

Phocus 4.1.2 Mac read-me

March 30th, 2026

Compatibility

macOS 12.0 or later is required.

In case you need to run Phocus on older versions of macOS please visit our software archive.

Phocus requires at least 8 GB of memory, where 16 GB or more is recommended.

Apple Silicon

Phocus supports Apple Silicon and Intel based Macs.

Use of the Rodenstock eShutter will require an Intel Mac or Phocus needs to run using Rosetta.

System Requirements

Graphics adapters

You should be aware that Phocus utilizes the processing power of the GPU - therefore using a Mac with a high performance GPU is definitely an advantage. All Apple Silicon Macs and all Intel Mac's using discrete GPU's should provide good performance. We do not recommend using a Mac that only incorporates an integrated Intel GPU.

Phocus will take full advantage of an external GPU.

Supported products

Image files from all Hasselblad USB and FireWire based digital camera products are supported. Tethered operation will work with the same range of cameras except for the first generation Ixpress series.

New Features in 4.1

HNNR for FFF files

Hasselblad Natural Noise Reduction (HNNR) is extended to FFF files, further improving the noise reduction effect of professional format files.

HDR support for the Reproduction tool

- The Reproduction tool adds full HDR workflow support, including Hasselblad L* wide color gamut selection, color calibration and curve adjustment in HDR mode.

Improved viewer quality

- Optimised the viewer display quality for direct editing of 3FR format files, improving
- rendering consistency at low zoom ratios and highlight rendering performance.

General improvements

- Improve processing and export performance
- Updated to support macOS Tahoe.

Other updates and fixes:

- Added automatic DRC application for HDR HEIF and HDR JPG images captured with the X2D II 100C, providing better image quality when HDR effects are turned off.
- Corrected color readouts, particularly in HDR mode.
- Fixed an issue where the Moiré mask generation progress slider showed negligible progress.
- Improved highlight recovery at extreme white balance settings.
- Fixed an issue where 6-shot exports could, under certain conditions, produce unwanted black noise artifacts.
- Fixed a tethering issue with H4D cameras.
- Fixed a luminance mismatch in the Viewer between Hasselblad RGB and L*RGB.

Change Log

4.1.2

- Supports setting AF-C for X2D II 100C during tethered shooting
- Supports switching all shooting modes for X2D II 100C during tethered shooting
- Supports switching various crop modes for X2D II 100C during tethered shooting
- Optimized entry and exit logic for live view during tethered shooting
- Supports setting the RAW import format to FFF or 3FR when importing images
- Fixed incorrect brightness when switching edited 3FR HDR to SDR
- Fixed CFe card images showing twice in backup mode
- Fixed tethered shooting failure over USB 2.0
- Optimized loading speed for multi-layer images
- Fixed slightly inconsistent shadows between SDR and HDR
- Fixed wrong output color profile when attempting to export HDR using 'Source'

4.1.1

- Improved performance when accessing image files on disk
- Corrected dark shadow rendering under certain HDR settings
- H6D live view is now displayed correctly in portrait orientation
- Fixed a crash when capturing multishot images with H4D-200MS
- Fixed a crash related to the Navigator and Zoom tools

New features in 4.0

HNCS Dynamic Range Compression (DRC)

With the X2D II 100C, Dynamic Range Compression (DRC) automatically enhances shadows and highlights.

- A DRC line will appear in the Exposure tool.
- The “As Shot” option automatically selects highlight and shadow levels based on the image content.

HDR Processing in Phocus 4.0

All Hasselblad RAW images can now take advantage of HNCS HDR processing in Phocus 4.0. To use HDR:

1. Verify that your monitor supports displaying HDR content.
2. Open the Exposure Tool V4.
3. Enable HDR by selecting the HDR checkbox.

In HDR mode, the Recovery slider has a separate setting to harmonize the appearance between SDR and HDR. A ghost marker shows the recovery level when viewing HDR in SDR mode, or SDR in HDR mode.

Optimizing Highlight Display

- Lower the monitor brightness to ensure highlights are displayed correctly.
- The Histogram will mark the monitor’s highlight capability, helping you judge highlight rendering.

Highlight Limiting

The Limit dropdown in the Exposure tool controls the maximum highlight output.

- Use this to match your monitor’s highlight range.
- Or reduce overly bright highlights that may be distracting.

Exporting HDR Images

HDR images can be stored or shared by exporting them as Ultra HDR JPEGs.

Hasselblad Natural Noise Reduction (HNNR)

Phocus 4.0 introduces Hasselblad Natural Noise Reduction (HNNR), an AI-powered model that runs locally on your computer. It is designed to perfectly preserve Hasselblad’s natural tones and fine details, even in 100-megapixel RAW images. This feature is applicable only for 3FR captured by X2D II 100C, X2D 100C, CFV 100C, CFV II 50C, X1D II 50C.

To use HNNR:

1. Select one or more 3FR images in Phocus Thumbnail View.
2. Right-click and choose HNNR from the menu.
3. Select your preferred mode:
 - Prioritise Purity - Minimises image noise as much as possible, ideal for most scenes.
 - Prioritise Detail - Retains a small amount of luminance noise in order to

better preserve fine image details.

Direct Editing of 3FR Files

Phocus 4.0 now supports direct editing of 3FR files from all X, CFV, and H6D cameras.

- 3FR images can be edited directly, without conversion to FFF.
- All adjustments are saved in a sidecar file, keeping the original RAW untouched.
- When importing from a camera or folder, the images remain as 3FR files and are no longer converted to FFF.

Improved Highlight Recovery and Dynamic Range handling

- Using Exposure version V4
- Applies for both SDR and HDR

Support for new hardware

This release introduces support for the new X2D II 100C camera and the new XCD35-100E lens.

Quality of Life improvement

Phocus 4.0 includes numerous user experience improvements designed to streamline everyday workflow

Tethering: Camera White Balance separation

- Doing tethered capture, camera WB can be adjusted and viewed in the Capture tool
- Preceding adjustments to the image in White Balance Tool will not affect camera settings.
- EV +/- range increase
- Phocus now allows +/- 4.0 stops EV adjustment for more flexible editing

Improved Import Tool

- Import all / import selection
- Option to skip duplicate imports
- Import path display
- Import actual count displayed

Color Readout improvements

- Use button "Always show color readouts" (just beside highlight warning button). Then the Readouts remain visible while other tools are in use
- New Viewer Zoom controls
- One click 100% / zoom to fit
- Menu for common zoom levels

Curves Tool improvements

- Histogram of input values to the curve tool drawn in background
- Larger curve tool layout

- Curve Tool resizable when in floating panel.

Updated UI styling

- For clearer tool distinction and easier navigation
- Larger fonts in tool view

Viewer background color context menu

- Toggle 'Proof mode'
- Select Background color tints

Thumbnails browser empty state view

To help give an indication to user why nothing is shown.

- No Images in folder
- No Images because image type filter is applied (Clear filter button appears)
- No Images because Search term applied (Clear filter button appears)

Hint user if viewer is empty

Due to a (legacy) 3fr that requires import

- Message is shown in viewer when a 3fr that requires importing is selected in Thumbnails.
- Button to begin Import appears.

Fast image access

- Support of 'Open With...' and drag and drop from Finder (and other apps) to Phocus for all file types created by HB cameras.

Known Issues

Reproduction tool

Does not work correctly with Exposure Tool V4

For Exposure tool V4 the reproduction tool will be disabled and settings changed to default:

- Working Space: Hasselblad RGB
- Color calibration: Factory
- Input Profile: Factory
- Response: Standard

To use reproduction tool, change Exposure tool to V1-V3

Direct 3FR editing

- Thumbnail previews may not update after editing
- Low-resolution Viewer preview may differ from full resolution
- Color Calibration tool not supported with 3FR files

Change Log

4.0.1

- Exposure Tool: EV input text field now accepts values from -4.00 EV to $+4.00$ EV.
- Reduced excessive memory consumption when opening folders containing many JPEG files.
- Fixed compare mode functionality for 3FR files.
- Corrected vignette adjustment for the XCD35–100E lens, which previously could cause overly bright corners after export.
- Resolved stability issue when using "Export as Previous".
- Fixed an issue where some JPEG images could not be displayed or exported.
- Fast Preview export for 3FR files now correctly applies image settings.