

# PC SOFTWARE

## K3-Studio



### Description

The software ABS K3-Studio is a user-friendly program for camera control, camera configuration, and video documentation. It was especially developed for operation with the 3 megapixel HDTV camera system KK101 (camera for environmental chambers). K3-Studio provides all features of a video- and image-based documentation and logging of various technical processes. Furthermore, K3-Studio can configure and control the heating and cooling system of the camera (via E-box).

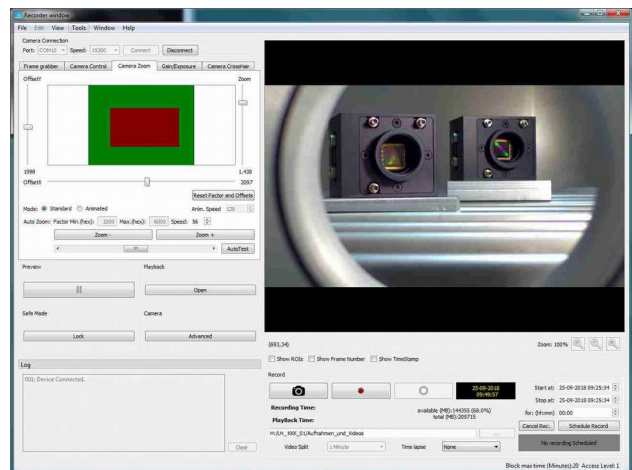
Together with the KK101 camera the software combines easy integration with comfortable handling and modern image improvement possibilities. Image transmission to a PC is realized via frame grabber card (provided). The system is controlled via USB2.0 interface. By default, the live image output is FullHD format 1920 x 1080p. Other formats are selectable (such as 720p).

By means of a software-based interface and other freely configurable I/Os, the software can be used to control external devices and/or export/import information via data transfer. For example it would be the optional function to record the temperature values of the environmental chamber, and in case of overheating an emergency stop of the environmental chamber can be triggered.

### Applications

- Documentation by single image capture, time lapse and sequential, or full video recording
- Quality management, traceability
- Documentation / process surveillance
- Optional: event controlled recording (pre-post-capture)

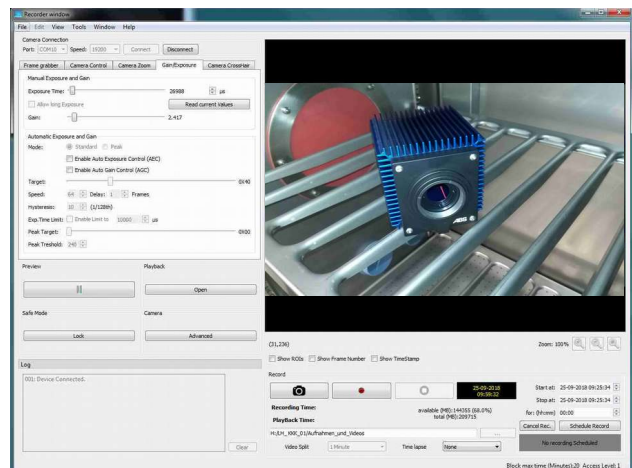
### Screenshot user interface (zoom and tilt)



### Supported functions

- Single image capture manually (camera mode)
- Live preview
- Live image capture – manually or timer controlled
- Image display mode
- Each image can be saved with precise time-stamp ( $\mu$ s precision)
- Hierarchy based user structure with different access levels including password management
- Automatic locking function for user interface – delay time adjustable
- Camera interface via frame grabber and separate communication channel for configuration and controlling of camera and heating/cooling system
- Frame rate adjustable (stepwise in seconds)
- Typical application scenarios are
  - Live image recording
  - timer controlled image recording with adjustable time delay over a time period of hours or days
- Digital zoom, tilt, pan
- Intelligent automatic naming to facilitate documentation and retrievability/traceability
- Supported imaging functions:
  - Exposure time and gain – manually or automatically
  - White balance, shading correction, color correction
  - Manual image improvements: contrast, sharpness, saturation
  - Horizontal and vertical flip (image mirroring)
  - Cross hair overlay insertion
  - histogram
- Frame grabber control
- Logging of serial ports

### Screenshot user interface (exposure control)



### Technical specification

- Compatible with Windows 7, 8 und 10 (64 bit)
- Software based interface for environmental chamber control provided in principle (must be adapted to chamber model)
- External data logging (e.g. temperature, pressure)
- Master/slave behaviour of the system in connection with external components (e.g. environmental chamber, illumination)
- Freely configurable I/Os for external components
- Optional: customer specific safety shutdown of the environmental chamber at critical temperatures

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