



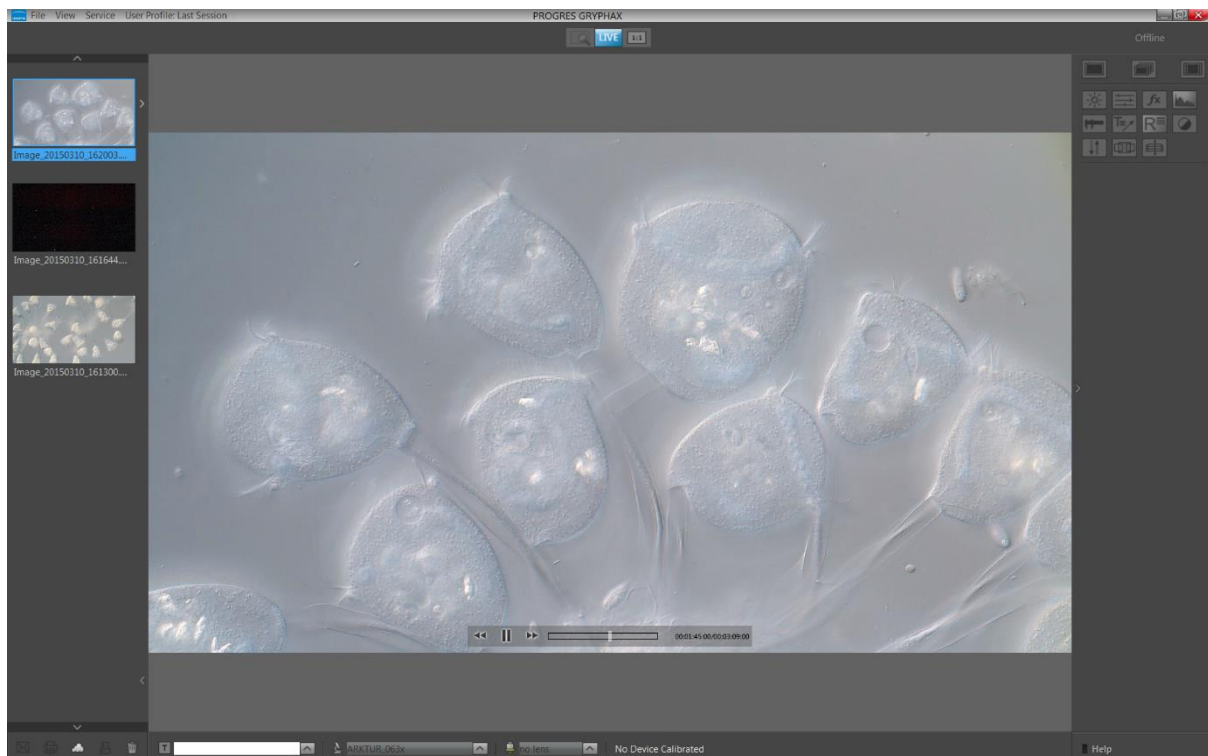
## Slow Motion Video mode of JENOPTIK GRYPHAX<sup>®</sup> software

The “[Slow Motion Video mode](#)” of JENOPTIK GRYPHAX software enables user to record video files in high image quality and high speed up to **120 fps**. Depending on camera type.

### General description:

The *Slow Motion video mode* is part of the JENOPTIK GRYPHAX software version 2.2.0 or newer. It enables user to record **High Speed** or **Slow Motion video** files in high image quality up to 120 fps. The video resolution is fixed to the used camera type and aspect ratio. Additionally, user can replay / review recorded video files from gallery.

### Video replay mode activated:






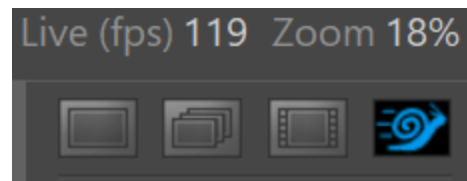
## Preparations general:

To reach the best Slow Motion performance, additional function from *FX tool* and *Histogram* should be disabled in advance.

Furthermore, the object to be recorded should be illuminated in the best possible way to reach greatest results. All software settings will be used from current settings.

### 24.1 Start Slow Motion video mode:

To **activate** the *Slow Motion video mode* use the Slow motion icon  on the tool bar. All camera settings and tools are enabled to adjust the current camera image by enabling additional tools as well.



Note: The maximum possible exposure time will be limited according max. possible camera frame rate!

The slow motion widget will be opened and display the video resolution, recording time and slowdown factor.


Set the **recording time** in seconds (the maximum recording time depends on the installed memory "RAM" and the used video resolution)

Set the **slowdown** factor to archive a **high-speed video** or a **slow-motion video**.



- For **high-speed** set slowdown factor "x1" – frame rate live = video frame rate (up to 120 fps)
- For **slow-motion** video factor to e.g. "x4" – slow motion video frame rate = ¼ of live frame rate

Note: Change to record mode is enabled only if live image is activated before and live stream is shown in the image window.

**Start** the slow motion video record by pressing the "REC"-Button , which instantly changes to "STOP" to signal the user, that the recording mode is active.


Slow motion tool will record video file with pre-selected recording time and slowdown factor.

After finish of slow motion video record, the video file will processed and saved.

Afterwards, the software returns back to *Slow motion video mode* to start a new video record in case that the function "Show image after capture" is deactivated. (under Preferences / Storage Options. Keyboard short cut (ctrl / cmd + O)

Note: After starting the slow motion video mode no additional tools can be activated.

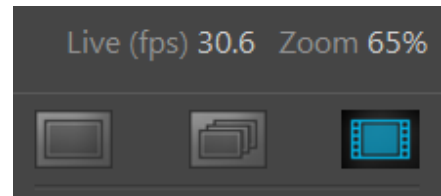
### Abort Slow Motion video:

Press the "STOP"  button to abort the video recorded at any time if needed. No file will be saved.

### Leave Slow Motion video mode:

To **leave** the *Video mode* use the alternate record mode icons "Single shot", "Time-lapse" or "Video" from Tool bar.

Note: Last set software settings will be still used and saved at software settings.




## 24.2 Replay Video files:

To **replay** / playback video files from gallery, double-click on the according video file thumbnail. The video file will be displayed on the image main window together with an overlaid function bar.



The video replay function bar contains the following options:

- d) Video controls for Back / Play / Pause / Forward. 
- e) Progress bar to display position of video file or to seek the whole video file by mouse operation.



- f) Display the time-stamp and total video time. 



### 24.3 Change storage format:

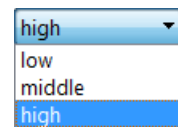
To [change](#) the storage format for video files, please enter the software Preferences at title bar under "Storage Options" or use keyboard short cut (**ctrl / cmd + O**).

Note: The available video storage format of the cameras depends on the operating system.

### 24.4 Change video quality:

To [change](#) the quality for video files, please enter the software Preferences at title bar under "Storage Options" or use keyboard short cut (**ctrl / cmd + O**).

**Video Quality** can be select from drop down list. The following quality levels are available: High, Middle and Low.



The quality level "Low" is pre-selected as default. Because of the best ratio between video frame rate, bitrate and used CPU utilization.

The used video decoding bitrate for each video format and quality level varies and is depending on used operating system.\*

Note: The video frame rate depends on the used hardware environment of PC, video format and selected quality level.

\*(Available as of Jenoptik GRYPHAX version 2.1 or newer)

#### Limitations:

- No live preview is displayed during slow motion video record and processing.
- Slow motion video file creation can be time combustion depending on hardware environment.
- Measurement and Annotation are not available during slow motion video record.
- Video resolution is fixed to the used camera type and aspect ratio.
- The video file size is limited by approx.: half size of installed memory (RAM).
- The max video frame rate is limited up to 120 fps depending on used hardware environment.
- The max exposure time is limited by given frame rate limit from camera. Gain can be used instead.