

GV400 Visualizer

Document Camera



USER MANUAL

Please read this manual carefully before operating the document camera and keep it for reference

Safety Measures



Notice: PLEASE READ CAREFULLY BEFORE USE

- ◆ Use the document camera (Visualizer) under the rated electric conditions.
- ◆ Do not place the document camera (Visualizer) on an unstable surface. It may fall causing injury or damage.
- ◆ Do not place this device directly under sunlight or near heaters.
- ◆ Do not place this device near water.
- ◆ Keep the camera away from acid or alkali gas.
- ◆ Do not place this document camera (Visualizer) in humid, dusty, windy or vibrant locations.
- ◆ The recommended operating environment is:
 - Temperature: 0°C—45°C (32°F-113°F)
 - Humidity: less than 75%
- ◆ Always unplug BEFORE cleaning the device. Use a damp soft-cloth for cleaning. Do not use volatile solvent.
- ◆ When this equipment functions abnormally, such as smoke, smell, noise, immediately unplug and call for professional assistance.
- ◆ Unplug the document camera (Visualizer) when not in use.

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1. INTRODUCTION

Thank you for purchasing this product, with sensible use it will give years of faithful service.

Like many of us, referring to the user manual is often a last resort so we recommend you make an electronic copy and a hard copy for future reference.

We have designed the product so that it's easy to understand and operate. Most of the core functions can be operated from the Visualizer front panel, leaving some of the special functions such as freeze, mirror, image store and rotate on the remote. It's therefore important that you take care of the remote

We hope you enjoy using the product.

3 Year Warranty

Warranties give you peace of mind, even so, you need to take care of your GV400 and understand what's covered and what's not.

What's covered?

In general the unit is covered by a 3 year warranty which takes into consideration failures which are outside of your control.

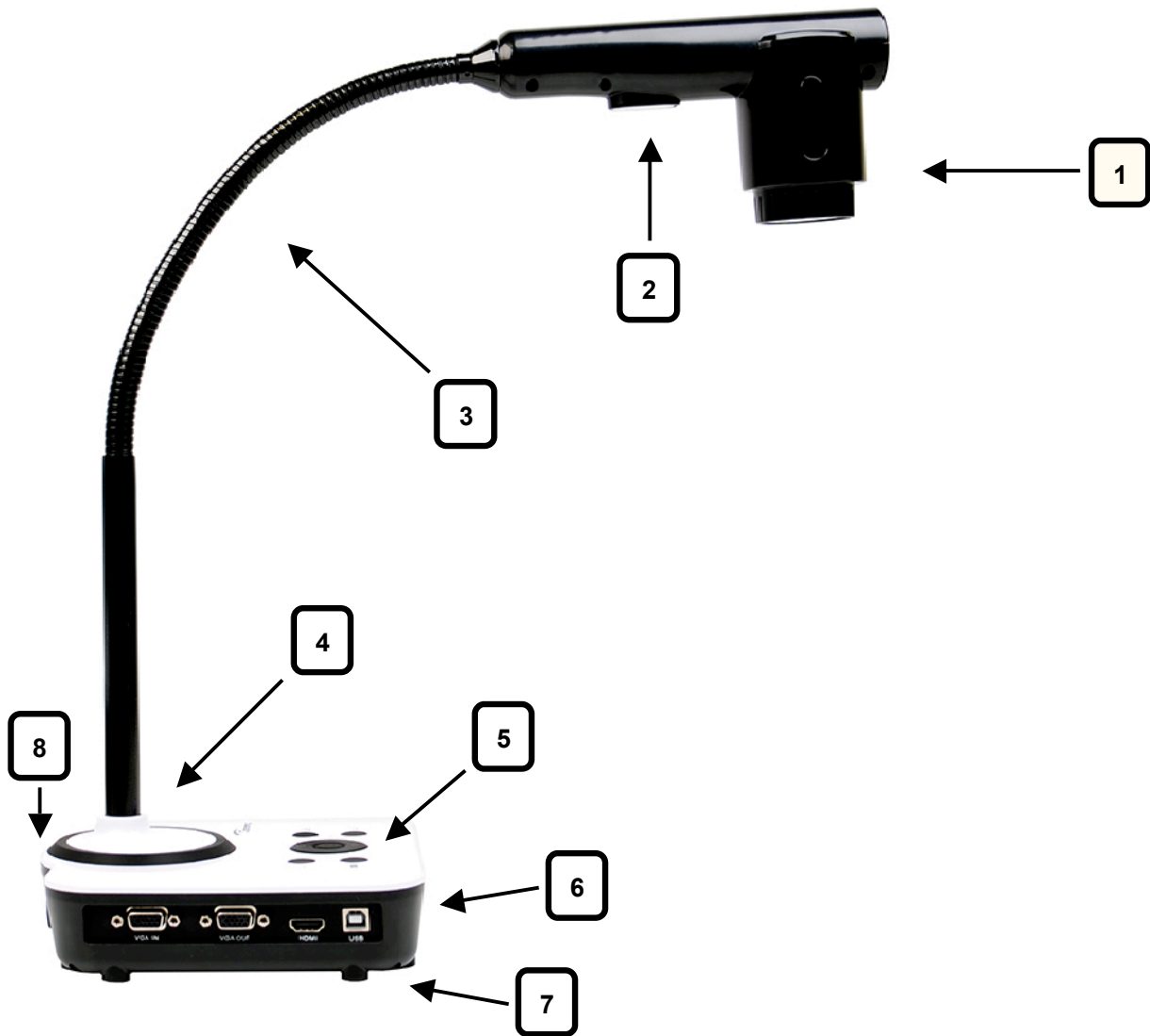
What's not covered?

- Physical damage / abuse
- Fluid ingress
- Broken cables due to twisting / excessive force

Compliant

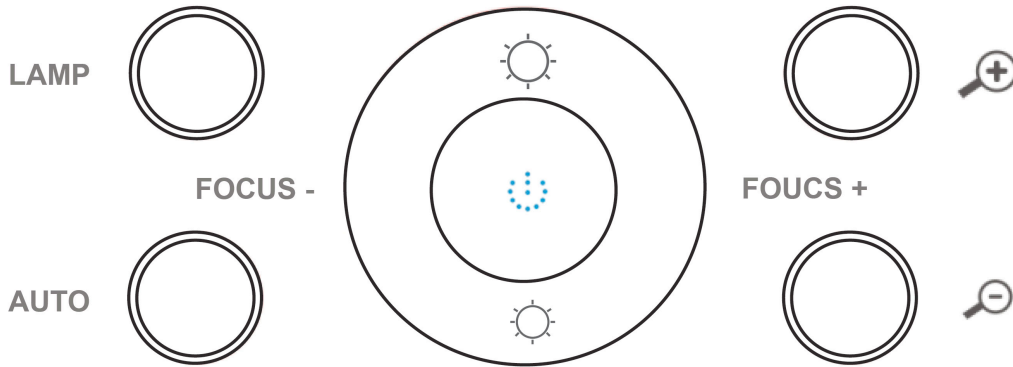
The GV400 is RoHS compliant, which means it meets the rigorous European Union's requirements for restriction of the use of certain hazardous substances in electrical and electronic equipment.

2. PARTS IDENTIFICATION



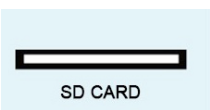
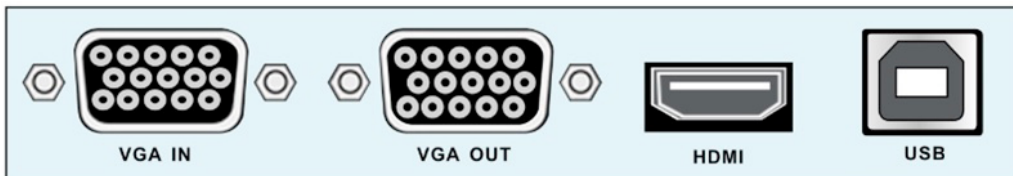
1. Camera
2. LED light
3. Flexible camera arm
4. IR receiver for Remote Control
5. Control panel
6. SD Card Slot
7. Interface panel (HDMI, VGA Out & Past Through ports plus USB2)
8. Mains Input & Kensington lock

3. CONTROL PANEL



1. **POWER** Turn on/off power.
2. **LAMP** Turn on/off LED light.
3. **AUTO** Carry out auto focus, color adjustment and white balance.
4. **FOCUS+/-** Adjust focus manually, focus far and focus near.
5. **BRIGHT+/-** Image brightness control.
6. **ZOOM+/-** Image zoom-in and zoom-out control.

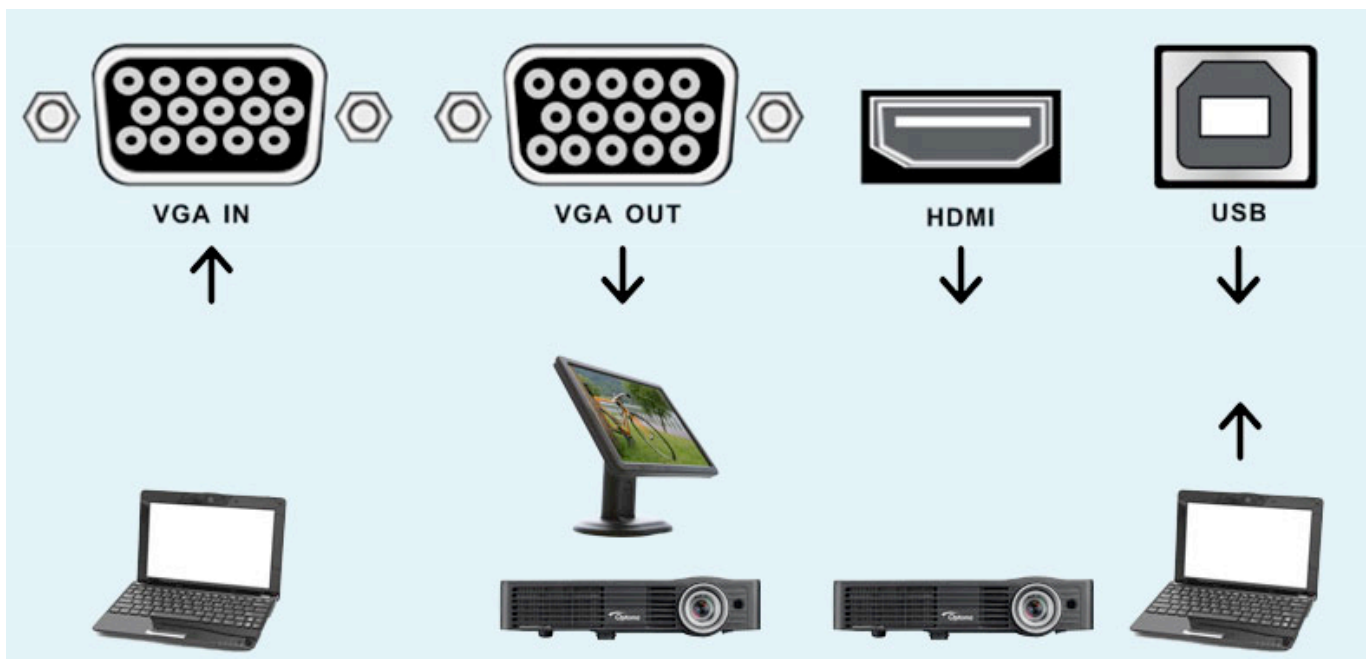
4. INPUTS AND OUTPUTS (I/O's)



1. **VGA IN** VGA (RGB) signal input (15 pin D-SUB).
2. **VGA OUT** VGA (RGB) signal output (15 pin D-SUB)
3. **HDMI** HDMI signal output.
4. **USB2** USB2 slave, used to connect with PC.
5. **SD CARD** SD card slot. (32 GB Max)







5. CONNECTIONS





















- **VGA-in** from PC/Laptop
- **VGA-Out** to Panel or Projector
- **HDMI-Out** to Projector or Panel
- **USB** to/from PC/Laptop



6. REMOTE CONTROL



1. Power: Power ON/OFF
2. **FPS**: Switch the frame rate between 20 (Visualizer mode) and 30 (video mode)
3. **RES**: Toggles output resolutions: SXGA, UXGA, 720P and 1080p.
4. **USB**: Switch USB functions between “Disk mode” and “Video mode”, use the buttons  and  to select, then press **ENTER** to confirm.
5. **DEL**: Click to delete the selected pictures, keep press for 2 seconds to delete all the saved pictures.
6. **Bright +/-**: Image brightness control use  and  to adjust.
7. **Focus+/-**: Adjust focus manually with  and  then press **ENTER** to confirm.

8. **RECALL:** Click to view saved images, use the buttons  and  to change pages and use buttons  and  to select your picture choice then press **ENTER** to confirm. In recall mode press  or  to zoom the image in or out. You can also use buttons  and  plus  and  to move the image.
9. The  button allows you to take a snap shoot of your image and save this to either SD Card or Internal memory. (200 images can be saved to internal memory) but a lot more if using a SD CARD, the amount is dependent on the cards size i.e. up to (32 GB).
10. **AUTO:** Adjusts white balance and focus automatically.
11. **Zoom +/-:** Zoom in/out control using  or  buttons.
12. **MIR:** Use this button **MIR** to flip the camera image.
13. **Split:** Use the Split button  to have two images on your screen.
14. **Freeze:** Use the Freeze/Unfreeze button  to freeze/unfreeze an image.
15. **TITLE:** Title **TITLE** freeze mode. In this mode you can adjust the position of the frozen title with buttons  or  and also adjust the size with  or 
16. **PIP:** Picture in picture **PIP** click to select a saved picture to display on the lower right corner of a screen.
17. **Rotation:** Rotate  the image in 90°,180° and 270° degrees.

Visualizer Mode

The **GV400 defaults to Visualizer mode** each time the unit is turned on. This is the preferred mode for most applications. The GV400 can **view & record** video in this mode at 20/30 FPS (frames per second)..

If smooth video recording is required then switch to Video Mode.

Video Mode

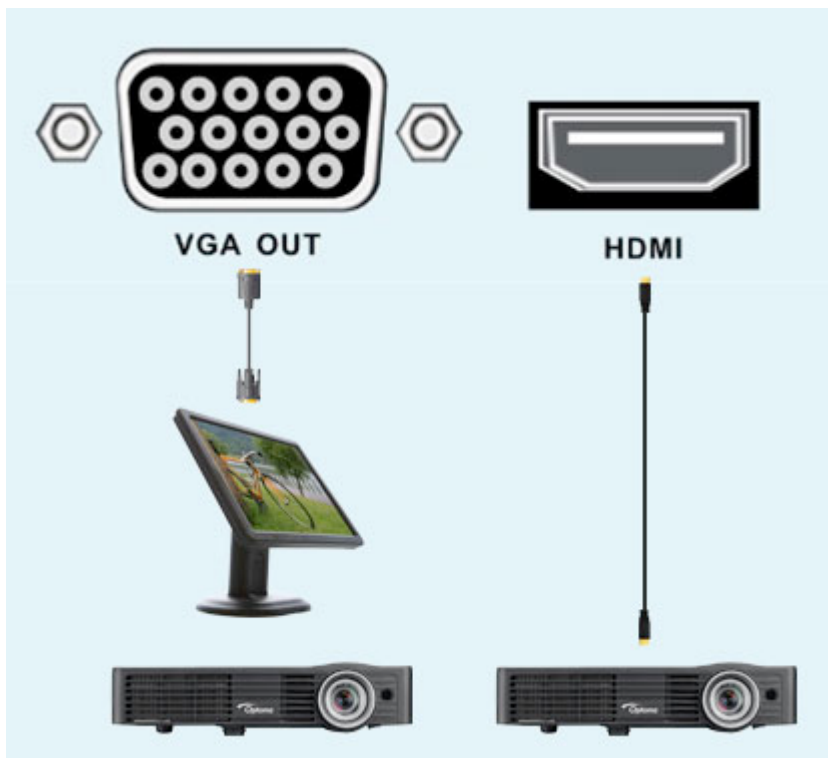
8. OPERATING THE VISUALIZER

Powering on

After connecting the external power supply the red led in the center of the GV400 will flash. This indicates the unit is in standby mode. To start the Visualizer simply press the power-on button via the main control panel or the remote control. The led will turn to green. Please Note: It takes 3~4 seconds before the Visualizer is fully powered and ready to use.

Connecting the Visualizer

This is simplicity itself. The supplied 15 pin VGA cable connects between the Visualizer and the output device i.e. Projector or monitor/TV via the 15pin VGA port. You can also use HDMI if your projector or panel supports this I/O. HDMI will give you a far better image and also goes up to 1080p output.



VGA In



VGA In is used to show your desktop on the camera. When you run the supplied software and show/project onto a white board it allows you to annotate over your image so you can highlight points of interest or draw over the image.

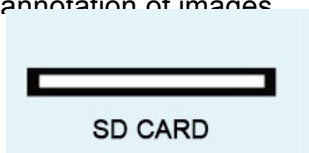


USB Connection

The USB port allows you to view the camera output via the PC. You will need to install the PC software which is described later in this manual.


Once connected this will allow you to record endless pictures and video files (depending on your Hard Disk capacity) the software also provides simple annotation of images.

SD CARD



You can also save images to an SD Card to review on a PC/LAPTOP or any device that reads SD Cards like the ML500 LED projector from GV400, the max card size is 32 GB. (You cannot record video to the SD Card)

Positioning the Camera – Rotation & Mirror

Normally the camera is positioned over documents and objects alongside the Visualizer. Using the remote control you can rotate  the image through 90, 180 or 270 degree increments so that the captured image appears straight to the viewer. You can also use the mirror **MIR** function in a similar way. Using the combination of rotation and mirror functions means you have flexibility when positioning the camera.



9. FEATURES

LED LIGHT

The GV400 uses eco-friendly, low power LED lamps which are cool to the touch and mercury free. Due to the excellent sensitivity of the camera the lamp is seldom required. Adjusting the light balance from the remote control can often provide clear vivid images.



ZOOMING IN AND ZOOMING OUT





With 14x optical zoom combined with 16x seamless digital zoom the GV400 enables you to view items in immense detail. GV400's advanced optical system features high speed auto focus capability that ensures instant auto focus when you quickly zoom in and out of any object. You can also manually adjust focus to satisfy any special viewing needs by pressing ZOOM+  or ZOOM- .

FOCUS ADJUSTMENT

When the Visualizer is turned on the focus automatically adjusts, it is not necessary to re-adjust the focus if you are only working with flat materials (text, photos, etc.). Only 3D objects require a focus adjustment.

Press the "AUTO" button to auto focus. Press the FOCUS+  or  FOCUS- buttons to focus manually. ***This function is accessible from the remote control and the base unit.***

BRIGHTNESS ADJUSTMENT

You can adjust the camera brightness by pressing the BRIGHT +  or BRIGHT -  buttons.

This function is only accessible from the remote control



WHITE BALANCE ADJUSTMENT

Under different lighting conditions you may need to adjust the white balance by pressing the AUTO button.

The **AUTO** button also assists with fine focus changes-

FREEZE IMAGE

Use **FREEZE** to freeze and unfreeze the image. 

MIRROR IMAGE (Only available from the remote control)

The mirror image function gives you a different perspective of an object.

SPLIT SCREEN (Only available from the remote control)


The split screen offers the capability of comparing two images or comparing two different views of one object side by side. 

IMAGE SAVE (Only available from the remote control)






The GV400 can store up to 200 images in its internal memory. 

IMAGE RECALL (Only available from the remote control)

Click the recall button to view saved images, use the buttons  and  to change pages and use buttons  and  to select your picture choice then press **ENTER** to confirm.

In recall mode press  or  to zoom the image in or out

You can also use buttons  and  plus  and  to move the image.

USB IMAGE CAPTURE AND VIDEO RECORDING



The USB2 port can be used to store images and video clips from the Visualizer on your computer. (Note: You will need to install the supplied software).

10. COMMUNICATE WITH COMPUTER

10.1 COMPUTER REQUIREMENTS

The PC's hardware and software configurations shall not be less than the following requirements:

- Operating system: Windows XP/Win7/Win8
- CPU: Pentium 4 1.8Ghz or better
- Physical memory: 512M or more
- Video memory: 64M or better

Windows XP and Vista do not support USB 2 without a driver so you must install the supplied USB2 driver to get your GV400 working.

NOTE:

With Microsoft Windows 7 or Microsoft Windows 8 USB2 drivers are built-in so you only need to install the software.

If you have Win7 or Win8 please do not install the USB Driver supplied on the disk.

You can also use the camera as a webcam with software like SKYPE or some other camera software the GV400 will work with the OS built-in USB2 drivers. Just select USB Camera device.

SKYPE also works with Windows XP but you must install the USB Driver located on the GV400's CD first

SKYPE is fully supported under- Skype – Tools – Options – Video Settings

Use the supplied USB2 cable and connect from the GV400 to a spare USB port on your PC/Laptop.

SOFTWARE START

Double click the desktop short-cut



then click Device; select the right model number, as shown

below:





IMAGE CAPTURE AND VIDEO RECORDING:

Left click 

to capture images. The captured images will be automatically saved into the default destination folder. The path and file name are displayed in software status bar on the bottom of the window.




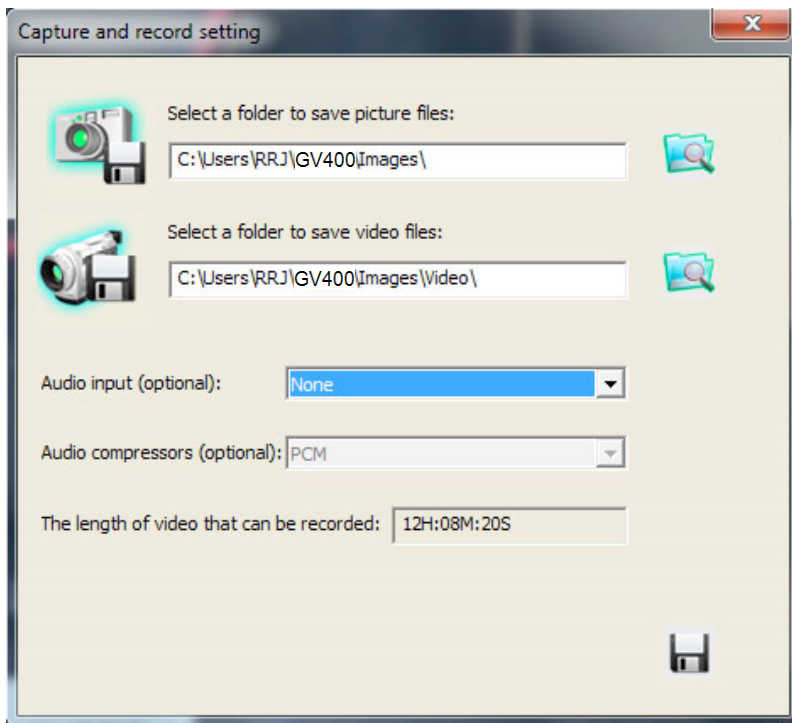
Shown below:

Left click  to start recording. During recording the settings button will be inactive.  Detailed information is displayed on the software status bar in the bottom of the window.

The video is automatically saved in the default folder or pre-set folder.

SETTING:

The captured images and recorded videos will be saved into the folders of Images and Videos respectively, which are created by the system automatically. To set a different path where you wish your image's or video saved, click  on the left side of the window, a pop up dialog box appears below.



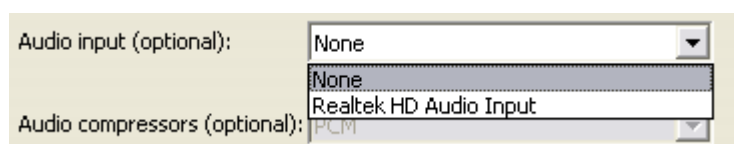
Save the captured images into a different folder

Click the button next to the "select a folder to save picture files" text box to set the path for captured images.

Save the recorded video into a different folder and set up parameters for videos

Click the button next to the "Select a folder to save video files:" text box to set the path for videos.

You can also change the video settings. The Audio input (optional) drop down box offers the options of recording video with or without sound. Shown below:




The length of video that can be recorded box displays the longest recording time for videos to be saved in the preset path. Shown below:




Click save to complete setting.

IMAGE MODIFY:


Click  you will see this interface:

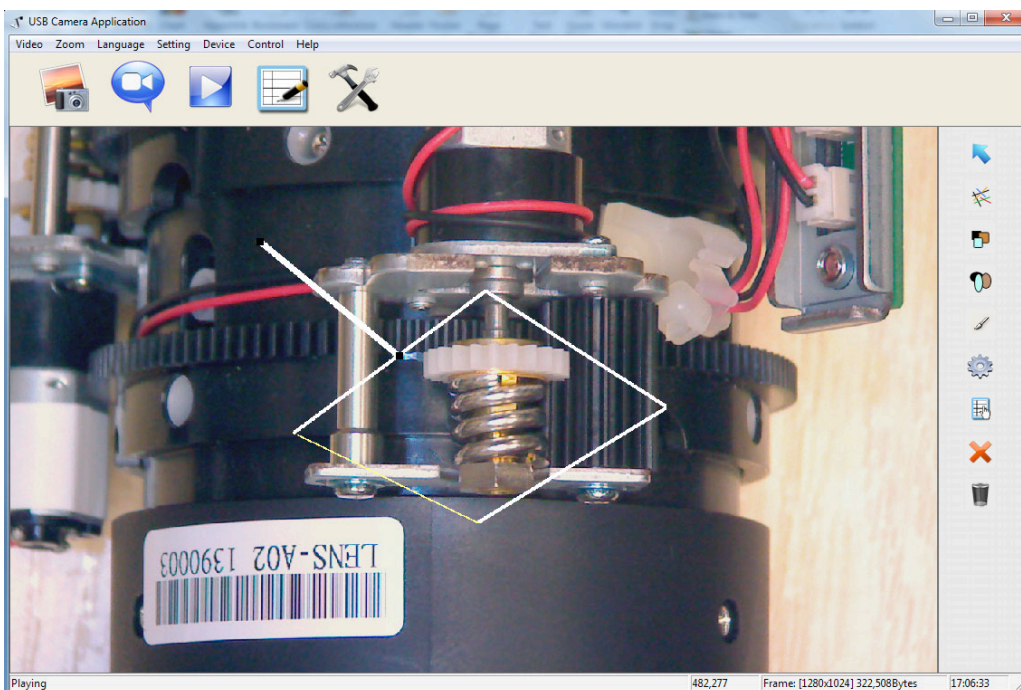



Graphic selection and move

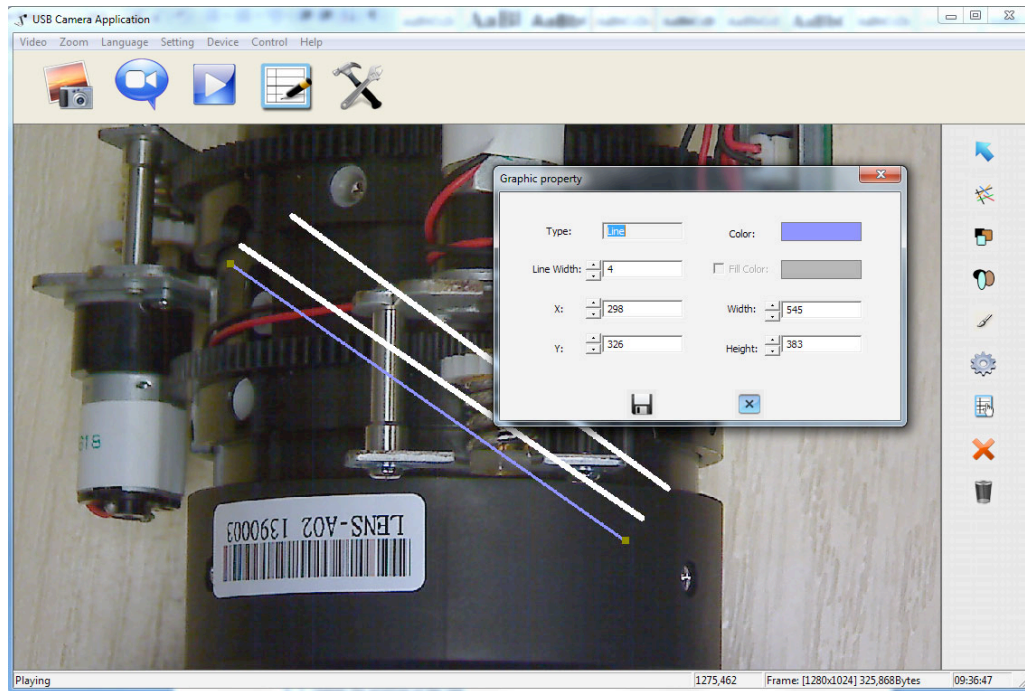
Clicking  allows to select and move lines, circles etc to a different position within the image.

Line

Clicking  allows you to create lines within the image.




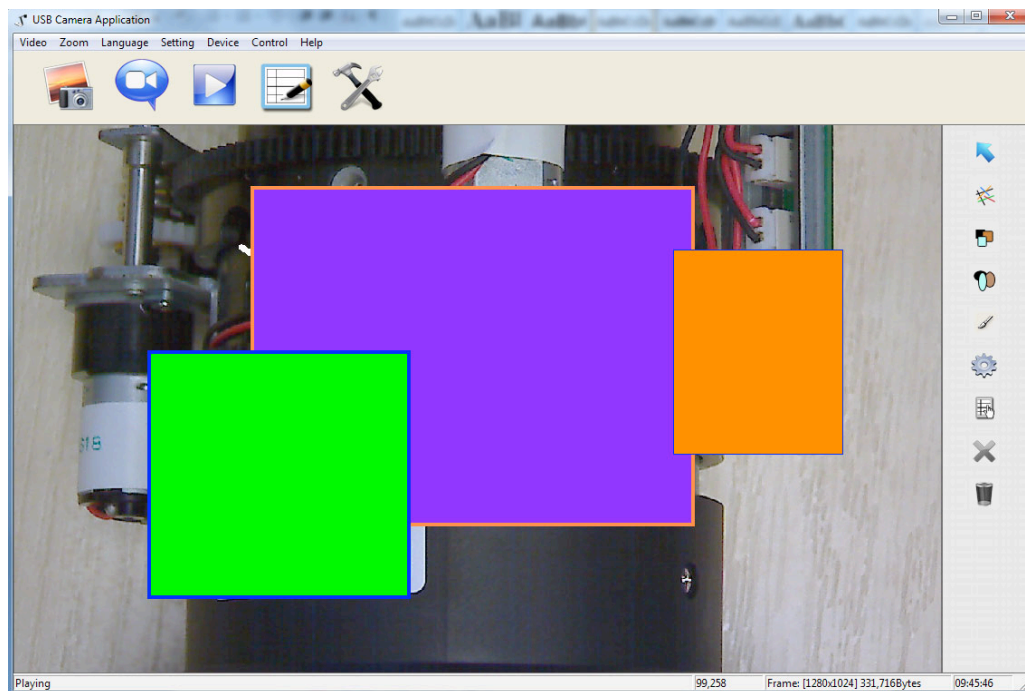
Click  to change the setting of the chosen line:




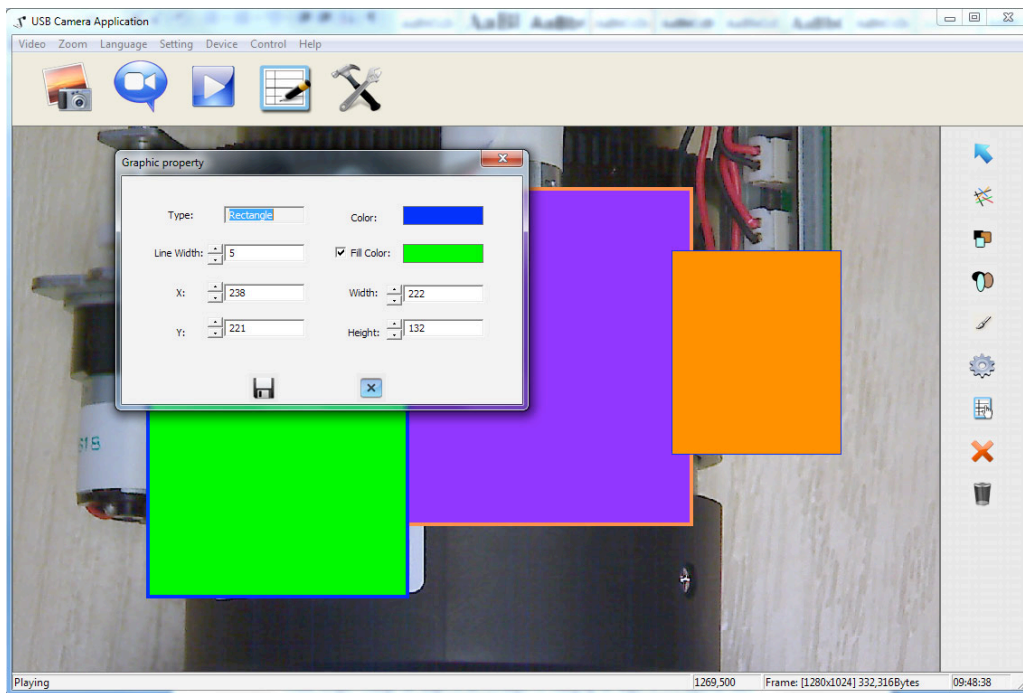
Line width: change the width of the line. **X/Y:** change the position of the line.
Color: change the color of the line. **Width, Height:** Change the angle of the line.

Rectangle

Click  to place a rectangle in the image, shown as below:




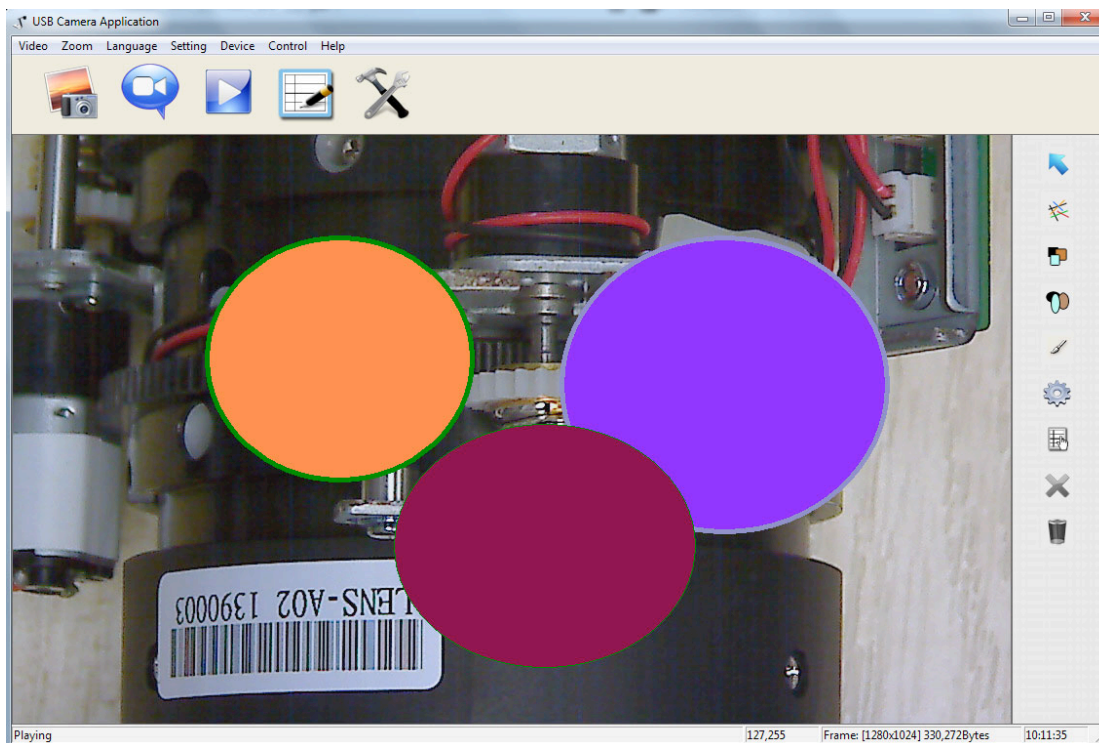
Click  to change the setting of the chosen rectangle:




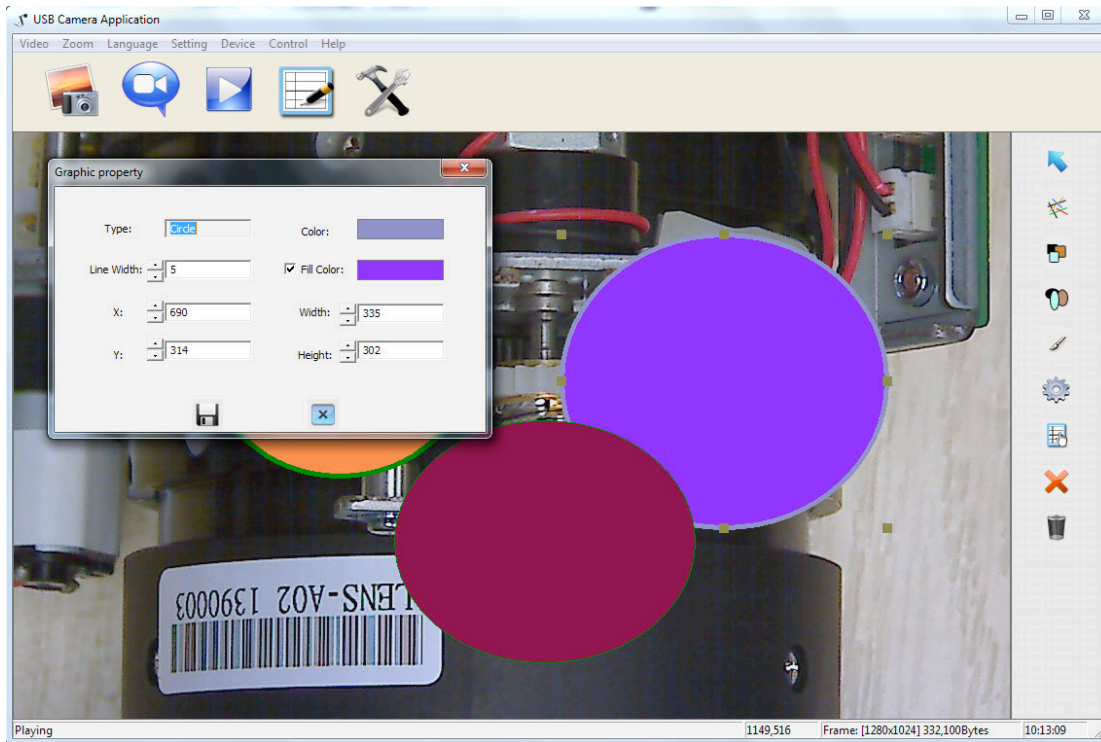
Line width: change the line width of the rectangle. **X/Y:** change the position of the rectangle.
Color: change the line color of the rectangle. **Fill Color:** Tick it to fill color in the rectangle.
Width, Height: Change the shape of the rectangle by changing the angle of two adjacent lines of the rectangle.

Circle

Click  to place a circle in the image, shown as below:




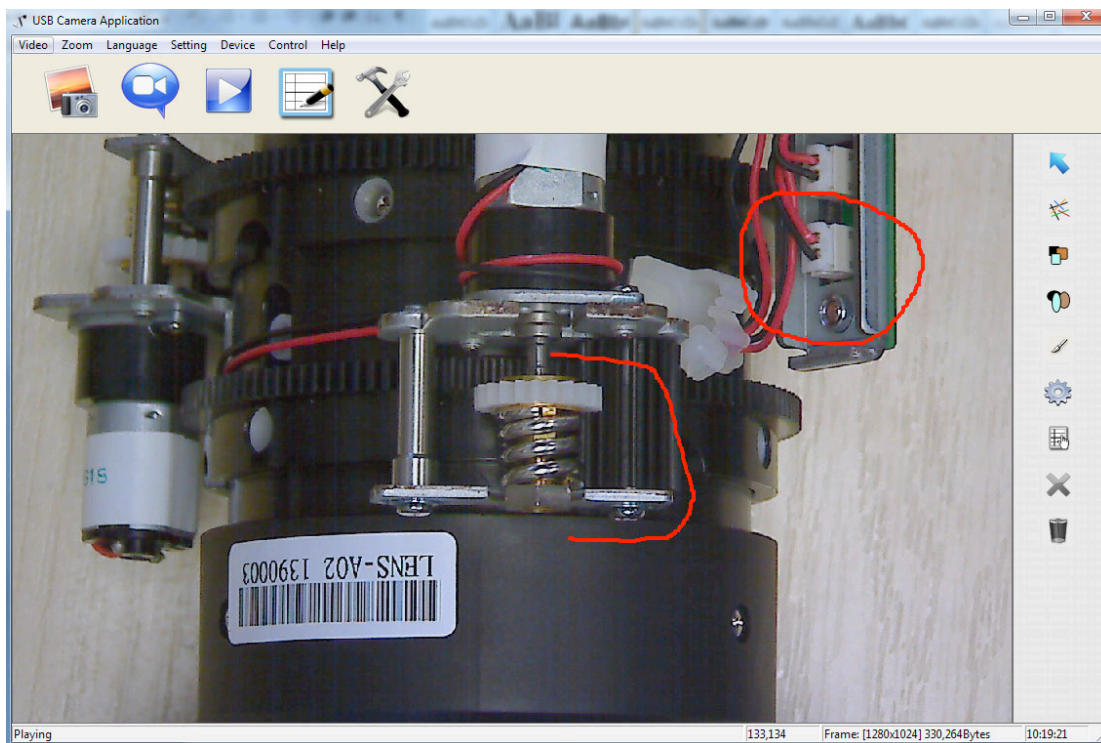
Click  to change the settings of the chosen circle:




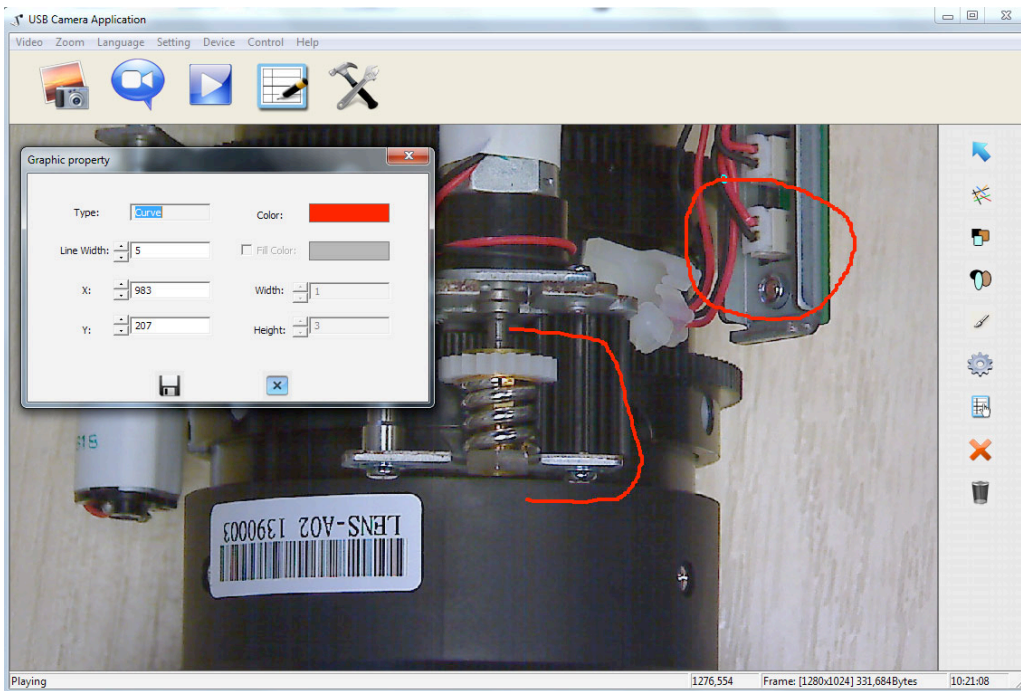
Line width: change the line width of the circle. **X/Y:** change the position of the circle.
Color: change the line color of the circle. **Fill Color:** Tick it to fill color in the circle.
Width, Height: change the size of the circle.

Curve

Click  to place a curve in the image, shown as below:




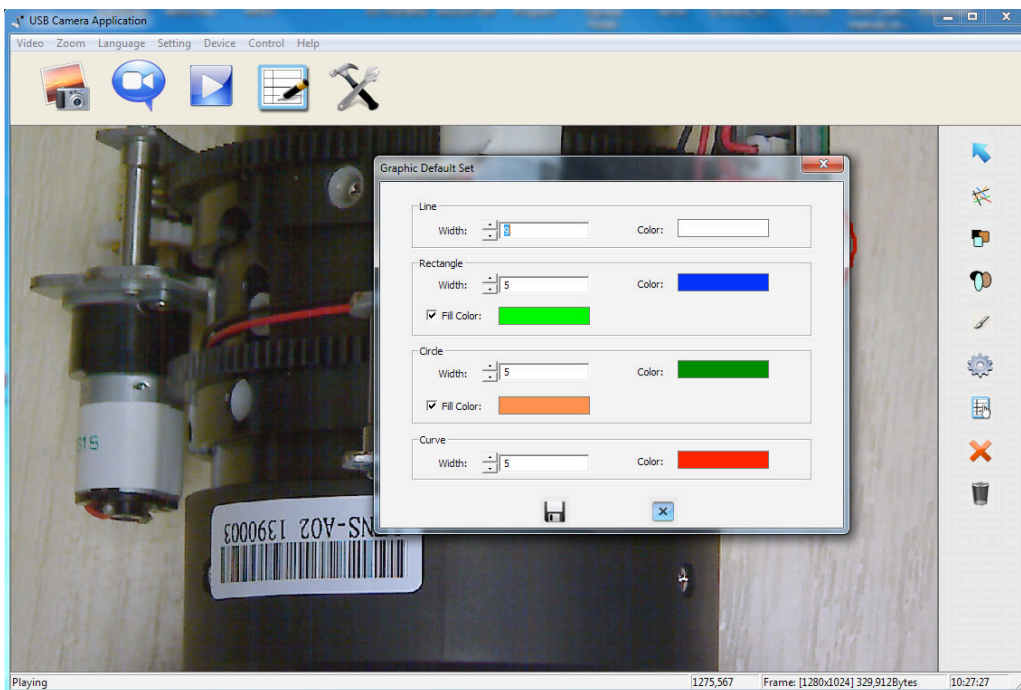
Click  to change the setting of the chosen curve:




Line width: change the line width of the curve. **X/Y:** change the position of the curve.
Color: change the line color of the curve.

Graphic default setting

Click  to change the setting of the graphic:



Graphic delete

Click  to delete the chosen graphic.

Delete all the graphics Click  to delete all graphics placed in the image.

11. SPECIFICATION

IMAGE

Sensor	1.2.5" CMOS
Pixels	5 Megapixel
Frame Rate	20/30
Color adjustment	Yes
Rotation	90, 180 and 270 degrees
White balance	Auto/manual
Mirror Image	Yes
Brightness adjustment	Yes
Output resolution	SXGA, 720p, UXGA and 1080p
Image split	Yes
Image Freeze	Yes
Video recording	Yes (via USB)
Text mode	Yes
Image capture	Yes (200 images Internal Memory)
SD CARD Support	Yes (Max 32 GB)
Remote Control	Yes
Kensington Lock	Yes
OSD	Yes

OPTICS

Focus	Auto/manual
Shooting area	Max: 14.7"x11.1", Min: 0.1"x0.1"
Zoom	14 x optical, 16 x digital

OTHER

Input	VGA
Output	HDMI and VGA
Dimensions	Setup: 6.7"×19.1"×13.5" Folded: 6.7"×7.2"×13.5"
Weight (net)	4.4lbs/2kg
Power Supply	12V DC Power Adaptor
Software Support	Microsoft Windows, Apple MAC OSX

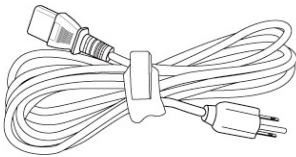
12. TROUBLE-SHOOTING:

Symptoms	Possible causes/counter-measures
No Image	Power Cord is not connected Cables are not connected Power is turned off Output resolution not set correct
Image Bending	Camera is out-of-line, adjust the camera Press AUTO
Out of focus or blurring image	Object is too close to the lens Focus point is full ZOOM, press ZOOM minus to adjust Auto-focus is not on: press AUTO again Dust or condensation could be on the lens, use a soft damp cloth to clean

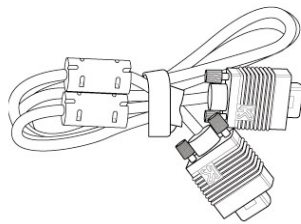
If the problem still remains after checking the above, consult your dealer or authorized service personal

13. Package Content

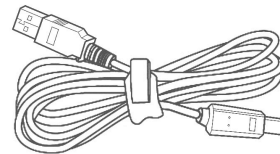
Item	Quantity
GV400	1
Power cord	1
Power adaptor(12V/2A)	1
VGA cable	1
USB (2.0) cable	1
Remote control	1
User manual (CD)	1
Microscope Adapter	Optional



Power Cord



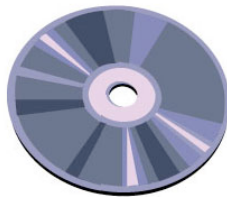
VGA Cable



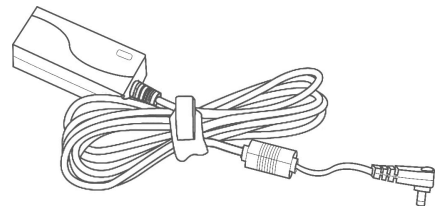
USB2 Cable



Microscope Adapter



Software/ User Manual CD



Power Adapter



Remote Control



GV400