



ZEISS eXtended Data workflow with SONY Venice camera

Version 4_4

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Introduction

ZEISS eXtended Data technology provides frame accurate lens characteristics (distortion and vignetting or shading) for use in VFX. Lens characteristics can be recorded in the video files and passed to the post-production – this replaces the standard grids and grey card workflow that are both time consuming and inaccurate.

In this guide, you will learn how to record ZEISS eXtended Data on a SONY Venice camera and how to prepare the recorded footage for using ZEISS eXtended Data in post-production.

Note

The following guide is not a user manual, but an optional support document from ZEISS to improve your user experience and to show you possible uses and combinations of our product and ZEISS eXtended Data technology. Please always observe separate specific user manuals for equipment from SONY (<https://www.sony.de/>) and software from Pomfort (<https://pomfort.com/>).

ZEISS is not the manufacturer of the SONY cameras and Pomfort Silverstack. If you have any questions, please contact the manufacturer of your respective technical equipment, components and software.

We do not claim to declare the use of third party equipment (third party means all companies except ZEISS), nor do we accept any liability for damage resulting from misuse contrary to the instructions of the respective manufacturer.

Pre-requisites

In order to use this workflow following equipment is needed:

- A ZEISS cinema lens featuring ZEISS eXtended Data with PL mount (Supreme Prime, Supreme Prime Radiance or CP.3 XD).
- A SONY Venice camera featuring FW version 4.0 or higher.
- Optional: An Apple iMac, MacBook or MacBook Pro (is called Mac in the following pages) with Pomfort Silverstack.
- Optional: ZEISS eXtended Data injection software (`zeiss-xdcp`).
- Optional: SONY RAW Viewer application

Overview of the workflow

Using SONY Venice camera, the workflow is simple:

1. **Record** ZEISS eXtended Data into X-OCN or XAVC video files.
2. **Prepare** video files and ZEISS eXtended Data for use in post-production.
3. **Use** ZEISS eXtended Data in post-production.



Record ZEISS eXtended Data into X-OCN or XAVC video files

SONY Venice camera can read ZEISS eXtended Data (distortion and vignetting) through lens mount and record the data to X-OCN or XAVC (.mxf) video files.

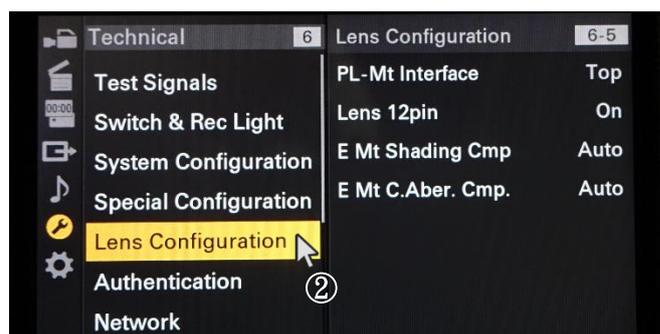
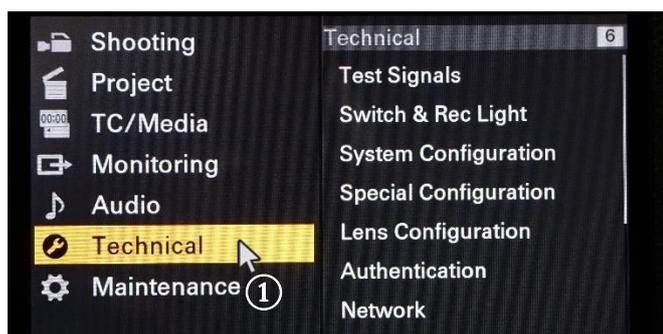
Note: ZEISS eXtended Data is only recorded in X-OCN or XAVC file format and not other file formats (ProRes, MPEG,...).

Use the following steps to check that your ZEISS eXtended Data lens is recognized by the camera:

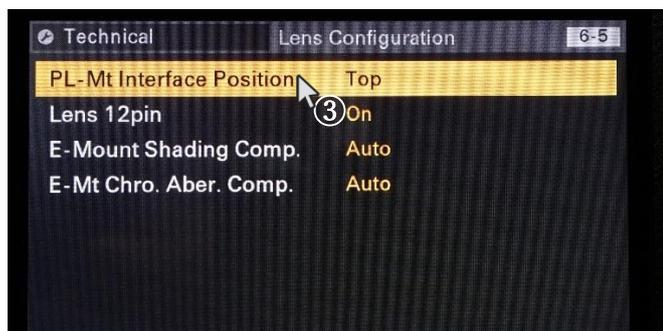
Setup camera

In order ensure that camera will recognize the lenses, following setup must be made:

Press and hold MENU button for two seconds to enter setup menu.



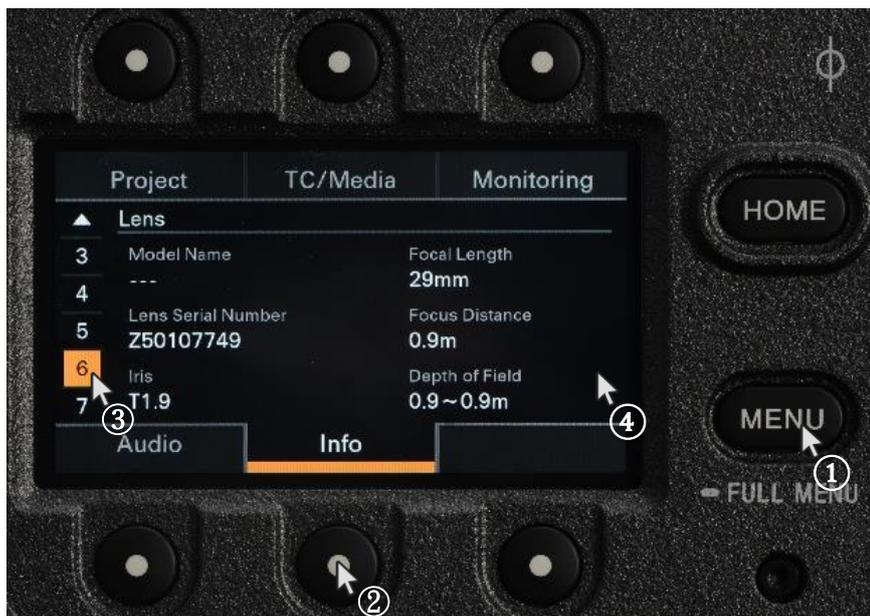
①+② Enter Lens Configuration menu.



③+④ Setting up **Top** or **Side** according to the used lens contacts position of camera mount.

Attach lens and verify that the lens is recognized

- Attach the lens to the camera.
- Lens information are displayed on "Lens" Tap (①+②+③+④).



Record ZEISS eXtended Data within video files

ZEISS eXtended Data will be recorded whenever video files are recorded.

Note: Ensure that recording file format is X-OCN or XAVC.

Prepare recorded media for post-production

There are two ways to provide recorded ZEISS eXtended Data to VFX:

- Provide EXR file sequences with embedded ZEISS eXtended Data.
- Provide video files of any format with ZEISS eXtended Data side car files.

The choice of the video file format is made by the VFX department.

In both cases the ZEISS eXtended Data must be extracted from the X-OCN or XAVC files and either injected into the EXR sequence or saved as side car files.

EXR files sequences with embedded ZEISS eXtended Data

In case the VFX department works with EXR file sequences, it is possible to read the ZEISS eXtended Data out of the X-OCN or XAVC files and inject them into the EXR file sequences.

As of today, only the SONY RAW Viewer application can automatically inject ZEISS eXtended Data into exported EXR file sequences.

Extract ZEISS eXtended Data out of the X-OCN files and export EXR sequences with embedded ZEISS eXtended Data using the Sony RAW Viewer

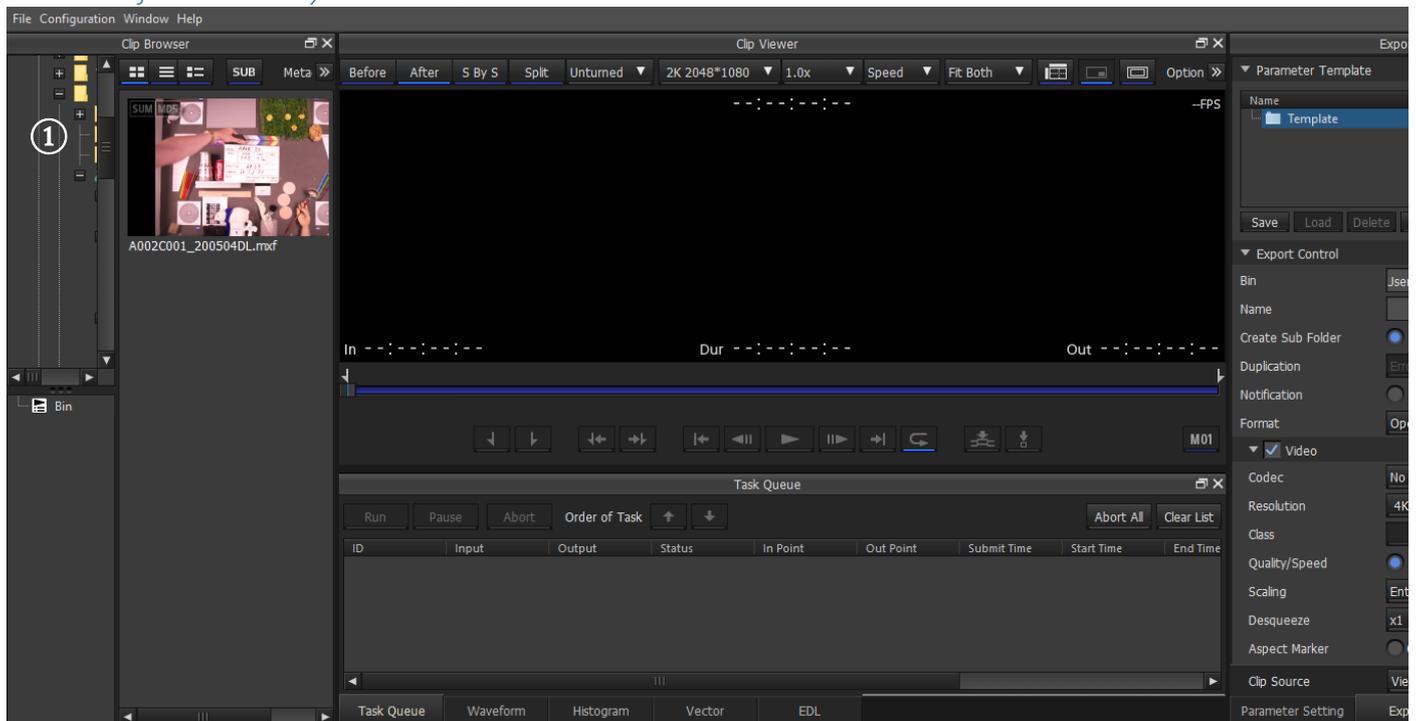
What is the Sony RAW Viewer?

RAW Viewer is a viewer application that can handle Sony RAW / X-OCN files recorded by VENICE/F65/F55/F5/NEX-FS700 with SR-R4/AXS-R5/R7. Users can check and playback the files, control images and generate several video formats.

Prepare the Sony RAW Viewer

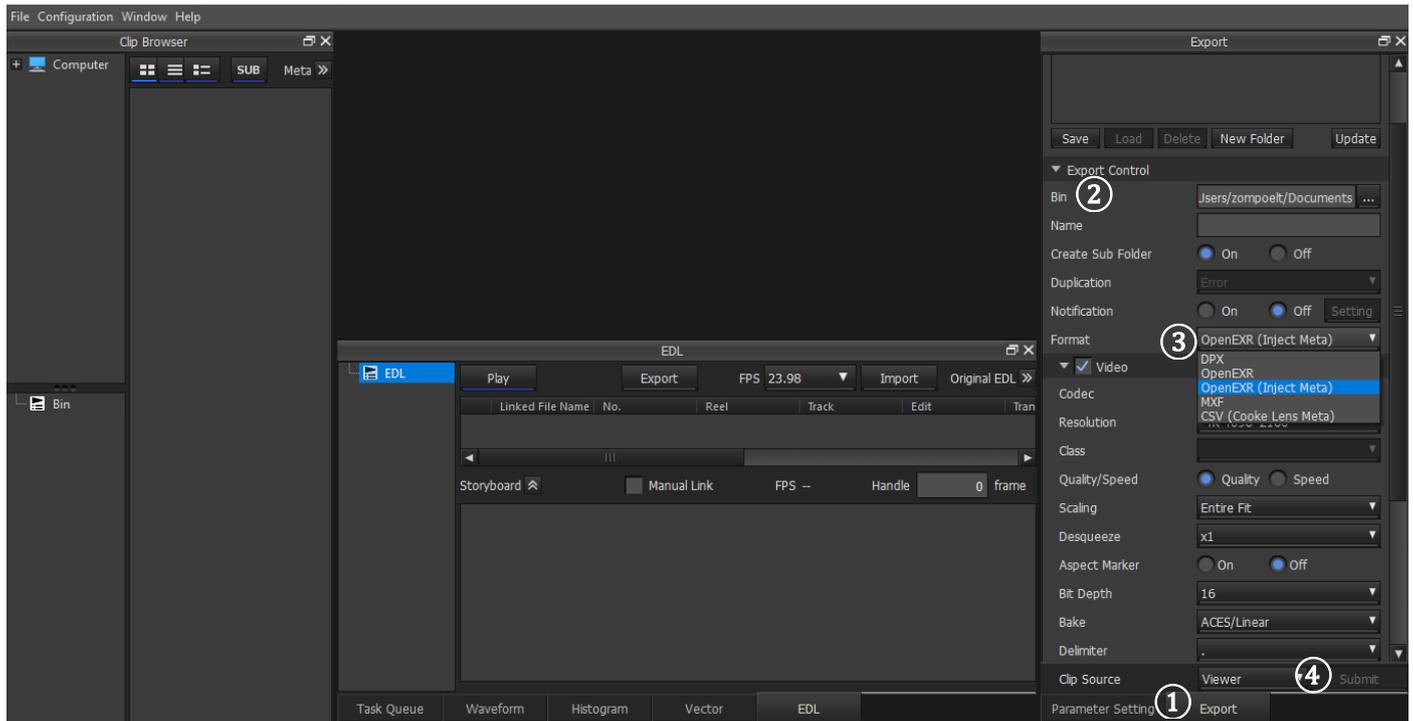
- Download Sony RAW Viewer from the Sony website and follow installation instructions (<https://www.sonycreativesoftware.com/download/rawviewer?lang=ENU>).

Load video files in the Sony RAW Viewer



- ① Select the media with the video files in the root directory.

Transcode video files to EXR files



- ① Click on Export to get to the **Export Menu**.
- ② Select a Bin where you want your files to be placed in.
- ③ Go to "Format" and select **OpenEXR (Inject Meta)**.
- ④ Choose **Submit**.

EXR frame sequences exported from X-OCN files will contain ZEISS eXtended Data. There is no requirement to use the ZEISS eXtended Data injection software (`zeiss-xdcp`) command line tool.

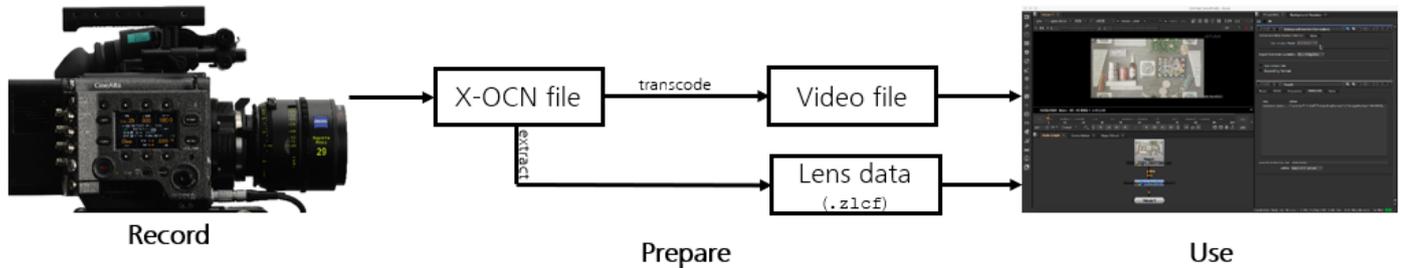
Send the EXR files with injected ZEISS eXtended Data to the post-production.

Any video file format with ZEISS eXtended Data as side car files

In case the VFX department works with another file formats than EXR, they will need for each video clip one side car file with the recorded ZEISS eXtended Data.

Side car files with extension `.z1cf` (ZEISS Lens Correction File) will be generated using Pomfort Silverstack. These files contain recorded ZEISS eXtended Data and all information needed by VFX.

Workflow description



Following two steps are needed:

- Optional: **Transcode** X-OCN or XAVC files into desired file format.
- Use Pomfort Silverstack to **extract** ZEISS eXtended Data out of the X-OCN or XAVC files and **generate** `.z1cf` files.

Extract ZEISS eXtended Data out of the X-OCN or XAVC files and generate `.z1cf` files using Pomfort Silverstack

What is Pomfort Silverstack?

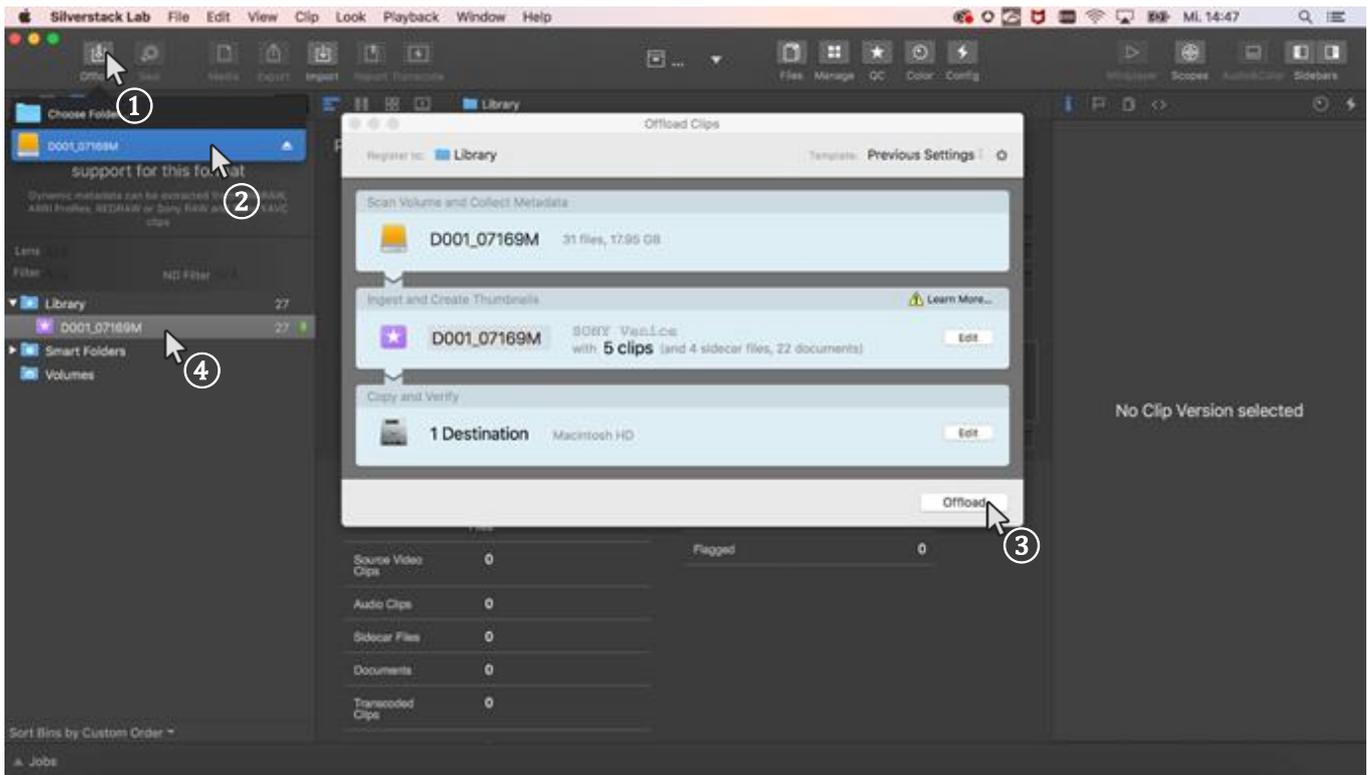
Silverstack is a Mac software, developed by Pomfort GmbH, for on-set data management in all kinds of professional film productions. A broad set of features including copying, playback and reporting enables the user to backup, preview and prepare movie data right on the film set.

Silverstack XT or Silverstack Lab allows to read the corresponding ZEISS eXtended Data from each SONY X-OCN or XAVC clip and generate ZEISS Lens Correction Files (`.z1cf`) for each clip. Always use the latest version of Silverstack.

Prepare Pomfort Silverstack

- Download Silverstack from Pomfort website and follow installation instructions (<http://pomfort.com/silverstack/download/>).
- Choose a license and install it using instructions from Pomfort website.

Load video files in the Silverstack library



①+②

Select the media with the video files.

③

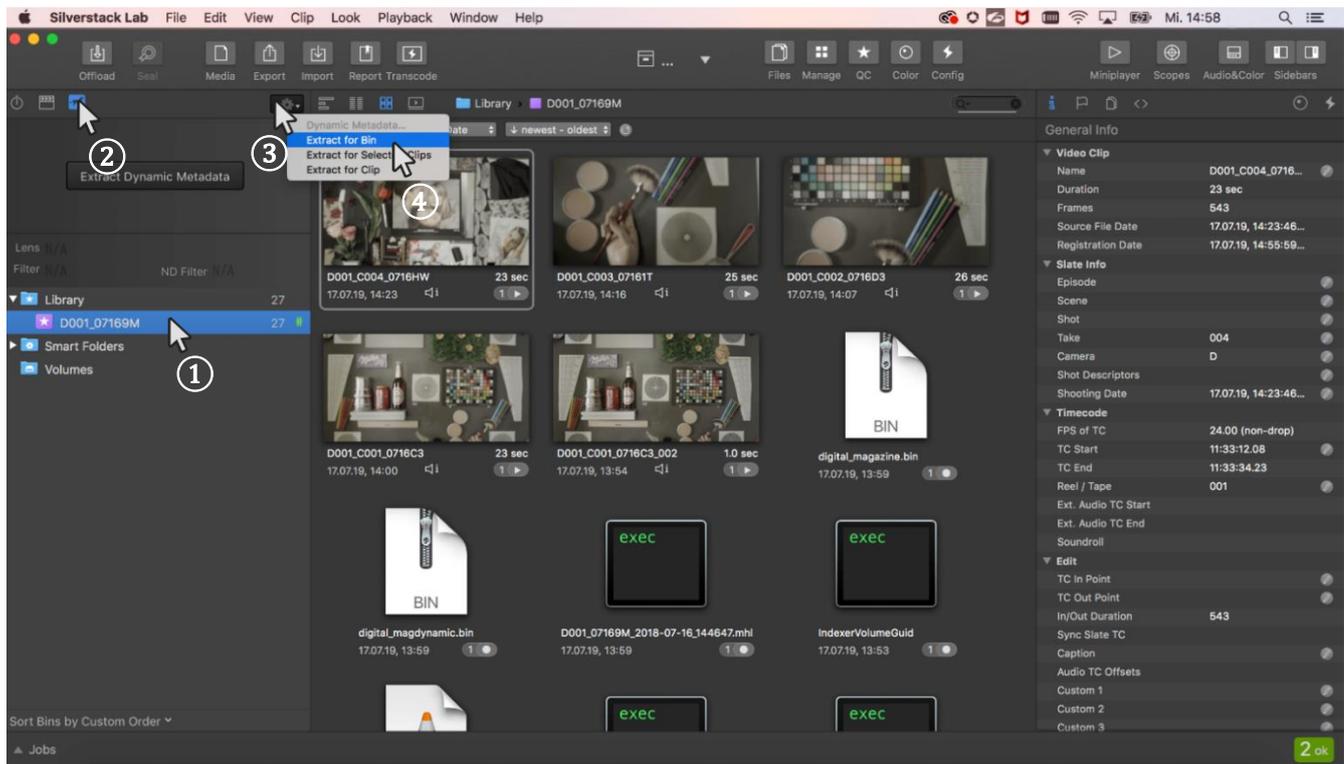
Choose a destination path where the video files will be saved, then **Offload**.

④

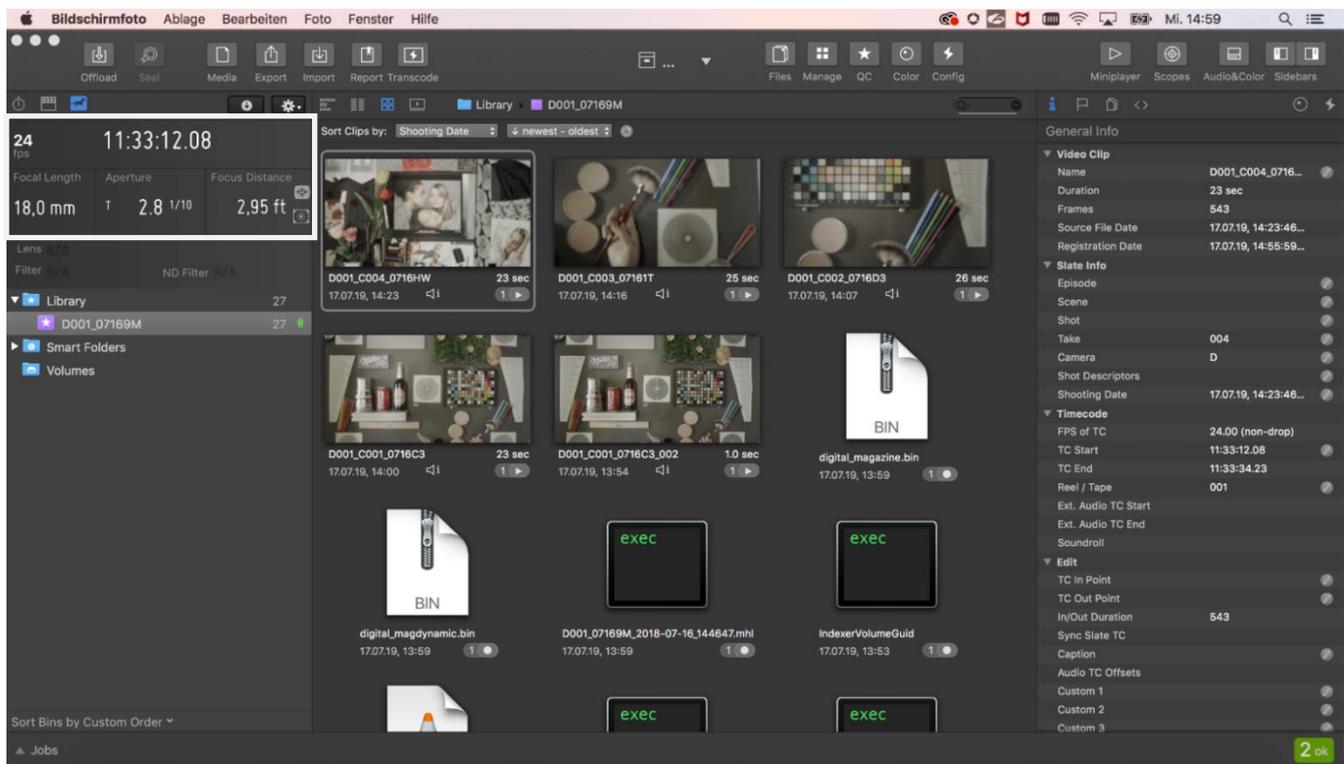
All clips will be listed in 'Library'.

Extract ZEISS eXtended Data from SONY X-OCN or XAVC video files

ZEISS eXtended Data are recorded into X-OCN or XAVC video files as dynamic metadata. They must be extracted using Silverstack and saved into `.z1cf` files.



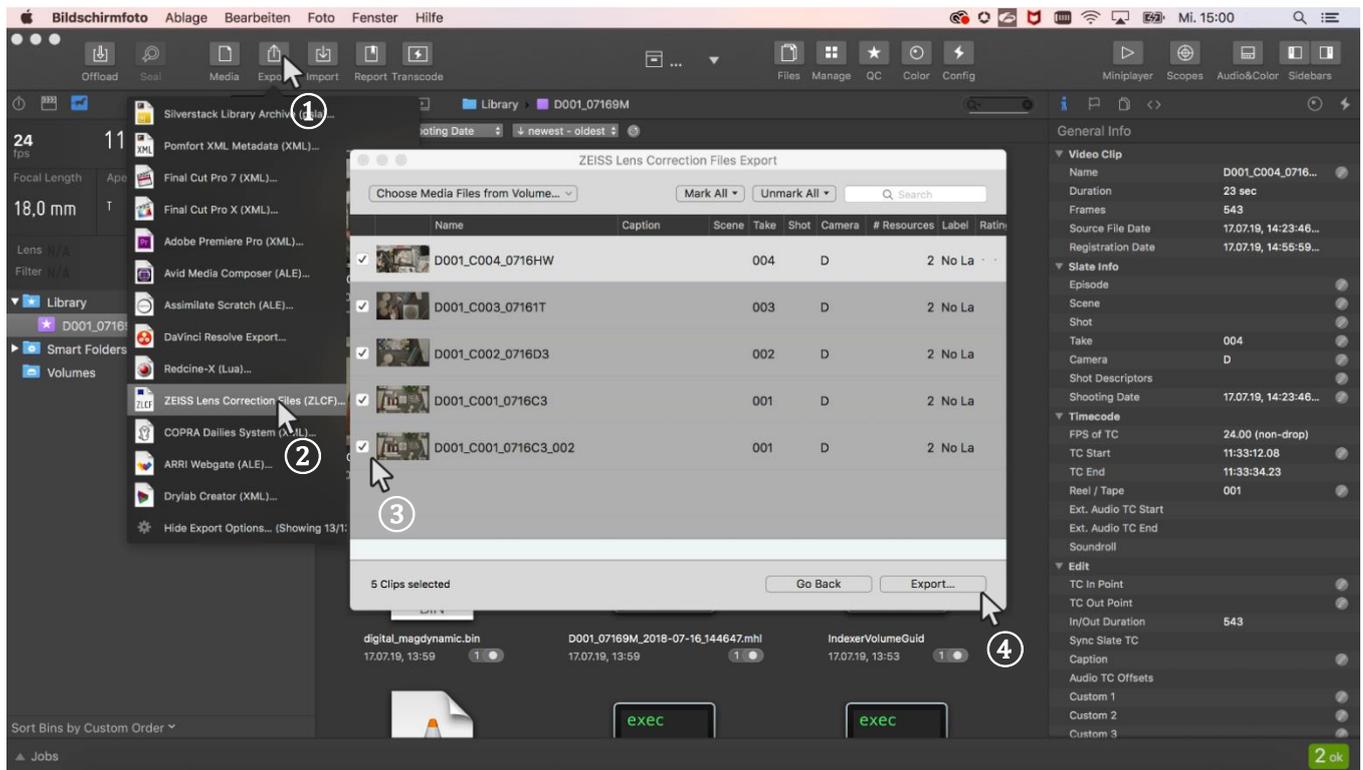
- ① Select the **Bin** that contains the X-OCN or XAVC files.
- ② Open the "Dynamic Metadata" section.
- ③+④ Extract dynamic metadata (**Extract for Bin**).



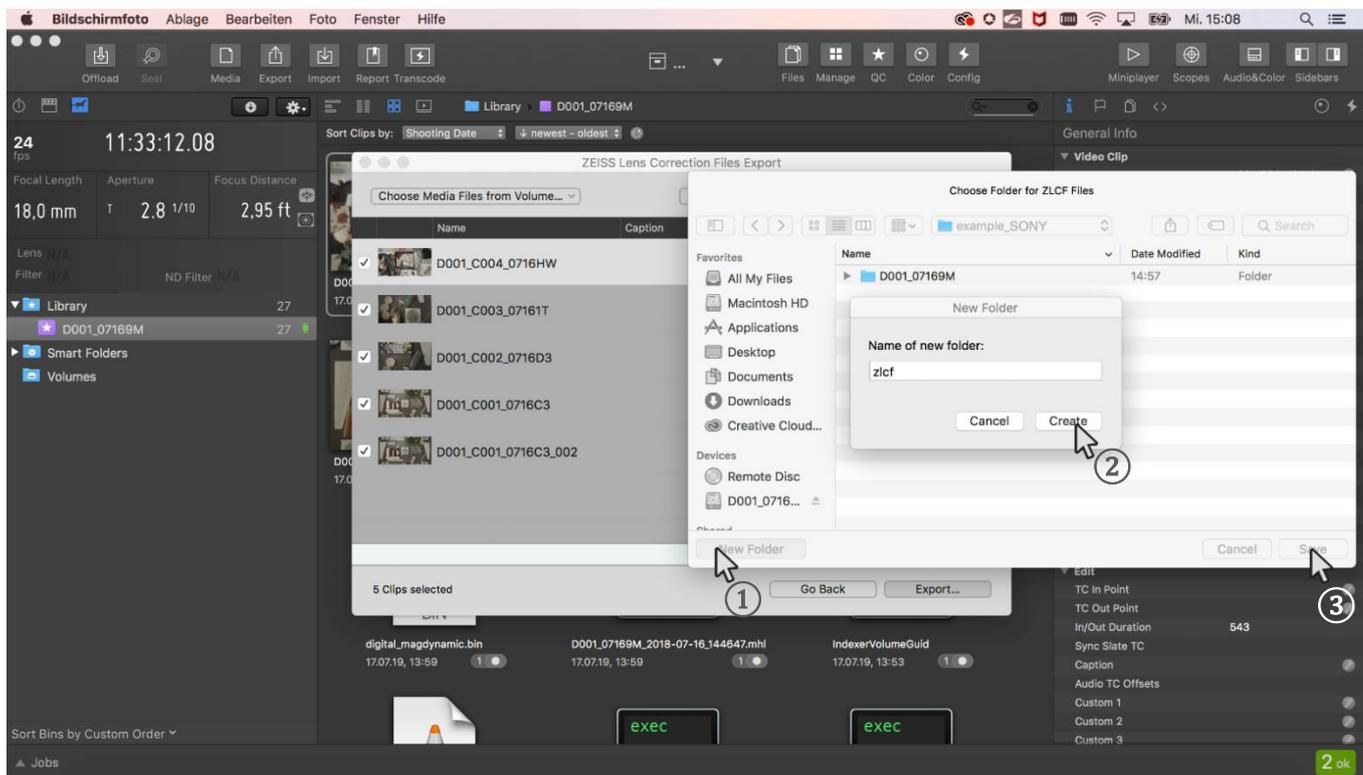
After successful extraction, the dynamic metadata panel reveals the extracted dynamic lens and camera metadata. The metadata can now be inspected during playback or while scrubbing through a clip.

Generate ZEISS Lens Correction Files (.zlcF)

Now that the ZEISS eXtended Data has been extracted from the video files, ZEISS Lens Correction Files (.zlcF) can be generated.



- ①+② Open the Export function by selecting **Export + ZEISS Lens Correction Files (ZLCF)**.
- ③ Choose all video files for which you want to generate a **.zlcF** file.
- ④ Go to the next step by choosing **Export**.



- ①+②+③ Choose a folder in which the **.zlcF** files will be saved.

Send the ZEISS Lens Correction Files together with the video files to the post-production.

Save the .zlc files in a folder within the same directory that contains the X-OCN or XAVC video files folder.

Use ZEISS eXtended Data in post-production

For introduction on how to use ZEISS eXtended Data in post-production, please read the ZEISS eXtended Data plug-in Quick Guide. It can be found on the ZEISS website <https://www.zeiss.com/cine/xd>.

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