Phocus 2.9.1 Windows read-me

September 17th 2015

Installation

To install Phocus, run the installation bundle. This bundle contains Phocus, Hasselblad Device Drivers, Microsoft .NET Framework 4.0 client profile and a Microsoft Direct X SDK subset.

Compatibility

Phocus is supported on Windows 7 64-bit, Windows 8 64-bit, Windows 8.1 64-bit and Windows 10 64-bit.

System Requirements

Graphics adapters
You should be aware that the Phocus viewer utilizes the processing power of the GPU - therefore using a PC with a high performance GPU is definitely an advantage.

Memory
We recommend at least 8GB of memory

Supported products
Image files from all Hasselblad FireWire based digital camera products are supported. Tethered operation will work with the same range of cameras except for the first generation Ixpress series.
Capture of micro-step images is not supported.
Scanner 3F files are not supported.
3F files generated by Phocus are not backward compatible with FlexColor!

Functionality Level

The Windows version only supports tiff and jpg as 3rd party files.

New features in 2.9

Integrated Color Calibration

We now support the ability to create custom color calibrations directly within Phocus without any need for the usage of 3rd party calibration software. While the standard factory color calibration for our cameras will generally work very well there are situations where you will want to use a custom color calibration made using the exact lighting setup used for the shoot. Until now this has only been possible by creating a custom ICC profile for the camera using 3rd party profiling software. Apart from this being a somewhat tedious and error prone process it is also not optimal from a quality perspective given that the ICC handling is taking place late in the image handling process. Calibrations made using the new integrated color calibration will be used directly on the raw camera data as a direct replacement of our factory calibration, thereby providing the best possible quality.

How to use it

In the Reproduction tool a new **Color Calibration** popup menu has been added. By default this will say **Factory** which corresponds to the same default color handling used by previous releases of Phocus. In this menu you can select the **Edit...** option in order to bring up the **Color Calibrations** dialog. Note that this dialog can also be opened via the **Window** menu where it has the keyboard short cut alt-cmd-C.

In order to add a new calibration make sure that a suitable image containing a color reference chart is shown in the viewer before opening the **Color Calibrations** dialog.

If you have no existing custom calibrations the dialog will move directly on to the calibration interface. Otherwise use the + button on the left (keyboard short cut is +). In the calibration interface you will see the selected image together with an overlay reflecting the type of color target selected. The standard workflow from here will be to:

1) Select target type

Out of the box we currently support ColorChecker, ColorChecker SG and ColorChecker DC targets. You can also use the + button to add your own target references.

2) Align target location

While you can make a manual adjustment of the overlay indicating target position, normally you will just have to press the **Auto Locate** button and your target will be automatically located.

3) Calibrate

Press **Calibrate** to perform the actual calibration. If this is successful you will get basic ΔE statistics. Using the **Mark ΔE >** slider you will get feedback in the image showing patches that deviate by more than the selected ΔE value. In some cases you may see a yellow warning triangle next to the statistics indicating potential issues like over- or underexposure, uneven lighting or just generally high ΔE values. A tooltip will show you the detailed warning.

4) Create the calibration

Once you're happy with the calibration result the actual calibration is stored by clicking the **Create** button and you will return to the base interface of the **Color Calibrations** dialog showing you the list of existing calibrations. Here you will also be able to enter a text description of each calibration.

5) Using the calibration

To actually use the new custom color calibration just select it in the reproduction tool. The calibration itself will be embedded in the 3F file along with the other adjustment settings so there is no need to move the stored calibrations between host computers. Actually if you view an image containing a color calibration that is not already stored locally it will be automatically copied.

Differences compared to using custom ICC profiles

While using custom ICC profiles makes a calibration very dependent on the exact setting of all adjustment parameters this is not the case when using the integrated color calibration. In fact the only adjustment setting that is tied to a calibration is scene calibration. Therefore in case you will be using scene calibration for the actual shoot it's a good idea to use scene calibration for the capture of a target. Provided that the scene calibrations used actually give the desired result you will not necessarily need to use the exact same scene calibration for both the target image and actual images.

So as a general rule when using a custom color calibration changing adjustment parameters does not necessarily invalidate the profile since it's applied before these adjustments take place. It is even possible to switch working space.

Also if you really want to you can in principle combine the integrated color calibration with a custom ICC profile - of course the custom ICC profile will need to be based on an image exported using the integrated color calibration.

Improved accuracy of desaturated colors in reproduction mode

When reproduction mode is active this version will provide better accuracy when it comes to colors that are close to being neutral.

Improved accuracy Lab readouts

In readout points you will now get Lab values with 1 decimal point accuracy.

Adjustable scene calibration intensity

In the Scene Calibration tool a new slider allows you to make fine adjustments to the intensity correction. When at the default value of 100% it will work exactly as it did in previous Phocus versions.

Focus control via arrow keys during live video

When running live video with a camera that allows focus control you can now use the up or down arrow keys to adjust focus. By default it will make small increments - holding down the alt key will result in a larger change.

General improvements

Apart from the above mentioned new features this release also incorporates a number of minor fixes and improvements.

Change log

V 2.9.1:

- fixes a problem that could introduce artifacts in images captured with 60mp cameras. 3F files affected by the problem will be repaired when opened with 2.9.1

- the reproduction tool now correctly reverts to default behavior for all parameters when the tool is disabled