

# ***DUKANE***



## **Camera 250 and Camera Software Guide**

( Version V1.1 )

**DUKANE** Audio Visual Products  
2900 Dukane Drive, St. Charles, Illinois 60174  
Toll-free: 888-245-1966 Fax: 630-584-5156  
E-mail: [avsales@dukane.com](mailto:avsales@dukane.com)  
[www.dukaneav.com](http://www.dukaneav.com)

## Contents

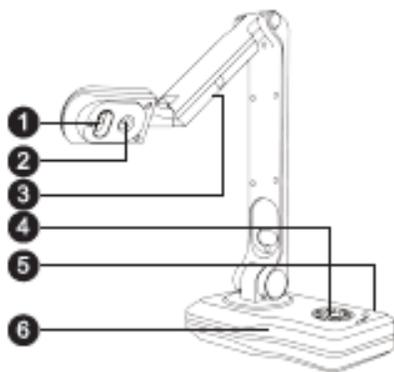
1. Camera 250 Properties
2. Camera 250, Operating alone ( No computer) Just HDMI or VGA out.
3. Camera Software on the computer ( Using the USB connection to camera )
4. Troubleshooting and operating tips

### **1.0 Camera 250 Properties**

- 1 5.0M pixels 1/4"CMOS Sensor
- 2 Large Shooting Area
- 3 100X Digital Zoom
- 4 Max. 30fps Frame Rate & HDMI Output
- 5 Simply one-touch Auto Focus & Video Recording
- 6 Built-in LED lights to provide bright images
- 7 Foldable Mechanical Structure allows users portability and easy storage.
- 8 Rotating camera head & split screen functions
- 9 PC Free Live annotation ( No computer needed )
- 10 Connectivity: Connect directly to any projector to share images of objects or document's content. With a projector, the native aspect ratio is automatically detected, so the image fills the screen.
- 11 Excellent pictures: High refresh rate of 30 frames per second which offers smooth, clear live video images, plus 100x digital zoom. Can support Full HD (1920 x 1080). Options are 480p, 720, 1080p resolution output.
- 12 Various I/O ports: HDMI output, , VGA output , VGA input, USB Type A. With the USB Type A port , users can use the PC free Live Annotation mode by connecting a USB mouse directly to the port.
- 13 Computer Free Live Annotation Mode: PC less annotation allows teachers to connect an USB mouse directly and annotate with line, circle, shapes, plus writing, etc. on the live image.
- 14 Intuitive buttons: The camera has highly visible, dedicated buttons to auto focus; switch between inputs; zoom in and out; take photos; or record video.
- 15 Flexibility: Camera head rotates through 270 degrees to adjust the viewpoint. Science teachers can easily position it by a microscope to share a close-up view. Or they can use the close-up view from the camera directly.
- 16 Advanced Application Software: Use the included computer software for USB image capture, editing or video operations.
17. Create lesson notes: Add written notes or audio commentary to videos or pictures with the built-in microphone and live annotation feature with simple-to-use drawing tools.

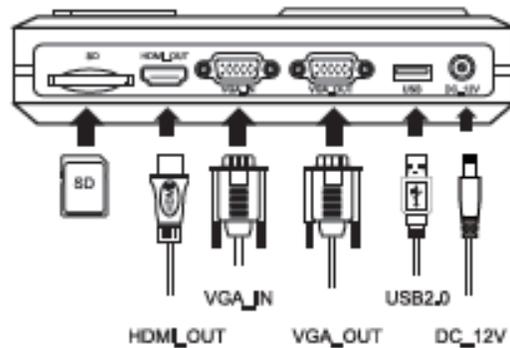


### Parts identification



- 1-Camera Lens
- 2-LED Light
- 3-LED Lights
- 4-Control Buttons
- 5-Interface Ports
- 6-Base

### Side Panel Ports



### Push Button Controls on base



- Turn on the power
- Zoom in current image
- Zoom out current image
- Function selection
- Function selection
- Turn on/off and adjust the LED lights
- Press to realize the function/auto focus
- Change the resolution/back to main menu
- Change to VGA/HDMI
- Go to the main menu



**IR Handheld remote Control**  
Use for controlling the camera at a distance.

**Technical properties**

Image sensor	1/4" CMOS	Automatic focusing
Frame rate		5MP 2592x1994 SXGA 1280x960 1080P 1920x1080 720P 1280x720
Image edit		Auto white balance Contrast ratio Brightness control Sharpness Saturation Edge enhancement Digital denoise Freeze Division Picture-in-picture Mirror Image rotate Annotate USB control
Digital Zoom		100X
Color display		Color / Black & white / Negative
Photograph (Analog)		JPEG, 1080P, 5M
Video (Analog)		720P/25, 1080P/5 (AVI)
Photograph (USB)		1080P, 5M
UVC		UVC, WIN/MAC YUV 2592x1944/2fps YUV 1920x1080/5fps MJPG 1920x1080/15fps YUV 1280x720/12.5fps MJPG 1280x720/15fps YUV 800x600/15fps MJPG 800x600/15fps
DC power adapter		EA12V 1A
Audio Built-in MIC		MIC/I2S Coder (I2S in HDMI)
USB interface		Support mouse / USB cable
SD		SD2.0, 32G
VGA interface		VGA-IN, VGA-OUT
VGA/HDMI		1920x1080@60HZ 1280x1024@60HZ 1024x768@60HZ 1280x720@60HZ

**Operating modes**

1. Camera 250 Operating alone ( No computer) Just HDMI or VGA out.
  - a. Connect camera with the HDMI cable to projector or display panel.
  - b. Connect camera with the VGA (out ) cable to projector or display panel.
2. Use the USB cable to connect camera to computer. Use software in computer.
3. Use VGA in port to connect to computer for the computer image. Use the VGA out port to connect to the projector or display. Can use the VGA / HDMI button to switch between the camera and the computer images. Need long press on the button.

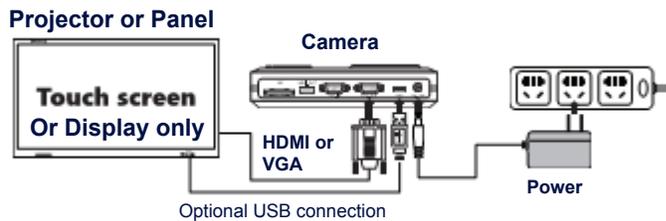
## 2.0 Camera 250 Operating alone ( No computer) Just HDMI or VGA

### PC less ( No Computer Connected Operation )

1. Plug in the power adapter and power cable to camera.
2. Connect the HDMI or VGA (out) cable from Camera to Display.
3. Turn on the Camera.
4. Operate the camera using the control buttons on camera base and the on-screen menu at bottom of the image.

Option 1; Add an USB mouse or a wireless USB mouse to the USB port for control of the image cursor and to annotate the image.

Option 2; For a touch screen display, connect the USB port to the touch screen USB port. Then can control the cursor by touch. May need to calibrate the touch screen.



On-Screen Menu

### Menu from above HDMI or VGA Display ( on bottom)



- Ⓜ Automatic Focusing.
- 🔍 Magnify the selected area.
- ➕ Zoom in the image.
- ➖ Zoom out the image.
- 🔄 Rotate image by 90°/180°/270°/360°.
- 🏠 Mirror the current image.
- ❄ Freeze the image.
- 🌑 Contrast captured image with live image.
- 📷 Capture a still image.
- 📹 Record a video clip.
- 📁 Browse images and videos in SD card.
- 🖼 Display captured images with live image on right top window.
- ✍ Annotate on the screen and the annotation can be saved into SD card.
- ⚙ Camera settings and other settings.

## Using the SD Card

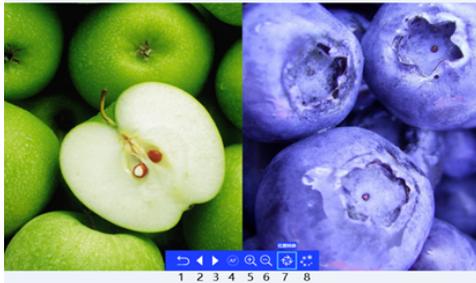
1. Insert SD card in slot.
2. When SD card is correctly inserted, images and videos will be saved automatically to the card.
3. Remove the card by pushing inward and releasing. Card will spring outward.

## Using the on screen menu options



### Contrast ( Compare images )

Compare captured and live images.



### Compare and show multiple images

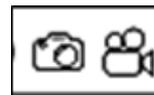


### Show picture in picture



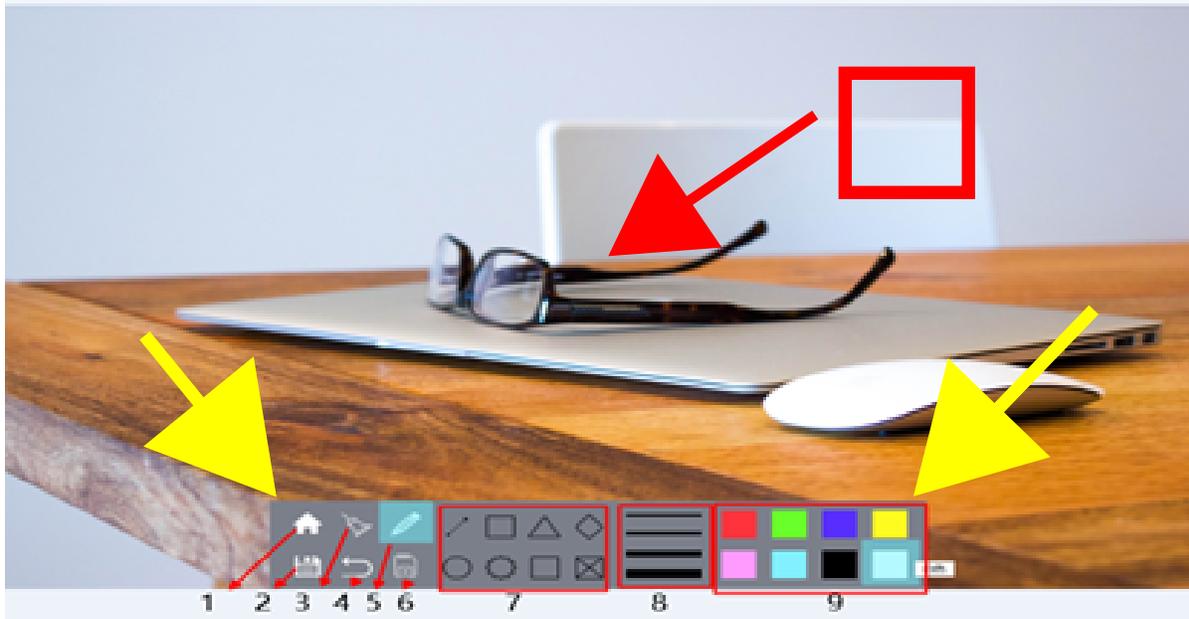
## Recording images or video

1. Set the size and position of the image.
2. Press the Auto-OK button for focus
3. Click the camera or video icon in the menu for storage on the SD card.  
Also can use the remote control for these functions.  
The SD card can be backed up by copying the files with a computer.



## Annotation

Click on the pencil icon to get the annotation menu.



### Annotation Menu tools

- 1 Back to main interface
- 2 Save interface
- 3 Empty interface annotation
- 4 Cancel last operation
- 5 Brush
- 6 Clean
- 7 Drawing tools
- 8 Line thickness
- 9 Color selection

### Main Menu

Annotation tool Menu

- Automatic Focusing.
- Magnify the selected area.
- Zoom in the image.
- Zoom out the image.
- Rotate image by 90°/180°/270°/360°.
- Mirror the current image.
- Freeze the image.
- Contrast captured image with live image.
- Capture a still image.
- Record a video clip.
- Browse images and videos in SD card.
- Display captured images with live image on right top window.
- Annotate on the screen and the annotation can be saved into SD card.
- Camera settings and other settings.

## Control settings

Gear icon on menu bar

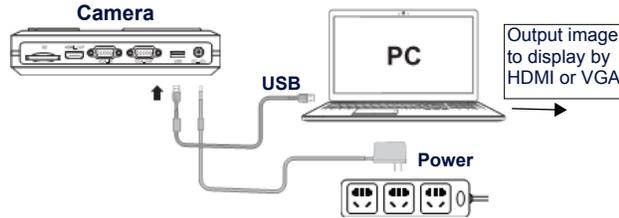


### CONTROL MENU ITEMS

- 1 Focus : Continuation or single
- 2 Focus distance : Far or near
- 3 Photograph mode : Color /Black-white /negative
- 4 Image mode : Text and image single select or not, after selection, image parameter (brightness, contrast ratio, saturation, sharpness, and volume) Self-adjust image parameters.
- 5 Top LED light : 1 section shift
- 6 Side LED light : 3 sections shift
- 7 Anti-glare /flicker : 50Hz or 60Hz
- 8 Language : English or Chinese
- 9 Pixel selection : 1920\*1080, 1280\*720, 1280\*1024 and 1023\*768
- 10 **Format SD card** operation and to restore the default parameters: After the parameter modification, the first save, then exit.

### 3. Software on the computer ( Using the USB connection)

The application software is for use with USB 2.0 camera output. It will operate with both the camera model 150 and 250. Check website for the latest version of the software.



1. Plug in the power adapter and power cable to camera.
2. Connect the USB cable to the PC and the camera.
3. Install the software on the computer.
4. Operate the software by clicking on the Icon.
5. Final image can be displayed on the computer screen and also by a projector or panel.

#### 3.1. Install the Software

Install the Visualizer program from the CD or the Dukane web site.

For the website;

See the Downloads on the website product page, or the Downloads on the SUPPORT section.

On the website for the camera, go to the model on;  
<http://dukaneav.com/documentcamerasandvisualizers>  
 Then click on the Downloads.

On the dukaneav.com website SUPPORT page go to SUPPORT / Product Downloads / Document Camera / Show Products / and the model.

Note that the software file may exceed 300MB in size.

The software icon should be present on the desktop if the normal install procedure is followed.

#### 3.2. Operation of camera

Double click the Visualizer icon to open the software.

The control menu disc should appear.



This menu lets you choose 5 modes of operation.

1. Presenter; operates the camera
2. Desktop: shows your computer desktop
3. Video: lets you record videos
4. Contrast; use to compare images
5. Scan; For file management and image processing

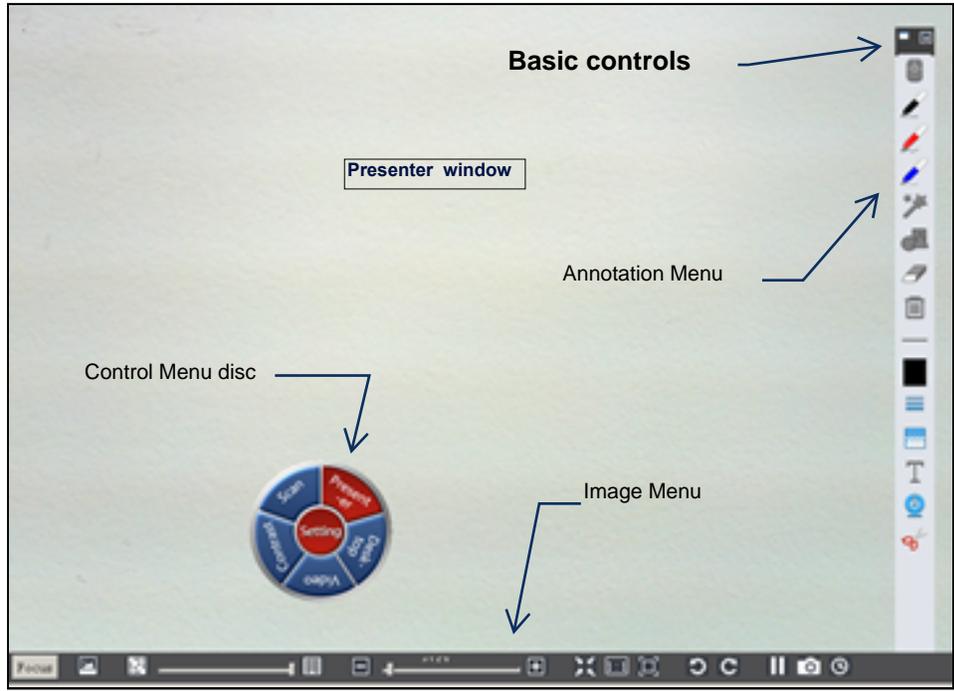


- Center is " Setting" ; when clicked provides options;
- Saving File path; where the images are saved
  - About; Software information
  - Exit Close the software program



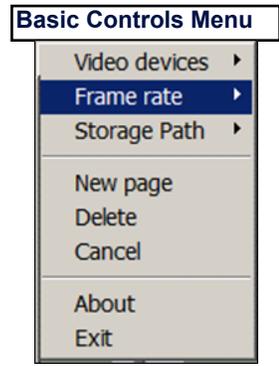
### **Presenter Mode ( Camera image and operation )**

For startup, use the **Presenter** mode to view the camera image. The Presenter window has menus on the right side for annotation and a tray menu to control the image properties.



#### **Basic controls (button on top right)**

Located at top of the annotation menu bar. Click to open.



#### **Annotation Menu items ( Side bar )**

-  minimize menu
-  Cancel
-  Brush Black
-  Brush Red
-  Brush Blue
-  Flash Brush

Continued on next page

Annotation menu continued

Sub menu for annotation

- Choice, select
- Rectangle
- Circle
- Ellipse
- Triangle
- Text
- Eraser
- Delete
- Line, curve, dash
- Color
- Line thickness
- Opacity
- Type
- Other camera

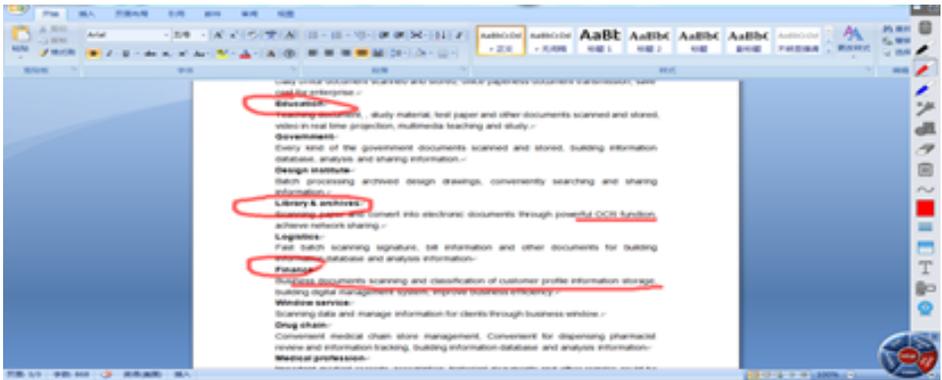


**Image Menu** ( at the bottom )



Use image menu to control properties like the focus, contrast, brightness, saturation, size, resolution, and rotation. Also the display, freeze, image capture (camera icon), and time lapse photos.

**Desktop on the circular menu**



Desktop

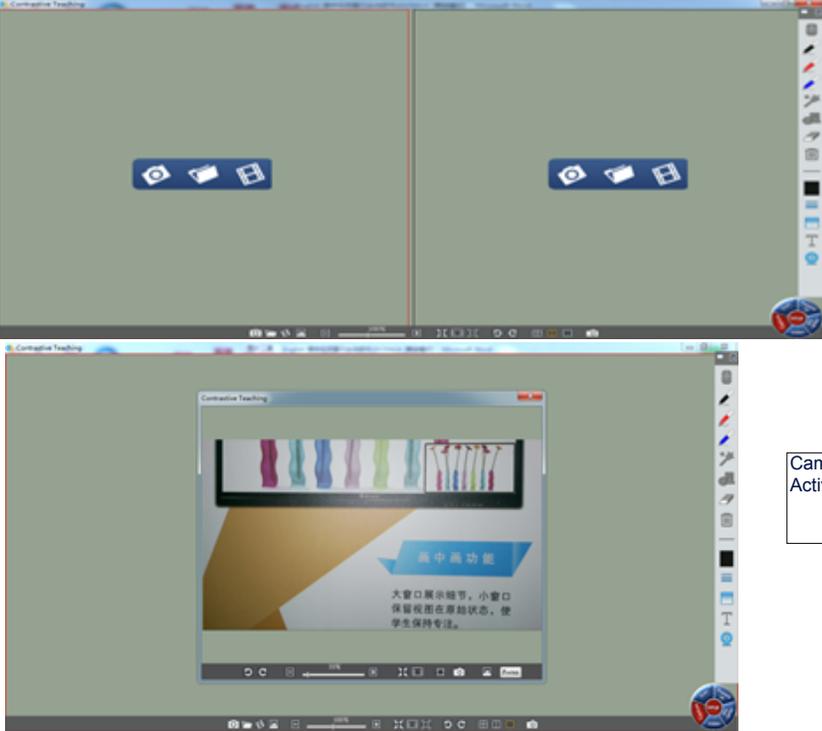
One added icon in the tool-bar for the Desktop. It is for the desktop operations . Layout options. Other tools have the same functions. You can annotate, clean, snap and other operations on the pre-prepared document.

**Video recording on the circular menu**  
 Click the **Video**.  
 Then click the start icon  
 To STOP the recording, click the circular menu **Stop**



Video / Stop

**Contrast / Capture on the circular menu**  
 Use to compare images

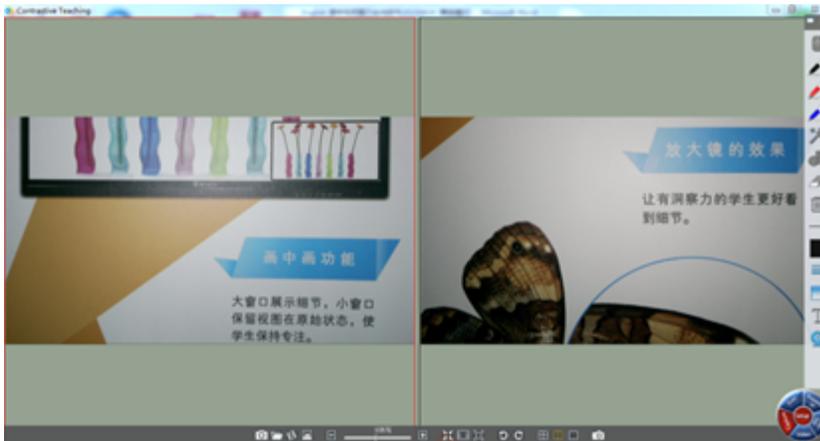


Contrast / Capture

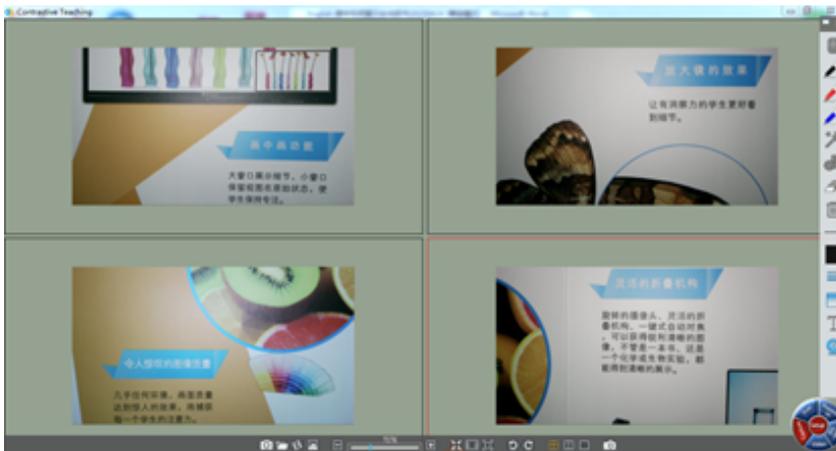
Camera scan  
 Active tool bars



Single frame image



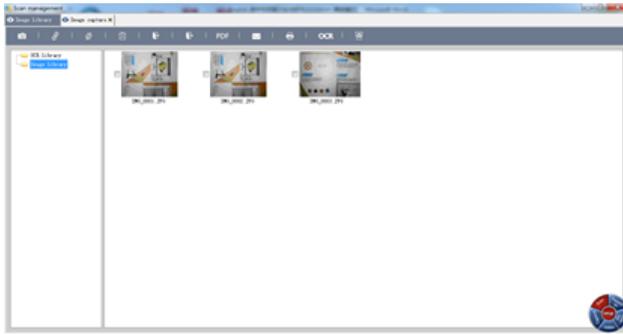
Two images compared



4 images compared

**Scan on the circular menu**  
 Use for file management and advanced image processing.

File management window.



Scan

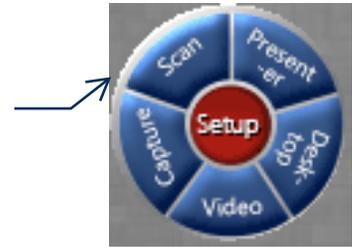


Image capture window.



Image processing window.



- Toolbar options
- Cancel
  - Revert
  - Brightness
  - Saturation
  - Contrast ratio
  - Correct black edge
  - Cut
  - Flip horizontal
  - Flip vertical
  - Gray scale
  - Binaryzation
  - Antiphase
  - Anaglyph
  - Sharpen
  - Use
  - Resetting

Browser window.



## 4. Troubleshooting and operating tips

Software will not open.

1. Check whether the USB cable is connected correctly.
2. Go to company official website to download the latest software version.

Other

1. Manual format is PDF, if it does not open, please install PDF reader.
2. Please use the USB interface of the host computer to provide a stable power supply.
3. If removing camera from the computer, please close the camera software first, then turn off the camera power, and finally disconnect the HDMI , VGA, or USB cable.
4. For other issues try to restart your computer.

### TROUBLESHOOTING CAMERA 250

Problems	Possible causes	Solutions
The device does not turn on in normal condition.	The USB cable is not well connected with power.	Reconnect the USB cable.
	The power adapter is not well connected to the device or the power socket.	Make sure the power adapter is connected correctly to the device and power socket.
	The power is not turned on.	Turn on the power.
No image display after device connection.	The device is not connected to the external equipment correctly.	Re-connect the device with the external equipment.
	The external equipment is not selected correctly.	Select the correct external equipment.
	The device is not switched to the correct source of signals.	Switch to the correct source of signals.
	Equipment resolution not right.	Select the right resolution from equipment or Document Camera.
The device fails to capture images or record videos.	SD card memory is insufficient.	Remove some files and clear up the memory space of SD.
The image is blurry.	The object is too close to the camera head.	Use Auto Focus or Manual Focus to adjust the focus.
The image is too dark.	The intensity of the lighting is insufficient.	Turn on the LED light and press the light button on the operating panel to adjust the brightness.
The image does not move.	Image Freeze function is activated.	Press again the Freeze function key on the control panel or the remote control to close the function.
The remote control does not respond.	The battery runs out.	Please replace with new batteries.
	The distance between the remote control and the device is too far.	Please shorten the distance between the remote control and the device.
Touch does not respond on Touch screen.	USB cable not well connected.	Reconnect the USB cable
	No calibration process after connection.	Do the calibration

DUKANE CORP AV SERVICE DEPT  
 2900 Dukane Drive  
 St Charles, IL 60174  
 800-676-2487 / 630-762-4032  
 Fax 630-584-5156  
 avservice@dukane.com  
 www.dukaneav.com

20190523