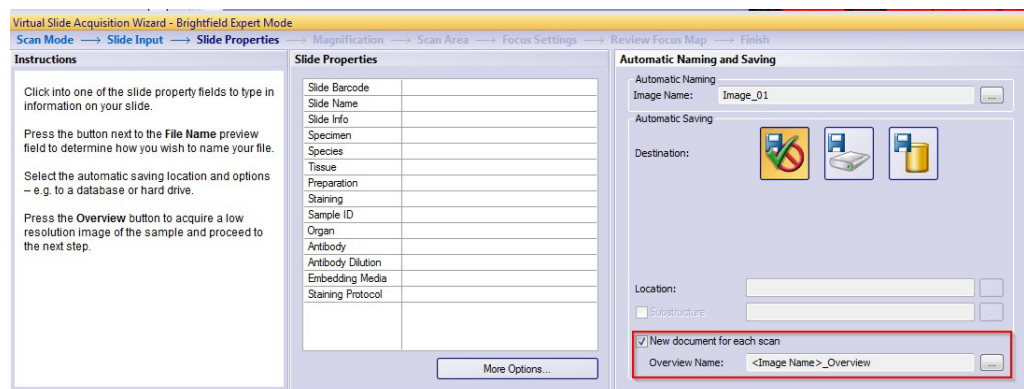
The file name is defined via the automatic naming dialog.



1-8 Overview naming for "New Document for Each Scan" mode can use the detail scan name

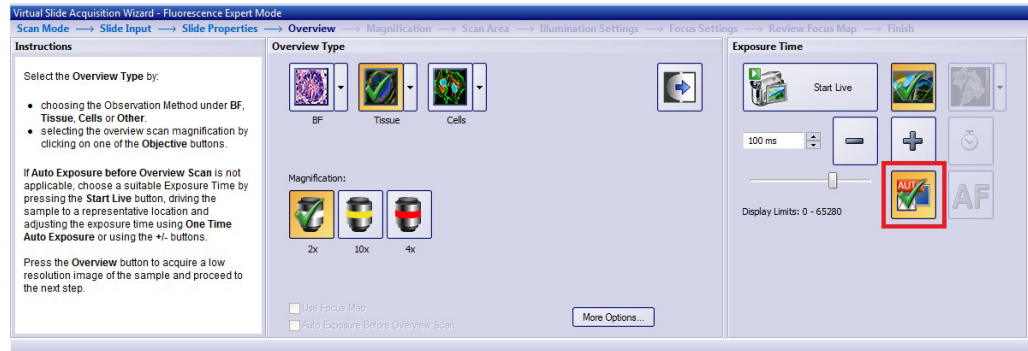
There is a new option to define the "overview file name" directly in the Virtual Slide Acquisition wizard (Slide Properties page).

The overview name can automatically contain the complete detail scan <image name>. This is the new default setting for the case that "New document for each scan" is used.

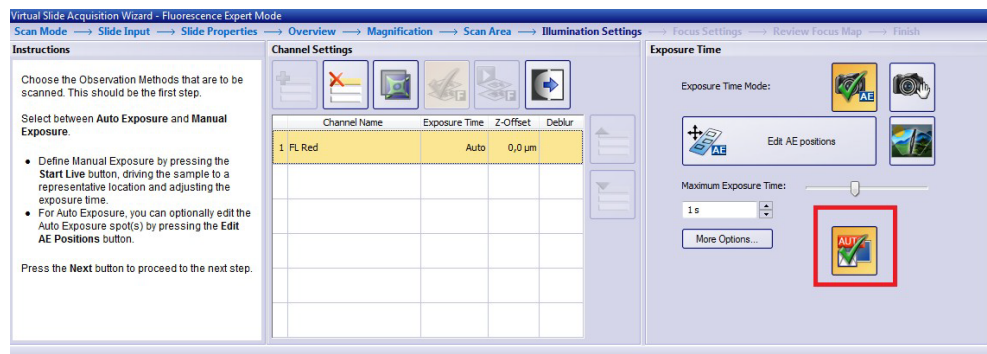


1-9 Consistent 16 bit "auto-contrast" behavior for live and VS scan image

There is a new button in Special and Fluorescence Scan modes in the VSA-wizard to define if "auto-contrast" shall be applied on 16 bit images or if fixed display limits shall be used. Previously this option was only accessible via the "More Options" menu.



If Auto-contrast is not switched on, the software displays the fixed display limits in the GUI



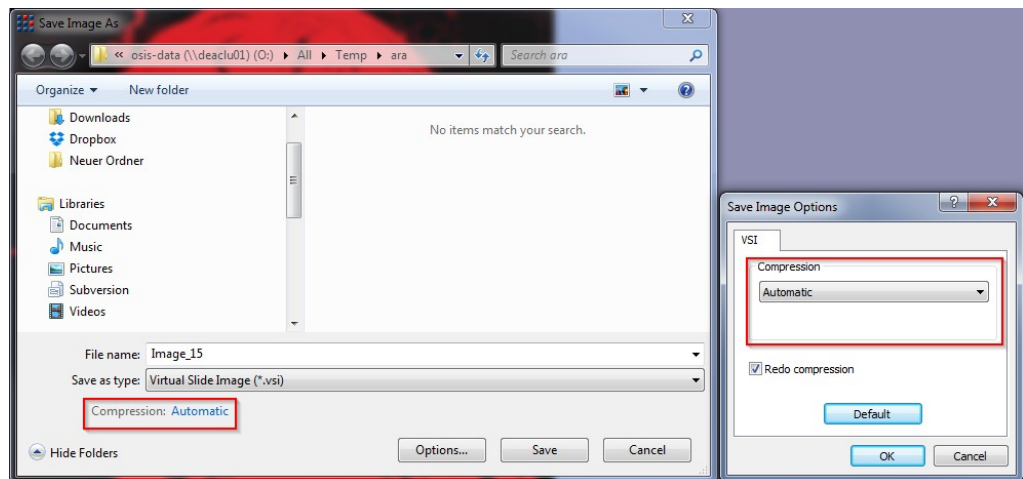
If the user starts the live image, the live image will use the auto-contrast if it is switched on in the VSA- wizard. However it will use the pre-defined fixed display limits if the live image is switched on with having auto-contrast switched off in the VSA-wizard.

1-10 Improved objective and compartment switching for S6

The changing of non-immersion objectives for the S6 system has been improved to increase performance: The previously mandatory Z-escape move for switching objectives or when switching slide compartments is now obsolete.

1-11 Save 16 bit FL images in "Save & Finish" step without de-/re-compression

In the past there were sometimes issues when the system decompressed and recompressed a 16 bit image if the image was saved manually using "Save as" and "JPEG" was used as compression. It is improved now by introducing a new "Automatic" compression option in the "Save as" dialog. This is now the default setting for VS software packages.



When the user presses "Save as" or "Save", the image is now always saved without doing a de-/re- compression, as the image has already been acquired with JPEG 2000 compression.

1-12 New splash screen and program icon

The splash screen for VS-ASW, VS-ASW DT, OlyVIA and NISSQL DB-Admin has changed and now follows the OLYMPUS corporate design.

The Program icon has a new design and is the same for all VS-related products.



2-1 VS120-S5-W-12

Items	Descriptions	Contents	Values Provided
Base system	BF system with 5 slides stage	Hardware is same as existing V2.8 * Caution: VS-ASW software is not included in the base system, need to be ordered separately.	<ul style="list-style-type: none"> • New features implemented by V2.9 software * Caution: 60x and 100x are never available
Available options	Standard FL upgrade	Same as existing V2.8 (FL camera: XM10, FL lamp: U-HGLGPS)	<ul style="list-style-type: none"> • FL shading correction
	FL upgrade with XM10-IR	<ul style="list-style-type: none"> • XM10-IR 	<ul style="list-style-type: none"> • FL shading correction • IR observation
	FL upgrade with ORCA Flash4.0	<ul style="list-style-type: none"> • ORCA Flash 4.0 • VS-HSCAM29-SET (add-on software) * See Note 	<ul style="list-style-type: none"> • FL shading correction • Faster FL scanning
	FL upgrade with SOLA SEII	<ul style="list-style-type: none"> • SOLA SEII 	<ul style="list-style-type: none"> • FL shading correction • Long life / low power consumption / fast lighting / mercury-free

2-2 VS120-S6-W-12

Items	Descriptions	Contents	Values Provided
Base system	BF system with 6 slides stage	<ul style="list-style-type: none"> • S6 stage • Tango controller for XYZ * <i>Caution: OASIS controller can not be used</i> * Caution: VS-ASW software is not included in the base system, need to be ordered separately. 	<ul style="list-style-type: none"> • New features implemented by V2.9 software • Batch mode with 6 slides • 60x and 100x is available as optional
Available options	Standard FL upgrade	Same as existing V2.8 (FL camera: XM10, FL lamp: U-HGLGPS)	<ul style="list-style-type: none"> • FL shading correction
	FL upgrade with XM10-IR	<ul style="list-style-type: none"> • XM10-IR 	<ul style="list-style-type: none"> • FL shading correction • IR observation
	FL upgrade with ORCA Flash4.0	<ul style="list-style-type: none"> • ORCA Flash 4.0 • VS-HSCAM29-SET (add-on software) * See Note 	<ul style="list-style-type: none"> • FL shading correction • Faster FL scanning
	FL upgrade with SOLA SEII	<ul style="list-style-type: none"> • SOLA SEII 	<ul style="list-style-type: none"> • FL shading correction • Long life / low power consumption / fast lighting / mercury-free
	60x and 100x oil objectives	UPLSAPO60XO UPLSAPO100XO	<ul style="list-style-type: none"> • High magnification / high resolution virtual images

2-3 VS120-L100-J-12

Items	Descriptions	Contents	Values Provided
Base system	BF system with 100 slides loader	Hardware is same as existing V2.8 * Caution: VS-ASW software is not included in the base system, need to be ordered separately.	New features implemented by V2.9 software * Caution: 60x and 100x are never available
Available options	Standard FL upgrade	Same as existing V2.8 (FL camera: XM10, FL lamp: U-HGLGPS)	• FL shading correction
	FL upgrade with XM10-IR	• XM10-IR	• FL shading correction • IR observation
	FL upgrade with ORCA Flash4.0	• ORCA Flash 4.0 • VS-HSCAM29-SET (add-on software) * See Note	• FL shading correction • Faster FL scanning
	FL upgrade with SOLA SEII	• SOLA SEII	• FL shading correction • Long life / low power consumption / fast lighting / mercury-free

*** Note: Existing U-FFWO and U-FFWR can not be used with ORCA Flash 4.0. Newer version of U-FFWR will be released by Feb 2016 and then fast filter wheels will be available in combination with ORCA Flash 4.0.**

Following minor defects and bugs have been already found on VS-ASW Version.2.9. Olympus Tokyo does not plan to release any patches on Version 2.9 so far. Please help to feedback the information to Olympus Tokyo if the users encounter the serious problem due to these defects.

Please raise action on Trackwize system when other trouble occurs.

#	Summaries	Workarounds (or Restrictions)
1	In BF Quick Batch mode, overview image is not displayed in Stage Navigator during detail scan.	Restriction. (No overview image is supposed to be displayed in BF Quick batch mode, since the stage navigator is hidden as default)
2	Live image is active when Auto Exposure Mode in Illumination Settings is selected for FL Expert mode. Reproducibility is very low.	Limitation. Switch Manual Exposure to Auto Exposure after AF operation is done. If the problem occurs, change the exposure mode to Manual, then close the live image.
3	Recursive Add Scan is not possible in certain conditions. The problem occurs when the scan is cancelled, and you try to switch off the option "Save the image without add scan". The option cannot be switched off.	Restriction. Go back to the start page of the scan mode, and switch off the option "Save the image without add scan".
4	Unable to switch channels during live display if different lamp intensity is set to each channel and CLF is switched on	Limitation. When CLF of EXFO X-Cite exacte Lamp is ON, set the same lamp intensity to all the channels.
5	[Online help] Wrong description for the Define Barcode Splitting To Image Properties dialog. In V2.9 is modified but not good as explanation for OLH information. Current: Click the bar code button of definition group of settings. Expectation: Click the button definition of the setting of the bar code group.	Constraint. Steps are as follows 1. In the scan settings dialog, switch on the option "Split barcode to image properties" (Image > Barcode) 2. Define barcode splitting to image properties
6	"Disable automatic saving" option is not selectable after restoring values to default in "Image" tab of "More Options" dialog if operator will change file format from TIFF or BigTIFF to default.	Restriction. Please do set again in "Image" tab of "More Options".

#	Summaries	Workarounds (or Restrictions)
7	If software version is updated by domain user, reference error of MSI file will occur.	Specification. Restore the OS to the factory settings, and perform software version update.
8	If any Single Slide Scan is selected, the inside Menu of Camera Control of Toolbars will be grayed out.	Specification. Camera control tool window is used.
9	Calibration does not abort even if communication error pops up while calibration is in progress."	Restriction. Please do application reboot after the end of a calibration.
10	"Create thumbnails for" setting is not displayed even when "Show image substructure" is checked.	Specification. "Create thumbnails for" is not valid for VS-ASW.
11	Softkeys tab is usable.	Specification. Device customization soft keys tab cannot be used.
12	Image present in clipboard is not getting pasted.	Constraint. Images other than Greyscale are saved.
13	"Use Calibrated Intensity Values" is displayed.	Limitation. "Calibrated Intensity Values" cannot be used while line profile is going on.
14	If the Enter key of a keyboard is pressed during a dialog display, it will be canceled to edit mode (Scan Area/Focus Map/AE positions).	Constraint. EditScanArea dialog is displayed again and settings are also redone.
15	Upgrade to VS-ASW-S6 is not possible on PC installed below package. - VS-ASW-S1 - VS-ASW-S1-FL - VS-ASW-S5 - VS-ASW-S5-FL	Specification. In the case of upgrade of S1 and S5 to S6, it uninstalls once.
16	Upgrade is not possible from VS-ASW-S6 package to VS-ASW-L100.	Specification. In the case of upgrade to S6 to L100, it uninstalls once.
17	At the time of oil object lens use, unnecessary oil will be attached on a slide during change of Stage insert Position.	Restriction. An objective is changed into 2x objective lens when changing Stage insert Position on a scanning wizard.
18	The observation technique of Type:Undefined is taken in as transmission overlay.	Restriction. Observation method of Undefined is not used.
19	If VS-ASW is started while Position of Nosepiece is not fixed, it will not change to a most minimum objective lens when VS-ASW is starting up	Limitation. In being in an object unfixed position, it changes to a most minimum as many objective lens as this manually after VS-ASW starting.

#	Summaries	Workarounds (or Restrictions)
20	While choosing the bottom layer, the "Set Layer Opacity" button is not disabled.	Limitation. While choosing the layer of the bottom of the heap, the "Set Layer Opacity" button is not used.
21	The image layer is not protected, even if the picture of RGB color is changed into Grayscale and it reopens a file after saving at DB.	Limitation. Editing of Image layer is not done
22	When the cable of Marzhauser Tango is fall out, the error is not displayed so long (about 10 minutes).	Limitation. Cable (Marzhauser Tango's) connection is done after an error message display, and restart of VS-ASW is carried out.
23	When the communication cable of Marzhauser Tango VS is disconnected and re-connected then while starting VS-ASW, VS-ASW to Marzhauser Tango VS cannot be operated.	Limitation. Cable (Marzhauser Tango's) connection is done after an error message display, and restart of VS-ASW is carried out.
24	The magnification of the object lens which was set up is not displayed in [Lens Correction] calibration.	Limitation. Once again, a calibration is redone.
25	Since the warning message is a modeless dialog, two or more same messages are displayed.	Limitation. The warning dialog displayed is closed by clicking on button of "x" or "OK".
26	When a value is inputted into the text box of Scan area, automatic adjustment of the value is done and changes to a different value.	Limitation. It takes into consideration that the error for pixel size is calculated.
27	Marquee Tool cannot be used on multi-layer images.	Limitation.
28	When a value is inputted into the text box of Scan area, automatic adjustment of the value is done and changes to a different value.	Limitation. It takes into consideration that the error for pixel size is calculated.
29	Value of Scan area size is incorrect.	Limitation. It takes into consideration that the error for pixel size is calculated.
30	"Exposure compensation" is not applied when a snapshot is carried out immediately after VS-ASW starting.	Limitation. The live is performed before photographing Snap after the reboot of VS-ASW.
31	Even if spaces character is added after DB name, it is possible to open or delete it.	Restriction. It registers by DB name with deleted space character.
32	During selection of "Auto Contrast" from Adjust Display Tool Window, the bar on graph can be used.	Restriction. "Auto Contrast" is not reflected even if it carries out bar movement. It is reflected when Fixed is chosen.

#	Summaries	Workarounds (or Restrictions)
33	When TIFF image by which Measurement Objects is drawn is imported into DB then Measurement Objects of the image will disappear.	Limitation. When inserting in DB the picture by which Measurement Objects was drawn, it is considered as a VSI format.
34	If a nosepiece is manually changed in the setting dialog of the [Lens Correction] object lens, it cannot progress to the next setup.	Limitation. The Objective lens is not changed manually.
35	After overview is acquired, the image setting menu in more option become disable on the step of [Slide property].	Specification. An Image setup is performed before Overview photography.
36	If Back is pressed when Slide Drop error happens during detail scanning, non-existent slide is selectable in Review Batch Scan Settings screen.	Specification. Since mapping in a cassette is not performed, the slide information on the list of batch scan setting screens is not updated.
37	In normal step of calibration wizard with 60x oil objective lens, oil adheres to the 40x objective lens.	Limitation. If adjustment of 60x object lens is completed then object escape will be performed from the microscope TW. After carrying out objective lens escape, OSIS chart is removed from slide maintenance, and oil is wiped off. Wiped-off OSIS chart is again set and "next" button is clicked in calibration wizard By this procedure, it is possible to avoid oil smear on 40x objective lens.
38	Using a specific specimen, when only specimen is scanned and focus is done then some parts of a specimen are not acquired.	Limitation. Only a specimen is captured by a scan and setup except carrying out a focus.
39	In only S6's behavior, if operator does set the overview area same as S6's stage limitation, Software cannot acquire for additional scan with 2 or more.	Restriction. Please do set again in instruction of simple operation. "TIP" It is recommended to set the overview image area so that it includes the entire specimen or the entire cover glass.

4

Compatibility List

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4-1 Compatibility List

✓ : Compatible

- : Out of warranty

Item	V2.9	V2.8	V2.7	V2.6	V2.5	V2.4	V2.3	V2.1
Motorized Stage for S1 / S5 / L100	✓	✓	✓	✓	✓	✓	✓	✓
Motorized Stage for S6	✓	✓	-	-	-	-	-	-
OASIS 4i (Inclusive of VS-XYZ-Cable and VS-JOY-B)	-	-	-	-	✓	✓	✓	✓
OASIS Express (Inclusive of VS-XYZ2-Cable and VS-JOY2-B)	✓	✓	✓	✓	-	-	-	-
Tango Controller (Inclusive of dedicated cable and joy stick)	✓	✓	-	-	-	-	-	-
Camera								
XC10 (VS110 or before)	-	-	-	-	-	-	-	✓
VC50	✓	✓	✓	✓	✓	✓	✓	-
XM10	✓	✓	✓	✓	✓	-	-	-
XM10-IR	✓	-	-	-	-	-	-	-
ORCA R2 (OSSA only)	✓	✓	✓	✓	✓	-	-	-
ORCA Flash4.0	✓	✓	-	-	-	-	-	-
Lamp								
U-HGLGPS	✓	✓	✓	✓	✓	-	-	-
Xcite Exacte	✓	✓	✓	✓	✓	-	-	-
SOLA SEII	✓	-	-	-	-	-	-	-
System								
BF	✓	✓	✓	✓	✓	✓	✓	✓
FL	✓	✓	✓	✓	✓	-	-	-
PC								
Z440 / Windows 7 64bit	✓	✓	-	-	-	-	-	-
Z420 / Windows 7 64bit	✓	✓	✓	✓	-	-	-	-
Z400 / Windows 7 64bit	✓	✓	✓	✓	✓	-	-	-
Z400 / Windows 7 32bit	-	-	✓	✓	✓	✓	✓	-
Z600 / Windows XP 32bit (VS110 only)	-	-	-	-	-	-	-	✓
Memory								
4GB	-	-	-	-	✓	✓	✓	✓
8GB	✓	✓	✓	✓	-	-	-	-
16GB	✓	✓	✓	-	-	-	-	-

Protection	V2.9	V2.8	V2.7	V2.6	V2.5	V2.4	V2.3	V2.1
Dongle	-	-	-	-	✓	✓	✓	✓
SW Protection (w/o dongle)	✓	✓	✓	✓	-	-	-	-
NIS								
V2.9	✓	-						
V2.8	-	✓	-	-	-	-	-	-
V2.7	-	-	✓	-	-	-	-	-

4-2 Required PC and Monitor

PC	Supplier	HP
	Model	Z440
	CPU	Intel Xeon E5-1620 v3 Quad Core 3.5GHz (or faster)
	Chipset	Intel C612 BIOS V1.16
	Memory	DDR4-2133 ECC Registered SDRAM Size: 16GB (or more)
	HDD	Primary (for operating system area): 1.0TB (or more) Secondary (for data storage area): 1.0 TB (or more)
	Graphics card	NVIDIA QuadroK620 (recommended) Ver335.58 (driver version 9.18.13.3558 on Windows Device Manager) Video memory: 2GB Output: 1920 x 1200 with 32bit color Connected via PCI-Express x16
	PCI bus	PCI-Express (x1) = 4 slots i) COM port card ii) XYZ controller card for S5/L100 iii) IEEE1394b card for VC50 iv) IEEE1394b/CameraLink for ORCA R2/Flash4.0 (optional for FL system) PCI = 1 slot i) IEEE1394a for XM10 (optional for FL system)
	Operating system	Windows 7 Professional 64bit Language: English
	Optical drive	DVD (must be readable for double-layers DVD, writing function is not necessary)
	USB port	6 ports i) Keyboard ii) Mouse iii) XYZ controller for S6 iv) Macro camera for L100 v) AD-USB-ODB (optional for FL system) vi) Xcite Exeacte or SOLA SEII (optional for FL system)

	Power supply	Input: AC100-240V, 50-60Hz Wattage: 700W (or more) Maximum rated current: 8A (or more) Required regulation: CE
Monitor	Supplier	HP (recommended)
	Model	Z24n (recommended)
	Size	24 inch
	Resolution	1920 x 1200 pixel

4-3 Free Version-Up Policy

All of the VS-ASW Version 2.8 users can update to Version 2.9 for free of charge (except the users who have updated from V2.7 to V2.8 for free of charge already). The service person can simply start the VS-ASW V2.9 installer and update from V2.8 to V2.9 by using the V2.8 license. Renewing of software license code is not required any more in case of FOC update. Please refer to the setup manual for detail.

4-4 Free Image Viewer “OlyVIA”

You can download a free virtual slide image viewer “OlyVIA Version 2.9” from Olympus global web site;

<http://www.olympus-lifescience.com/en/support/downloads/>

Required operating system for OlyVIA Version 2.9;

Microsoft WindowsXP SP2 or later (English), WindowsVISTA Business SP1 (English), Windows7 Professional 64bit SP1 and 32bit SP1 (English), Windows8 64bit and 32bit (English)

** Comaribility with Windows 10 will be announced by Feb 2016.*

As for the other system requirments, pleaes refer to the download site for detail.