1 Install and Uninstall

1.1 Installation

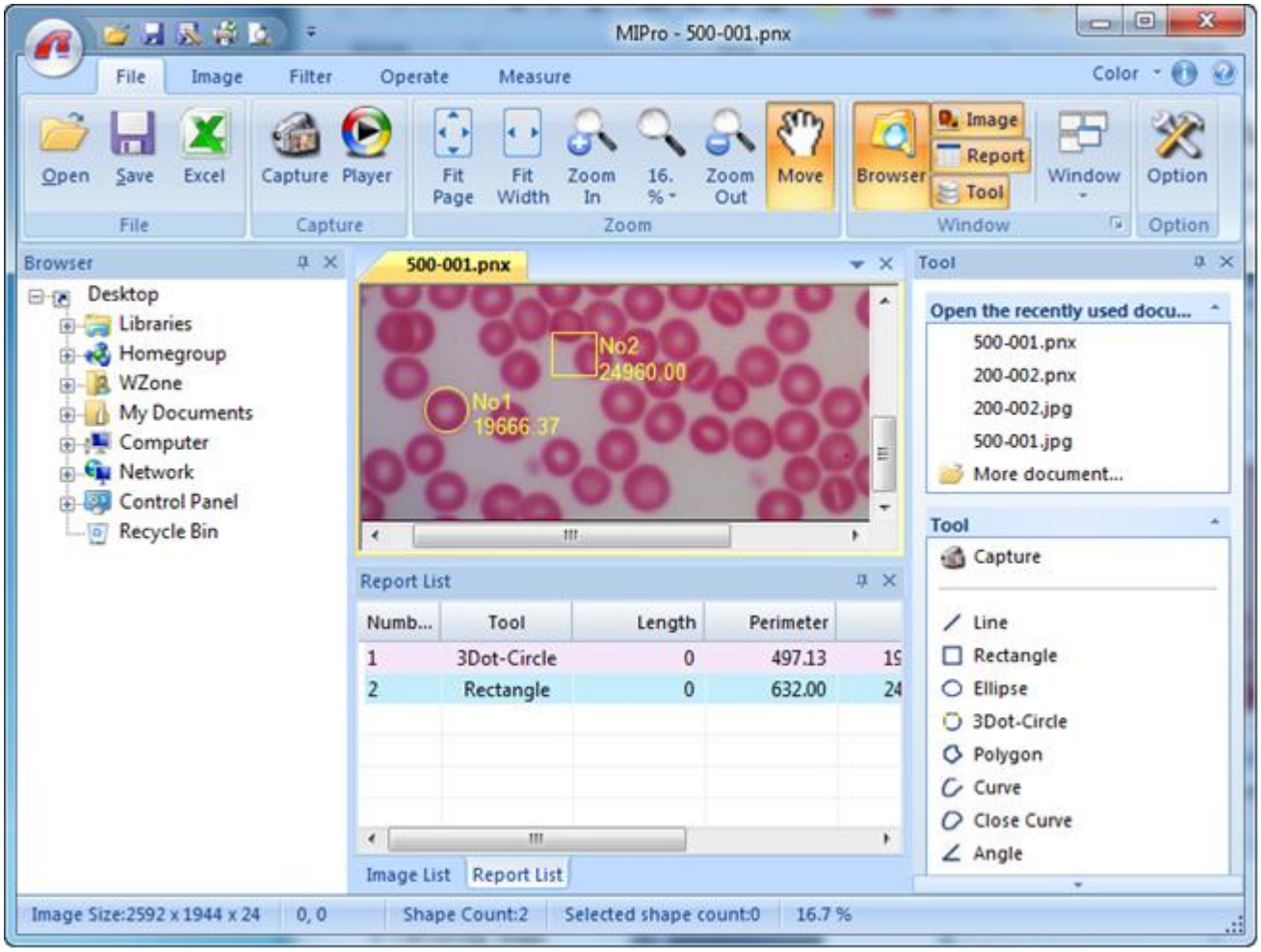
Run the program installation file MIPro Standard V1.2.exe, and start the installation following the indicated message. It is recommended to choose default option inside the program installation dialog.

1.2 Uninstallation

Get in Start > all programs > MIPro > MIPro Standard V1.2 > Uninstall MIPro Standard V1.2, and start the uninstallation, Procedure by following the indicated message.

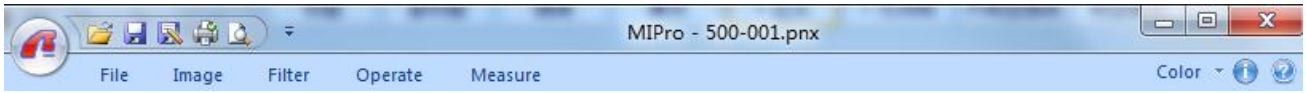
2 Interface Introductory

By adopting Ribbon Menu style (similar to Office 2007 menu), all commands of MIPro program can be found at the top front corner of the program interface. The main interface is as below:



2.1 Ribbon menu

There are 5 menus inside the program, they are: File Menu, Image Menu, Effect Menu, Operate Menu and Measure Menu.

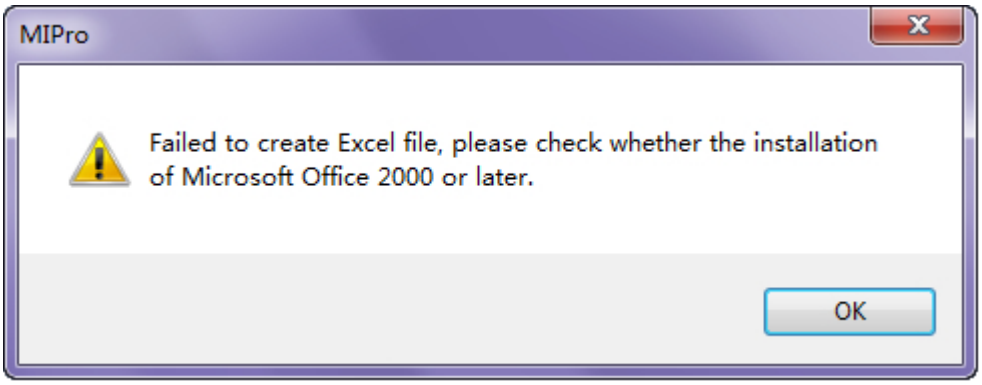


2.1.1 File menu



The following commands are inside the file menu:

- **Open:** to open an image file, the supported file types include image format such as bmp, jpg, jpeg etc, and graphics editing format like pnx.
- **Save:** to save an image file, the supported file types include image format such as bmp, jpg, jpeg etc, and graphics editing format like pnx.
- **EXCEL:** save the graphics information and images as EXCEL format. This function requires the support of the software of Microsoft office Excel 2000 and higher version.
  If you did not install Microsoft office 2000 and higher version, you will find the following dialog when you Run this command.



- **Capture**: open the window of video capturing, and start the related operations. For various performances, please refer to the Function introductory of video capturing.
- **Play:** open the play window, and play the video files stored inside the hard disc.
- **Zooming module:** refer to the Introductory of zooming operation function.
- **Window module:** refer to management module of program window.
- **Preferences:** customize the default parameters of program, including normal Options, measurement options. For detailed customization, please refer to Preference Set up.

2.1.2 Image menu

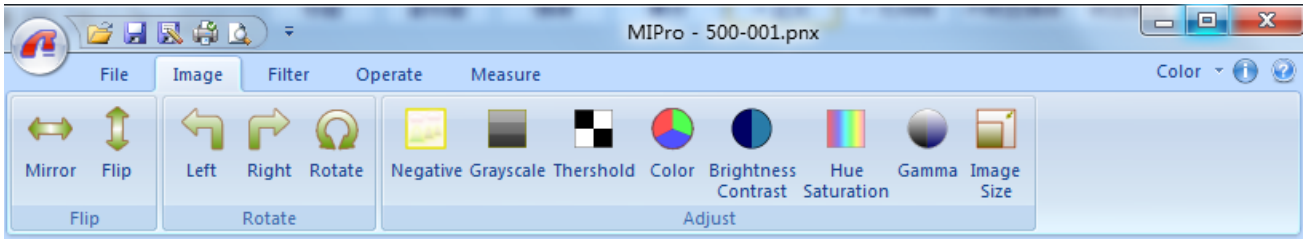


Image menu includes three modules of images mirror, image rotation, and image regulation. For each detailed

Command operation; please refer to the introductory of Image Menu Module Function.

2.1.3 Effect menu



Images effects include following filter effects: Blurring, Softening, Sharpening, Adding Noise, Media, Edging, Embossing, Eroding, Dilating, Contour, Jittering, Unsharp Mash and Customing.
For each command operation, please refer to the introductory of Image Effect Module.

2.1.4 Image operate menu

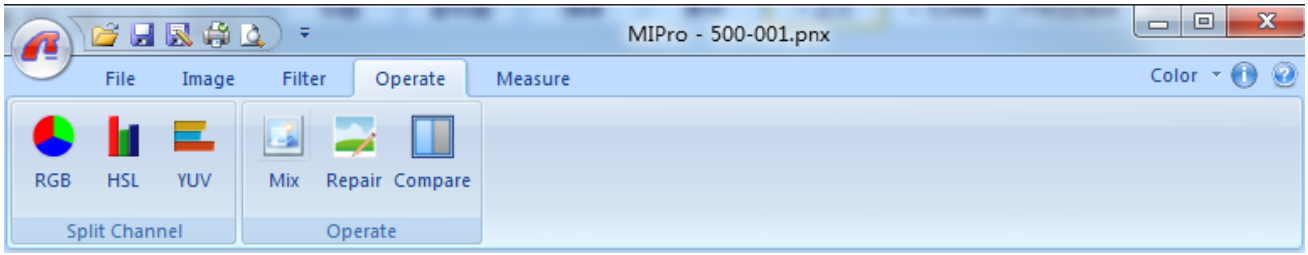


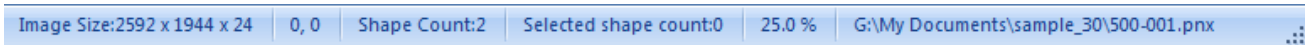
Image operates includes: splitting channel and image operate module.
For each command operation, please refer to the introductory of Image operate Module.

2.1.5 Measure menu



Image measurement includes: Calibration, Measurement tools, Operations, Font style, and Shape style modules. For each command operation, please refer to the introductory of Image measurement Module.

2.2 Status bar



- **Image Size:** to show the width and height of composed image, and its bit depth.
- **Mouse Position:** to show the position of the mouse in current image.
- **Shapes Count:** to show the total amount of various shapes inside the current composed image.
- **Selected Shapes Count:** to show the selected shapes amount inside current image.
- **Zooming Ratio:** to show the zoom ratio in current image.
- **File Path:** to show the directory of current opened image.

2.3 Zooming operation

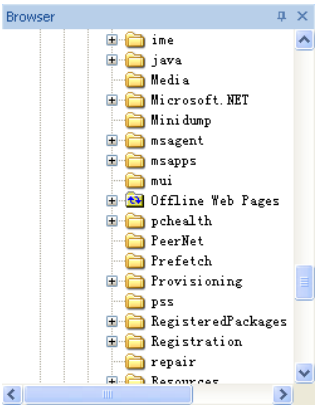
- **Fit Page:** to show the full image inside the window.
- **Fit Width:** to fit the window to the width of image at utmost
- **Zoom In:** click it to zoom in.
- **Zoom Out:** click it to zoom out
- **Users Defined:** this button is a menu button. By clicking the upper part of this button, the image will be shown at the ratio of 1:1. By clicking the lower part of this button, the zooming ratio can be displayed according to the selected zoom ratio.
- **Image Moving:** there are two ways to move the images.
  1) Single click the moving button, the mouse pointer will be shifted to hand shape, then press and maintain your pressure on the left key of mouse and move, the image will follow the mouse's movement.
  2) Press the Space button, the mouse pointer will be shifted to hand shape , then press and maintain your pressure on the left key of mouse and move, the image will follow the mouse's movement.
- **Short cut operation for Zooming:** Press Ctrl key, while moving the mouse wheel upwards, the image will be zoomed in; while moving the mouse wheel backwards, the image will be zoom out.

2.4 Panel

The programs include the following panel windows: directory panel, image displaying panel, measurement readout panel and task panel.

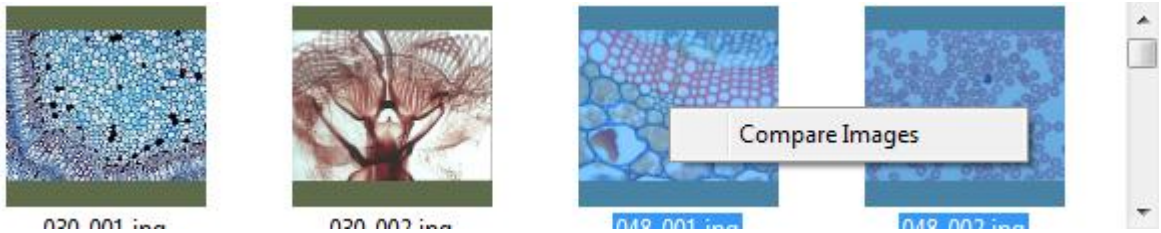
2.4.1 Directory Panel

The directory panel displays the directory list in your computer hard disc. By click any of the directories, the image displaying panel will come out to show the selected image files.



2.4.2 Image displaying panel

The image displaying panel displays all imaging file under your selected directory.



2.4.3 Measurement Readout panel

The measure readout panel will show the detailed information of image measured, which include serial number, measuring tool, perimeter, area, angle and unit.

Report List

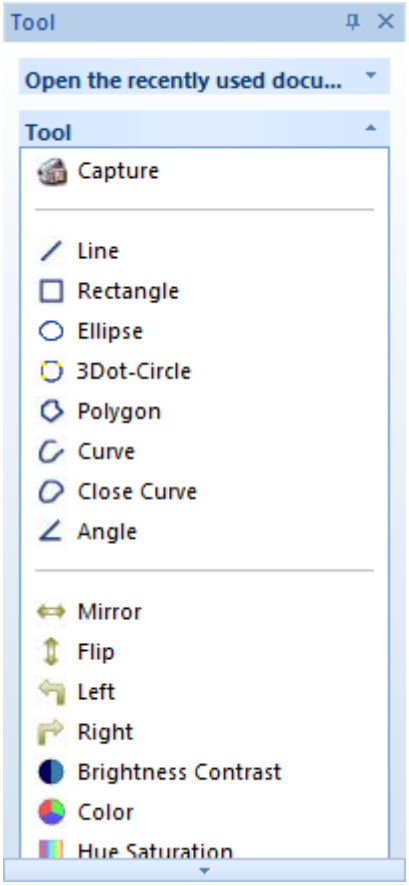
Numb...	Tool	Length	Perimeter	Area	Angle	Unit
3	3Dot-Circle	0	285.59	102.36	0	Micrometer
4	Polygon	0	61.79	247.35	0	Micrometer
5	Curve	0	25.49	0	0	Micrometer
6	Close Cur...	0	68.44	336.91	0	Micrometer
7	Angle	0	0	0	80.40	Degree
8	Ellipse	0	36.69	107.12	0	Micrometer

Image List | Report List

2.4.4 Task panel

There are two modules (recent files and common tools) inside the task panel.

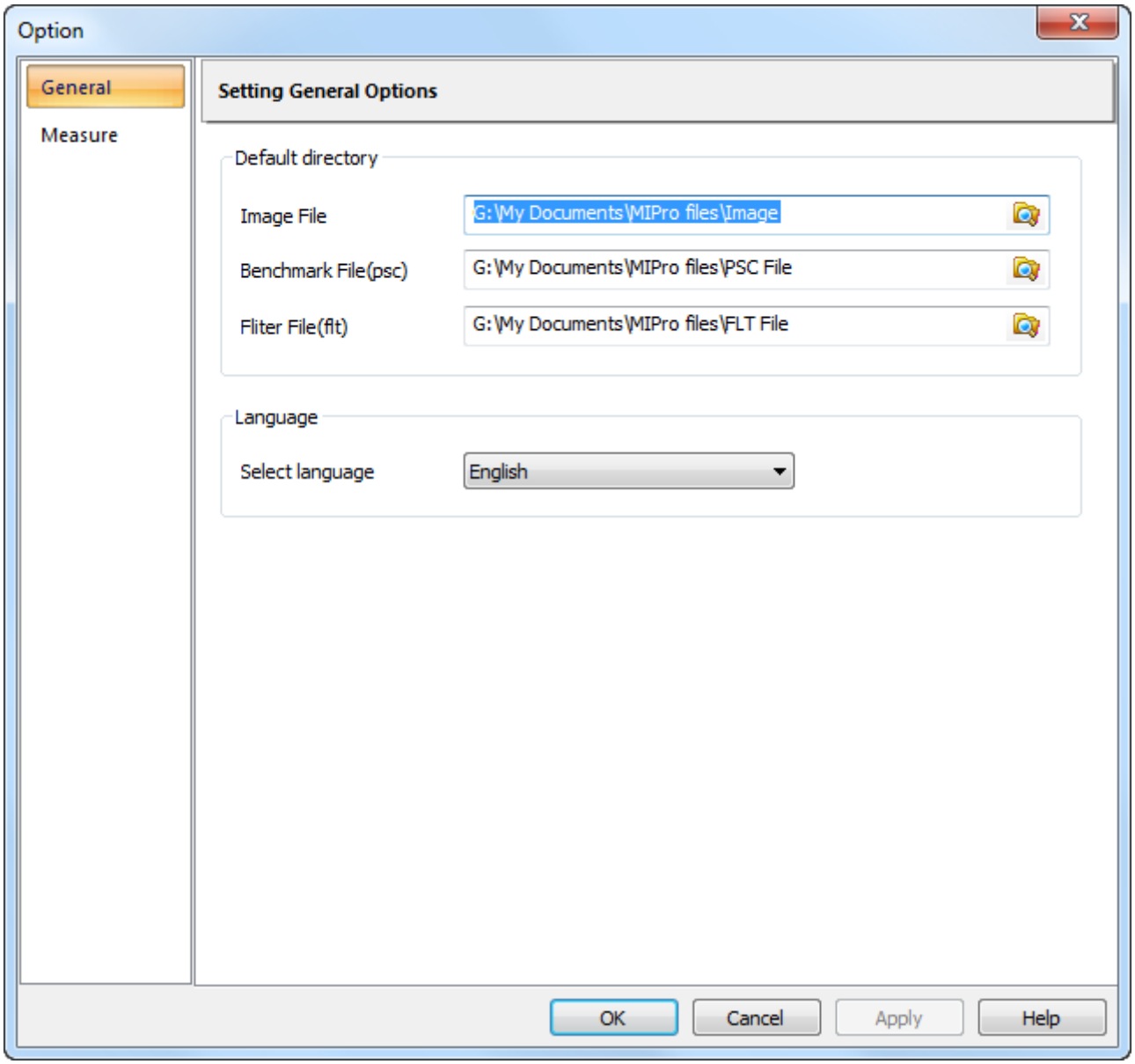
1) By clicking any files inside Recent Files, the program will automatically open the file.
2) All the commands inside the Common tools module can be found in the Ribbon Menu.
3) Clicking and drag the button at the right side of the module, the module panel can be folded or expanded.



2.5 Program default parameter configuration

By click the Preferences button inside the File menu, you can see the program default parameter configuration page. Inside this page, User can define the default parameters.

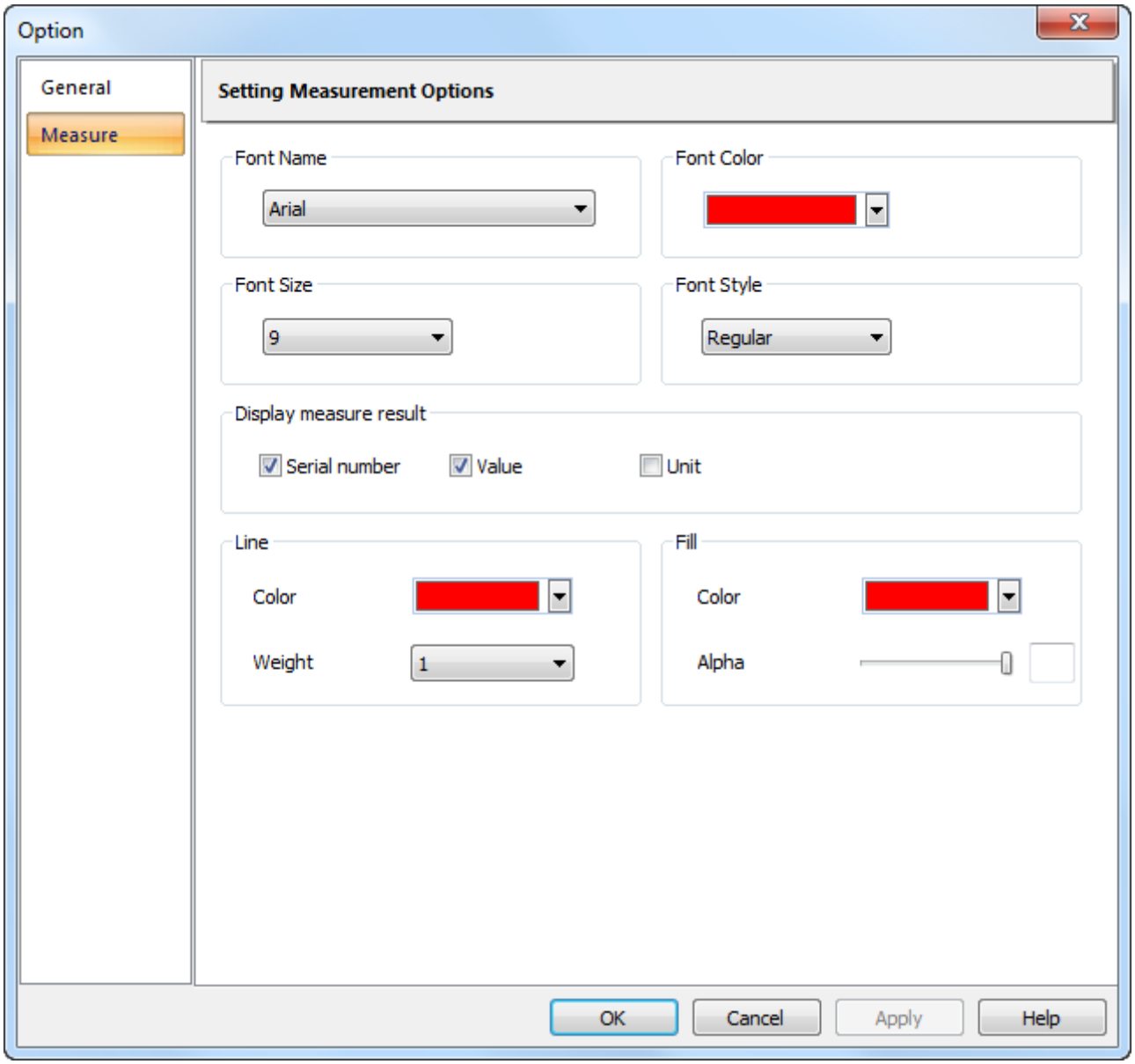
2.5.1 General Options Setup



1) Set up the default file saving directory
   - **Image File:** directory for saving the imaging file of video captured and shot.
   - **Calibration Files(*.psc):** the directory of saving calibration files.
   - **Filter files(*.flt)：** the directory of saving the user's defined filter files.
2) Configure the default language

   Click and drag the language menu, and choose the selected language, which will take effect at next restart.

2.5.2 Measurement Options Setup

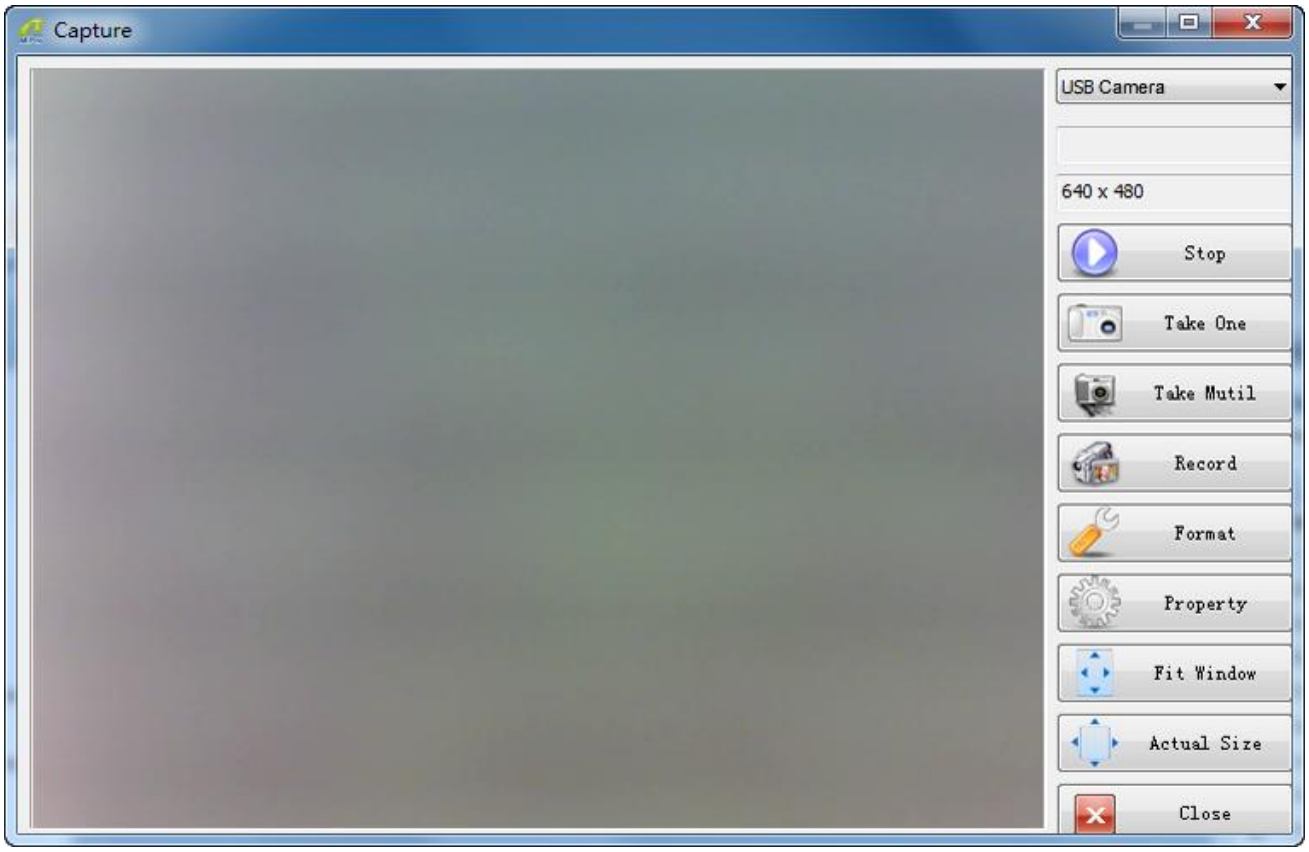


1) **Font Style:** you can choose the font style, font color, font size.
2) **Display measurement results:** By selecting the correspondent window, the related content will be displayed at the same time at the top right hand corner of the measured image.
3) **Shape Style**: Configure the Pen tool, paint brush color, Width of pen, and Opacity of Pen.

3 Video capture

Single click the Capture Button inside the File Menu, the Video clip capture dialog box appears.

- Inside the Video Clip Capture window, you can select Video Device, and operate Video Preview, Shooting, Recording and set displaying format.
- Click and drag the frame of the dialog box to change the window size of Video Clip Capture.



3.1 Selecting the Video Device

1) If there is only one video device in your system, it will be the default video device chosen by this program, which will be also shown inside the list box.
2) If there is more than one video device in your system, the first video device will be chosen as default by this program. The users can click and drag on the Video device list box to select the Video device you need.
3) If the Video device exists and is normal to operate, the Video clip will be automatically displayed on the Video Previewing Window.
4) The users can start and stop the Video Previewing by single clicking on the Video Previewing button and Stop Button.

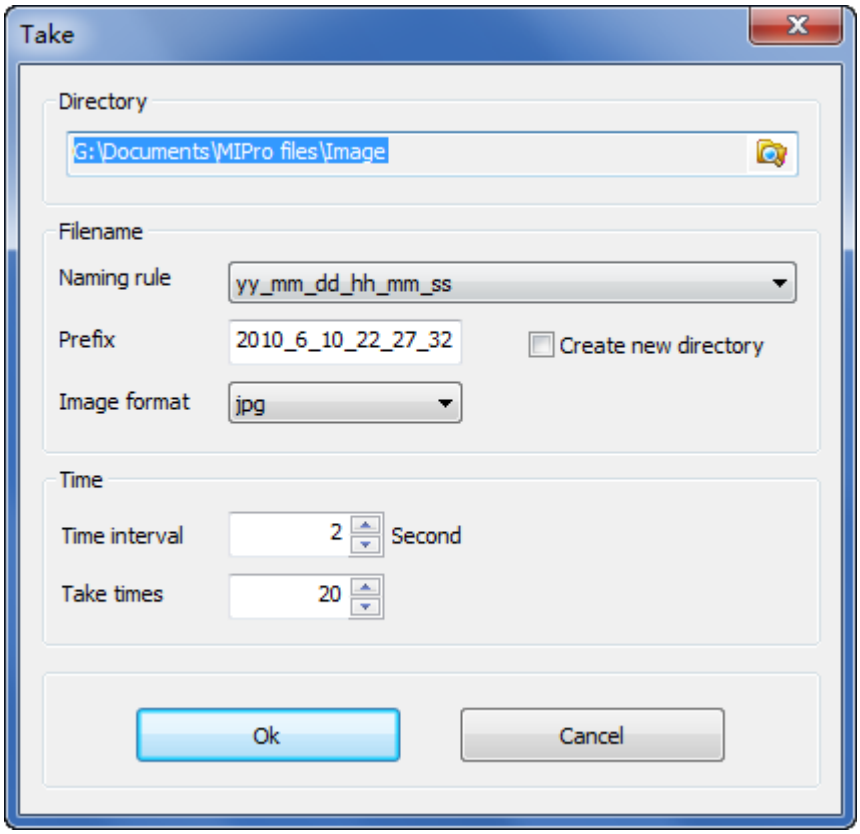
3.2 Single Frame Shooting

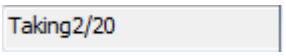
By single click the Take One button, the dialog box for requesting to save the Single Frame file appears.

- The default file naming rule is: yyyy_mm_dd_hh_mm_ss.
- The supported file formats are: *.jpg，*.jpeg，*.bmp，*.png, the default format is JPG.

3.3 Multi frame shooting

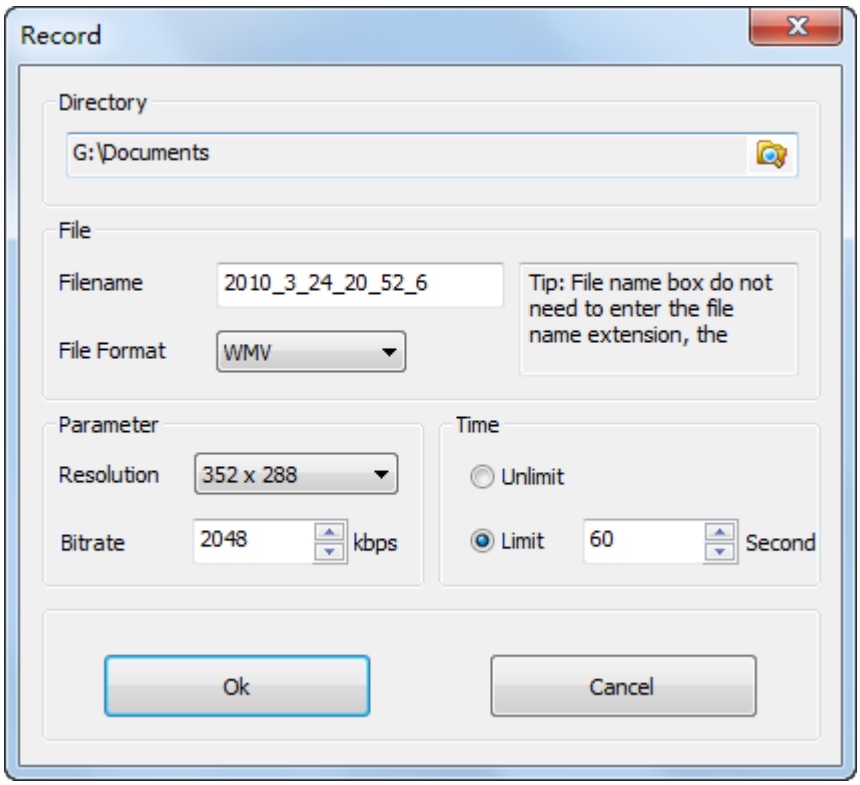
Single clicking the Take Mutil button, the dialog box for configuring the Multi frame shooting appears.



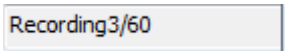
- **Directory:** saving directory of the image files. By single clicking the Preview button at the right side of Directory Editing box, you can change the image saving directory.
- **Naming rule:** the program will name the image file according to the Naming rule configured inside the dialog box. The default naming rule is: yy_mm_dd_hh_mm_ss， the users can change the Naming rule by single clicking and drag the list box.
- **Prefix, Creating new directory:** when users choose to create the new directory, the program will start to create this directory named by Prefix. Otherwise, the directory will not be created.
- **Image format:** the supported file formats include: jpg, jpeg, bmp, and png. The default format is jpg.
- **Time interval:** the program can accept the shooting interval setting. The default interval is 2 secs.
- **Take times:** the program will set the default frames of auto shooting as 20. During the shooting, the program will auto display the current frames numbers and total frames. See the figure: 

3.4 Video Recording

By single clicking the Recording Button, the dialog box for recording configuration appears.



- **Directory:** it refers to the saving directory for the imaging files. By single clicking the Browsing button at the right side of Directory Editing frame, you can change the saving directory for the image.
- **File name:** it refers to the file name of recorded video file. It is not necessary to input the expand name, the system will automatically add it.
- **Format:** it refers to the file format of recorded video files.
  - **WMV format**: if the format being selected, the files size will be depressed during recording, which will greatly minimize the recording file size.
  - **AVI format:** if this format being selected, the files size will not be depressed during recording, which makes the recording file very large.
- **Resolution:** you can choose the video resolution of recording files. The users can click and drag the list box, and choose the suitable resolution. The higher resolution you choose, the bigger recording files you will get.
- **Recording time**
  - If you choose "Unlimit", the recording has to be stopped by single clicking the Recording Button.
  - If you choose "Limit", the recording will stop after the scheduled time designated by the system.
  - The default recording timing is 60 sec.
- During video recording, the program will automatically display the timing information, see the figure:



3.5 Configuring the video format

Configuring the video output format, and resolutions, the different video device might have different configuration Dialog box.

3.6 Setup the Video properties

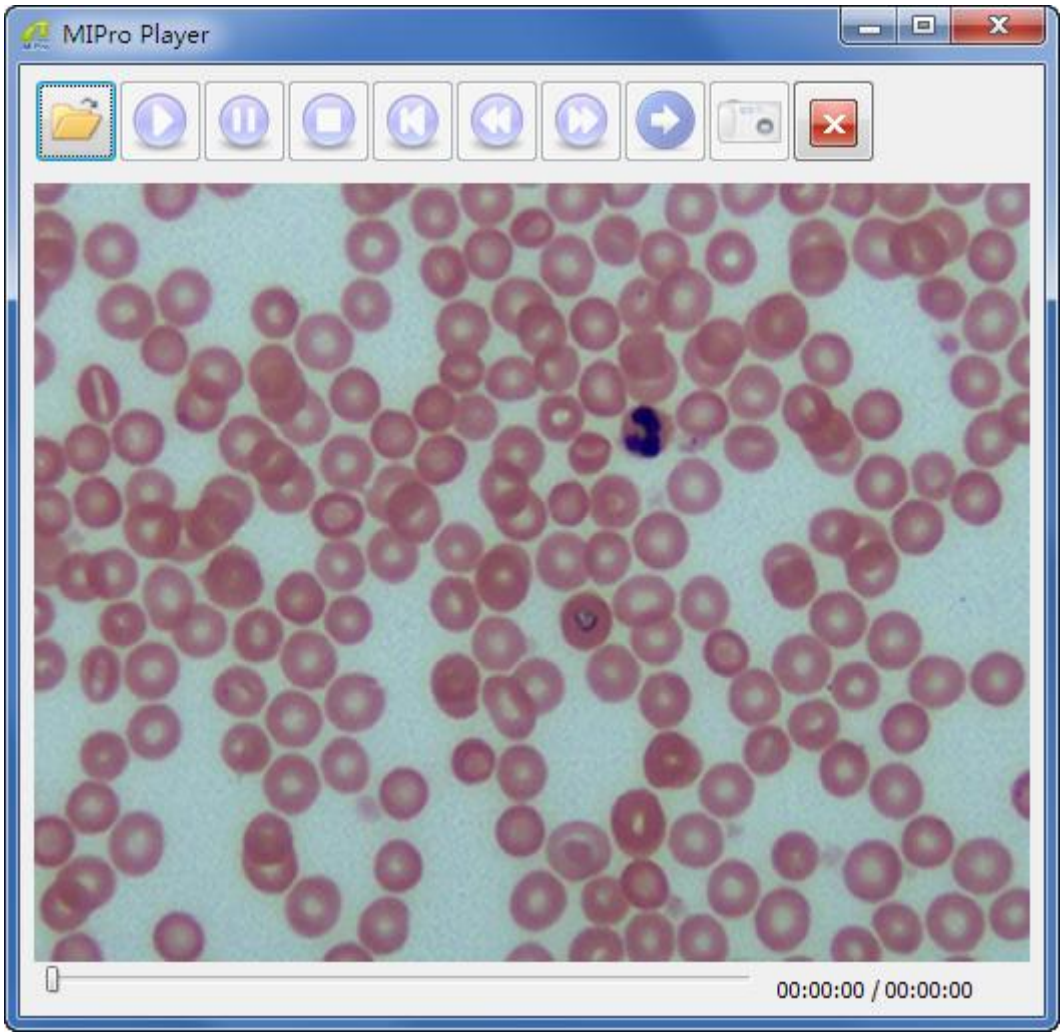
Set up the video output properties, such as: brightness, contrast, saturation, exposure, gain, and white balances. The different video device might have different configuration dialog box.

3.7 Setting the displaying preference Video windows

There are two ways of video displaying windows:

1) **Fit to window:** you can preview the whole video frame inside the opening window.
2) **Actual size:** you can preview the video in its actual size in the opening window. If the video size is bigger or smaller than the height or width of preview window, a scrolling bar at the right or bottom of the preview window will automatically come out, the user can change the displaying area by dragging the scrolling bar.

4 Playing video clip



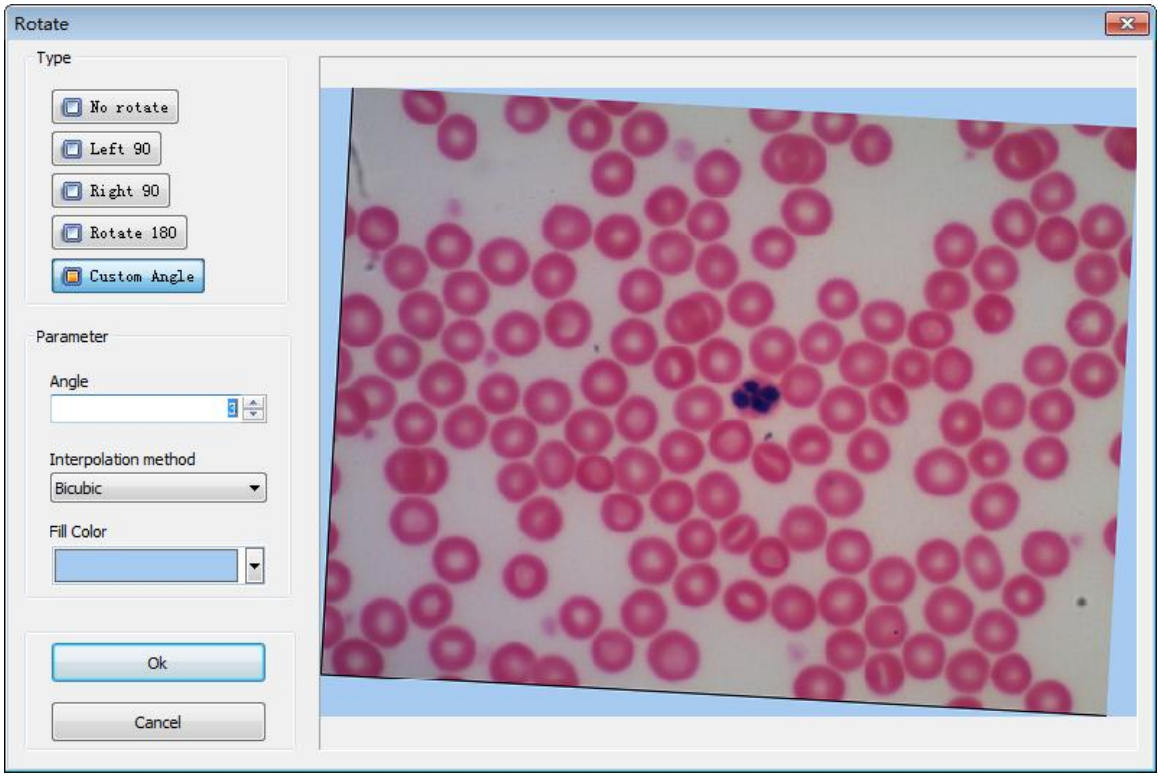
-  Opening button: to open the video file need to be played.
-  Playing or pause button: to play or pause the playing of video file.
-  Stop button: to stop the playing of video file.
-  Shooting button: to save a certain frame of video as an image file.

-  Full screen button: to play the video file in full screen. While in full screen, press ESC key, the program will exit the full screen video playing.
-  Close button: to stop video clip playing and close the related window.
-  Mute button: close or open the audio channel of video files.
- When playing the video clip, the user can change the playing process by dragging the scrolling bar.
- When playing the video clip, the program will automatically display the playing process, see the figure: 0:0:13 / 0:1:0
- You can change the size of video window by pulling or dragging the window frame.

5 Image Adjusting

5.1 Rotating image.

1) **Horizontal rotation:** to rotate an image to horizontal orientation.
2) **Vertical rotation:** to rotate an image to vertical orientation.
3) **Left 90:** to rotate an image 90 degrees counterclockwise.
4) **Right 90 :** to rotate an image 90 degrees clockwise.
5) **Free rotation:** single click this button, the Free Rotation dialog box will appear.



- In the Free Rotation Dialog box, first choose the rotation type. After free rotation, parameter in the Free Rotation Setup can be adjusted.
- **Rotation Angle:** and input or set a value in the control panel of the right side.
- **Interpolation method:** the default method is bicubic, the different sampling method will have different image quality after rotation.
- **Filling color:** to choose the filling color in the blank area after rotation..

5.2 Adjust Image

The image can be adjusted by various basic methods.

5.2.1 Negative Image

Negative Image can bring the color negative film effect on the current image.

5.2.2 Grayscale

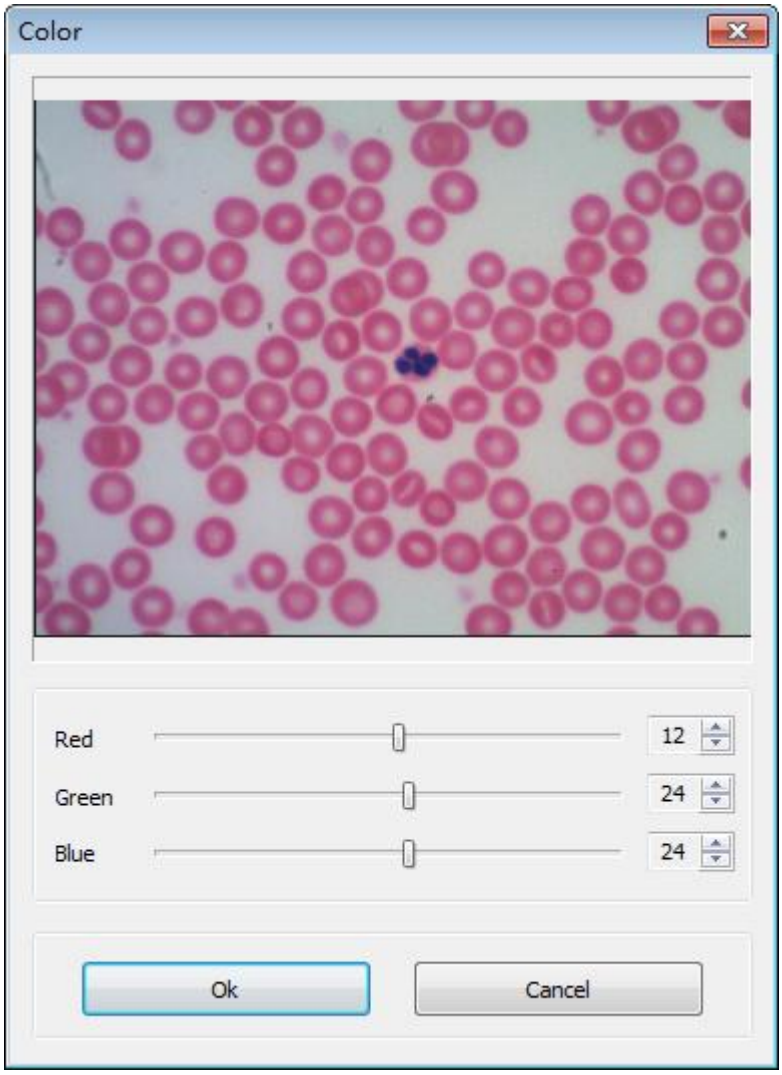
Grayscale can transform the current image to Grey image.

5.2.3 Blacken and Whiten

Blacken and Whiten can calculate the dynamic threshold value to generate binary black and white image.

5.2.4 Color

By adjusting the three channels of Red, Green, and Blue, to restore the genuine color of current image.
The channel value of correspondent color can be adjusted by dragging the scrolling bar in the dialog box.
The default parameter range of color channel is -255--- 255.

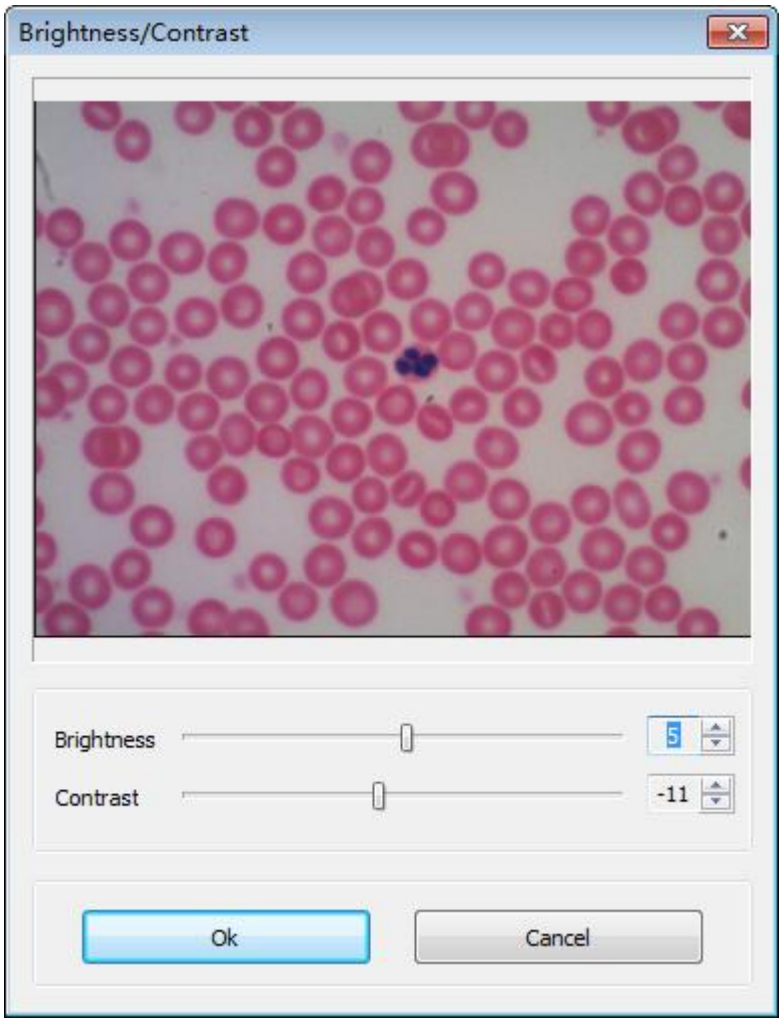


5.2.5 Brightness and Contrast

Adjust the brightness and contrast of image.

The correspondent values can be adjusted by dragging the scrolling bar in the dialog box.

The default parameter range of color channel is -255--- 255.

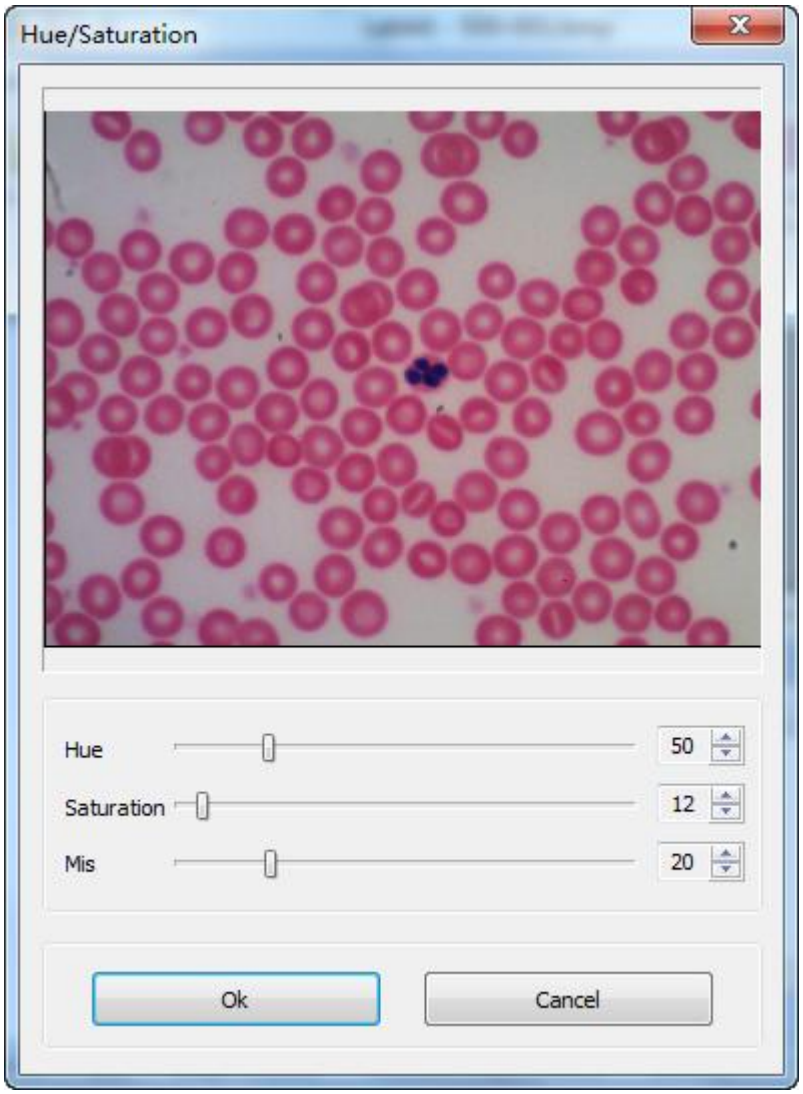


5.2.6 Hue and Saturation

To adjust the Hue and Saturation value of the image.

The correspondent values can be adjusted by dragging the scrolling bar in the dialog box.

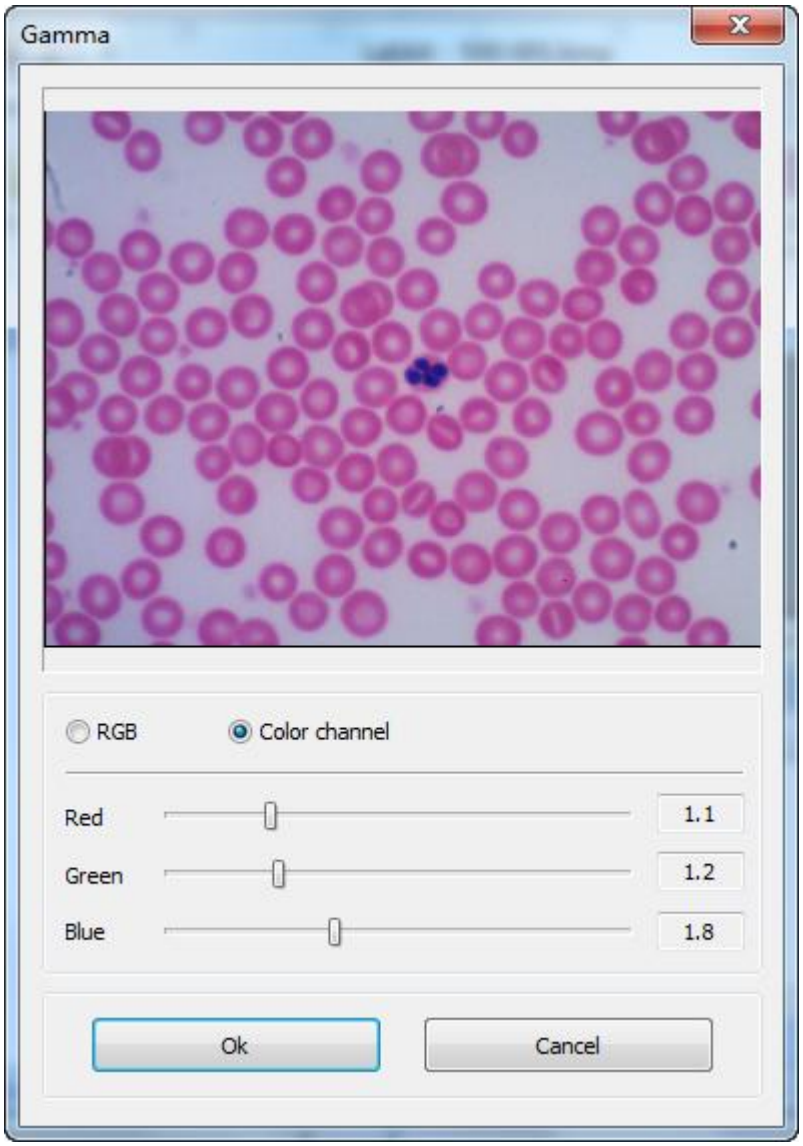
The default parameter range of color channel is -255--- 255.



5.2.7 Gamma

There are two ways to adjust the Gamma value of image, the default parameter range is 0-5.

1) Adjust the Gamma Value of RGB three channels at the same time.
2) Adjust the Gamma Value of Red, Green, Blue channel individually.

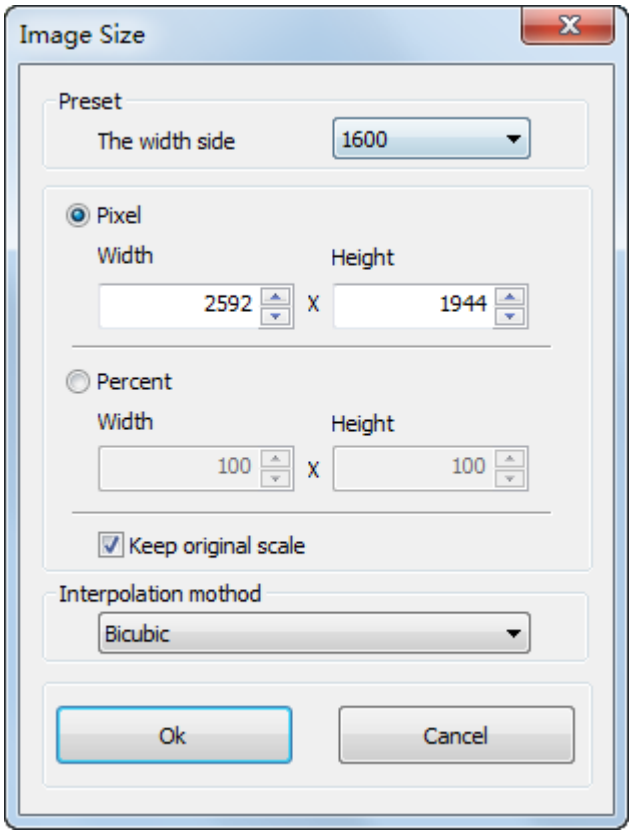


5.2.8 Image size

Readjust the height and width of the image. The methods are as below:

- **Preset value**: choose the required parameter at the pull-down menu of image width window. By single clicking the button, the size of current image will be adjusted to the correspondent parameter.
- **Pixel**: click the Pixel check box, the program will adjust the image size in the number of Pixels.
- **Percentage**: select the Percent check box, the program will resize the image by multiplying the current image size with chosen percentage.

  Keep original scale: choose the Lock Aspect Ratio Check box, the program will resize the image size by keeping the ratio of original image width and height..
- **Interpolation method:** Default way is bicubic, different resample use will effect the final image resolution.



6 Filtering

The program supports the filter effect of various formats to your image.

6.1 Blurring

To apply a blurring effect to the image.

6.2 Softening

To apply a softening effect to the image.

6.3 Sharpening

To apply a sharpening effect to the image.

6.4 Adding noise

You can add noise to the image.

6.5 Media

To removing the existing noise in the image.

6.6 Edging

To find the image edge.

6.7 Emboss

To generate the emboss effect to current image.

6.8 Erosion

To generate the erosion effect to current image.

6.9 Dilating

To generate the dilate effect to the current image.

6.10 Contour

To generate the Contour effect to the current image.

6.11 Jitter effect

To apply the jitter effect to the current image.

6.12 Enhance

To apply the Enhance effect to the current image.

6.13 User defined filter

Allow user to self define the Filter Matrix computing and also display the modified effect.

6.13.1 Newly build a Filter Matrix

1) Input the name for the newly built Filter Matrix in the Editing frame.
2) Choose the Matrix size of filter Matrix Computing.
3) Fill in the correspondent value to the editing frame of Matrix.
4) After the editing on Matrix, single click the Preview button to view the image effect.
5) Click Save button, and save the Self defined Filter as *.flt format file.

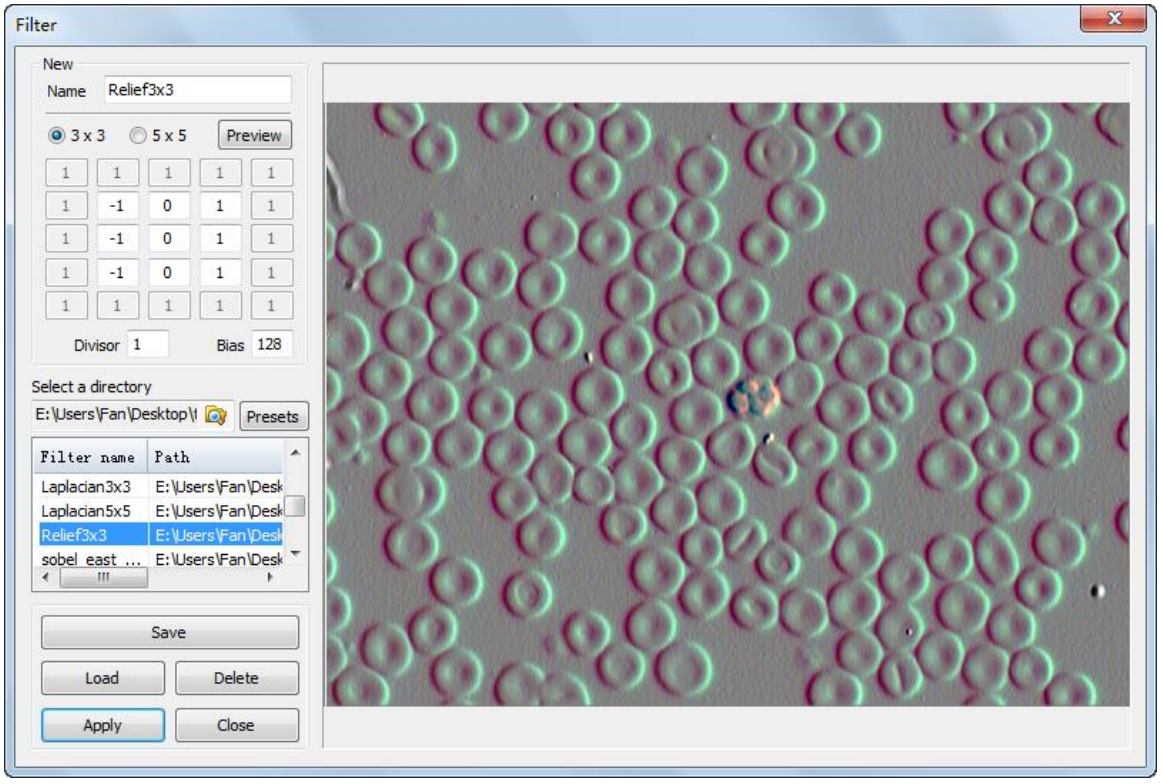
6.13.2 Loading self defined Filter

1) Single click Loading Button to load a saved filter file in *.flt format.

2) By single clicking the Preview button at the right side of Directory Edit Frame, to open a directory for saving *.flt format files. All filter files will be shown under the directory inside the Filter List box. But double clicking a Filter file, the system will automatically load the parameter of the filter and fill into the Matrix frame. The correspondent computing effect will be shown inside the Image Displaying Window.
3) While a certain filter file has been chosen by the user, just single click Delete button, the system will dump the deleted filter file into the system Recycle Bin.

6.13.3 Loading the program preset filter

The filters built in the program are all typical filters, the deletion is not recommended.
Single click the Preset value button, the filter list box will display the filters built in the program.



7 Image Process

7.1 Split Channel

Splitting channel includes “Split to RGB”, “Split to HSL” and “Split to YUV”.

7.1.1 RGB

Split the channel of current image to single channel image of R/G/B, and image is grey displayed.

7.1.2 HSL

Split the channel of current image to single channel image of H/S/L, and image is grey displayed.

7.1.3 YUV

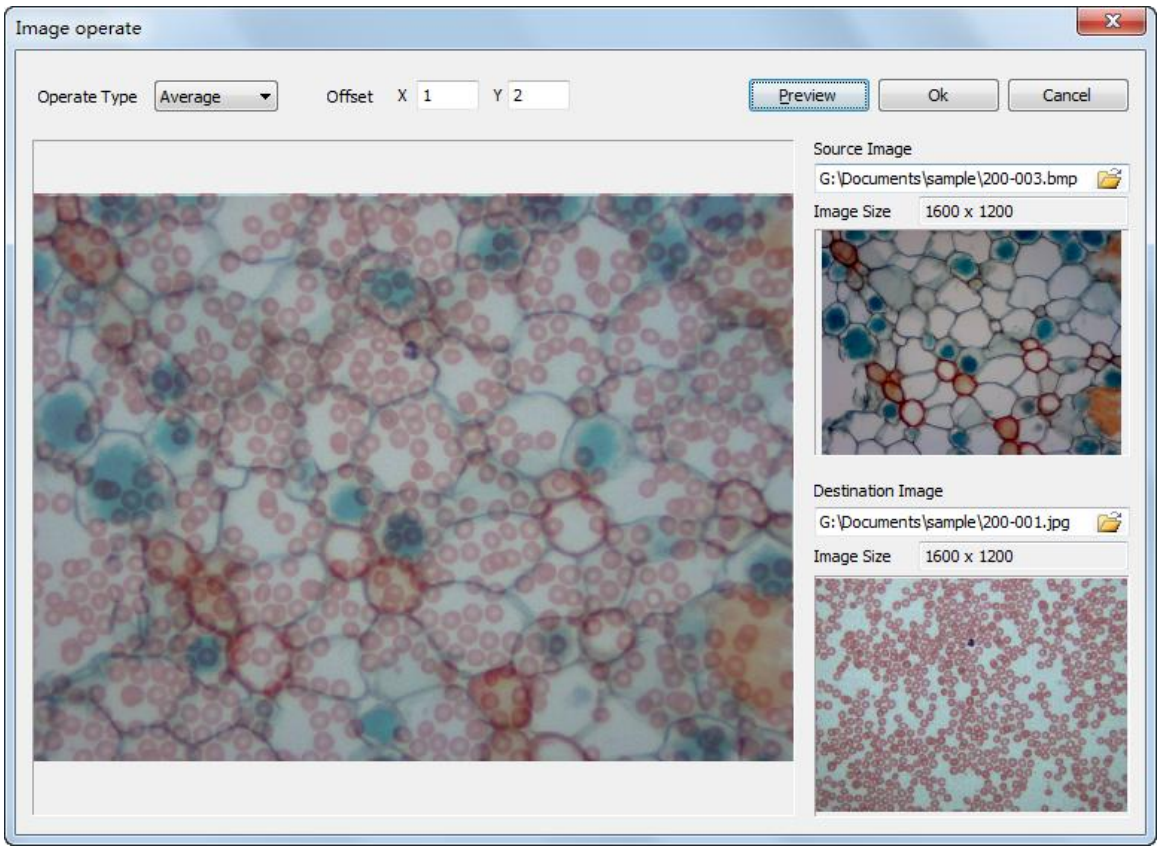
Split the channel of current image to single channel image of Y/U/V, and image is grey displayed.

7.2 Image Processing

Image processing includes Image Enhance, Image Merging, and Image Comparison.

7.2.1 Image Merging

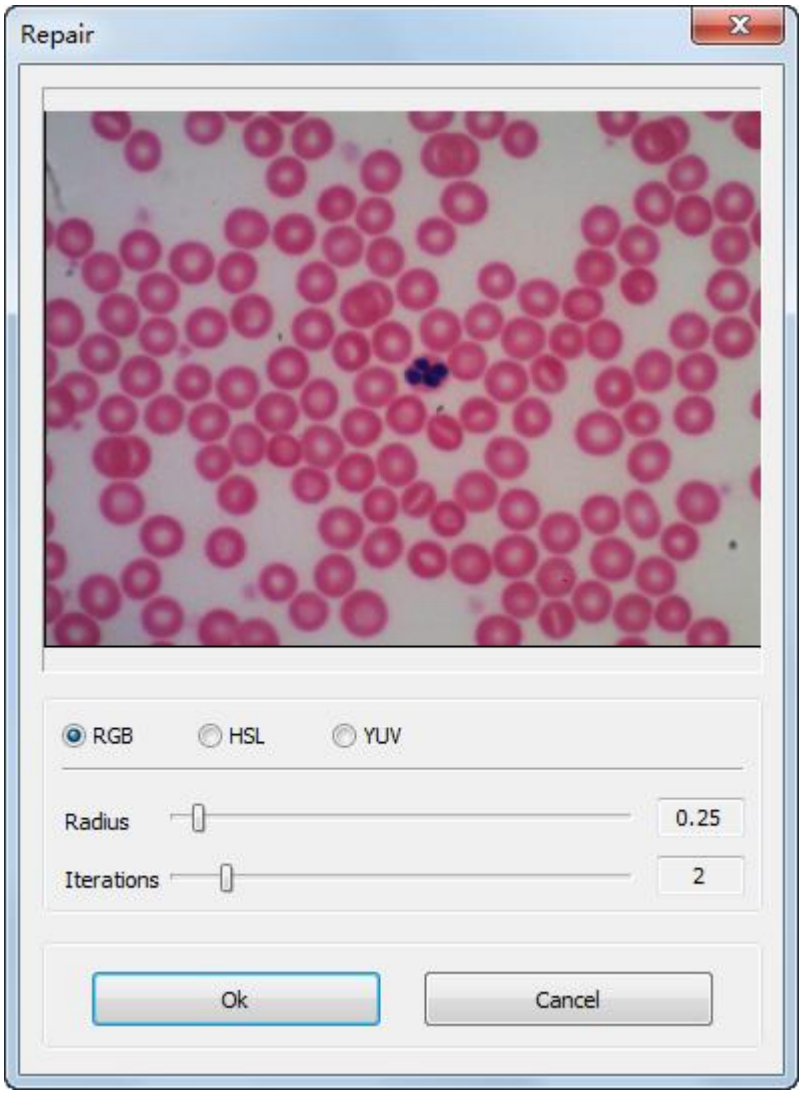
By single clicking the Merging Button inside the Ribbon Menu, the following dialog box will appear.
Image merging includes: Average, Add, And, XOR, Or, Screen, Mask, Copy source, Copy destination, Sub and Blend.



1) Click browse button open source image and target images.
2) Choose operation types, Image preview window will be automatically shows the mixture of images.
3) X axis and Y axis set offset, adjust the mixing effect. The default offset 0.

7.2.2 Repair

By single clicking the Remedy Button inside the Ribbon Menu, the dialog for image remedy appears.

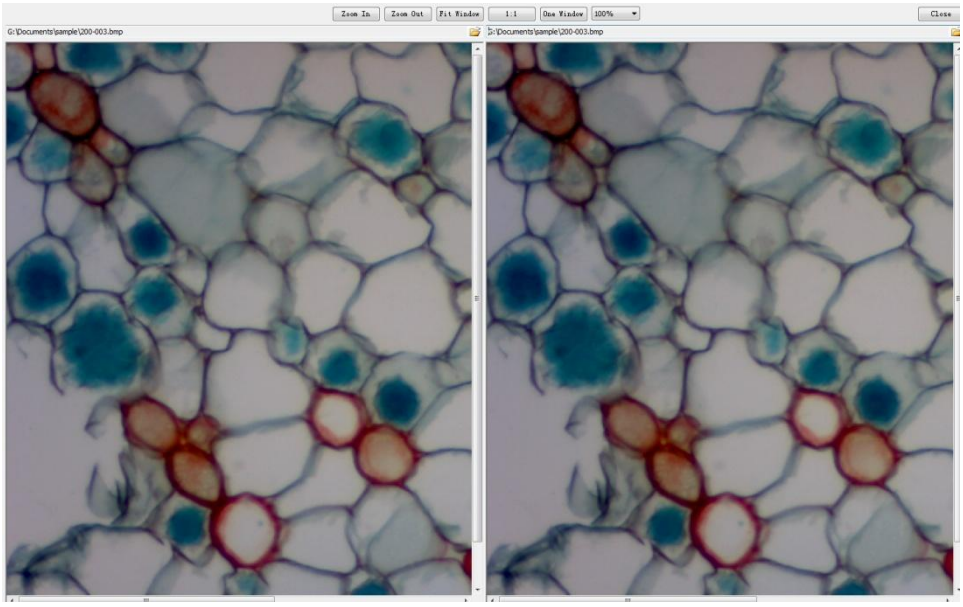


1) Single clicking the Color space check box to choose one requested color space to remedy the image.
2) Drag the radius scrolling bar to change the value of Radius, the default radius value range is 0-5.
3) Drag the Aggregate scrolling bar to change the Aggregate value, the default value range is 1-5.

7.2.3 Image Comparison

To open the Image comparison dialog box:

1) To open the image comparison dialog box by single clicking the Comparison Button inside the Ribbon Menu.
2) Picking up two frames from the Image List panel, and Right click one image with your mouse. Then single click The Image comparison from the Right mouse, the Image comparison dialog box will come out.



Zooming image:

1) Single click the Zoom In or Zoom Out buttons to zoom image.
2) First press Ctrl, then rotate the Scrolling wheel of the Mouse.
3) Single click the Zoom Ratio list box, and choose the needed ratio.

Moving image:

1) Drag and move the scrolling bar at the right side (or bottom) of image.
2) Press the left key of the mouse to move the image.

Most Fit: single click this button, the program will show the image in full size in the Image Displaying Window.

1:1 : Single click this button, the program will show the image in its actual size in the Image Displaying Window.

8 Measurement

The measurement command can automatically calculate the length, perimeter, area or angle of different geometric drawing. The geometric drawing includes lines, rectangular, oval, polygon, curve, closed curve and angle.

8.1 Calibration

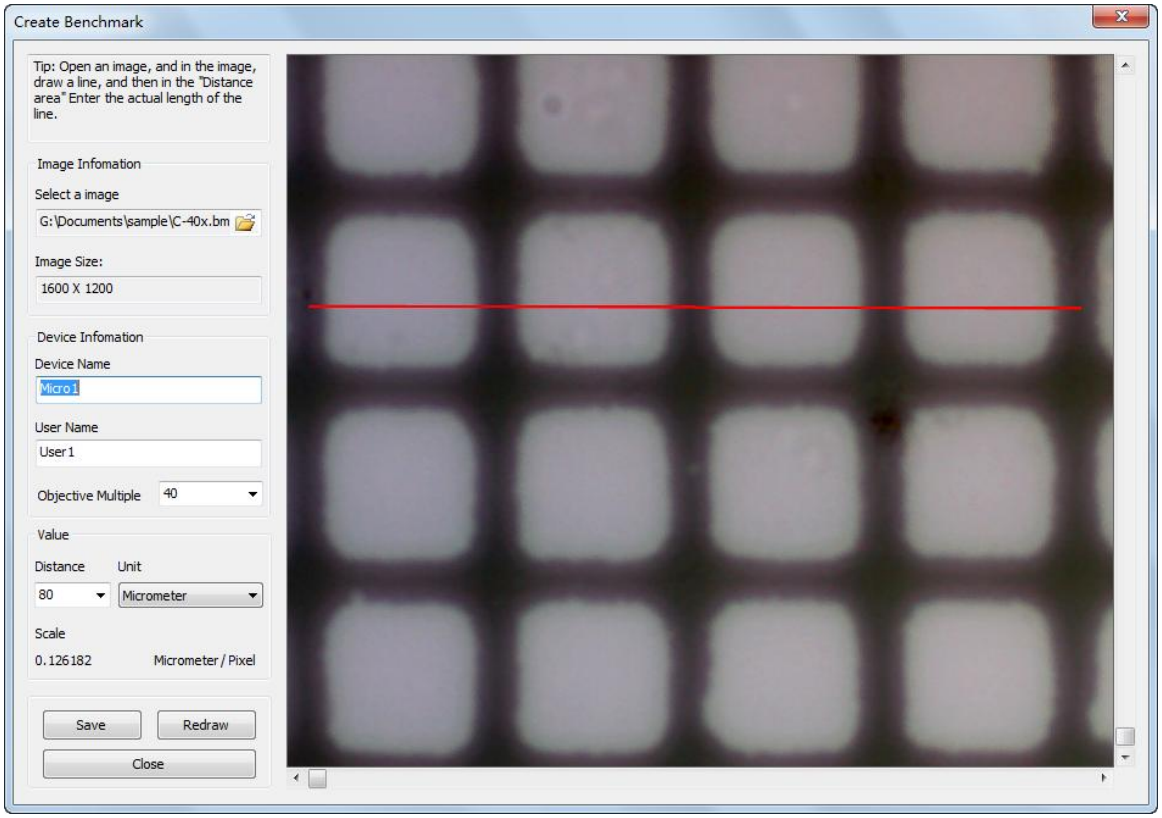
Before start the measurement of various parameter meter of different geometric drawing, the calibration must be selected.

8.1.1 New Calibration

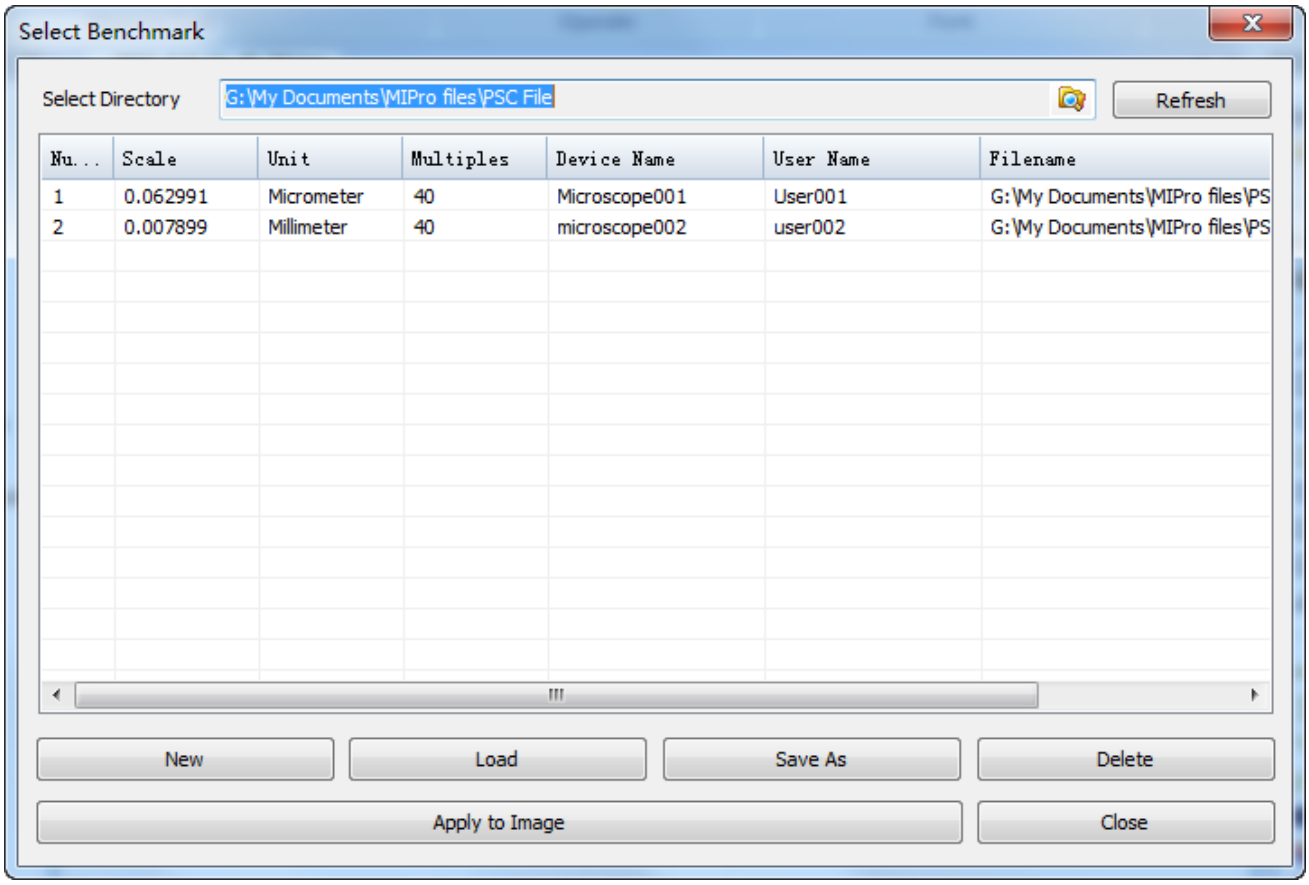
Single click the New Calibration Button, the dialog for new calibration appears.

The procedure for building the new Calibration:

1) First taking a photo used for building the new calibration from the Video Clip capturing dialog box (for details, please refer to Video Capturing Module.)
2) Open an image file used for building a measurement calibration from the Preview button at the right side of Image Textbox.
3) Input the name of device, editor and objective magnification into the textbox.
4) Draw a straight line inside the Image Displaying window, then fill in the actual distance and unit into the Evaluation field.
5) If you need to draw another straight line, please first single click the Redrawing Button.
6) Single click the Save Button, and save the calibration file in psc format.



8.1.2 Choosing the Measurement Calibration



- **Choose directory**: Single click the preview button to open a directory for saving calibration file (psc format). All files in psc format in this directory will be displayed in Calibration list box**.**
- **Refresh**: Single click the Refreshing button, all files in psc format will be displayed in the selected directory.

- **Newly build:** To open a dialog box for New calibration to newly build a calibration file.
- **Load:** To load a measurement calibration file from the hard disc.
- **Save as:** to save a selected calibration file from the List box as a copy file.
- **Delete:** The selected calibration file from the Calibration list box will be dumped into the recycle bin.
- **Apply to image:** the selected calibration file will be applied to the current image file.

8.2 Graphics and Images Merge

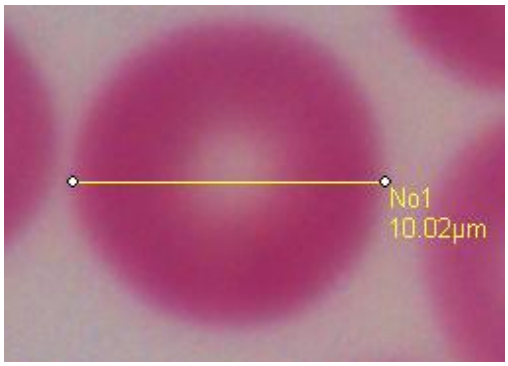
To merge the measurement information and current image into one new image file and save.

8.3 Measurement

- Before measuring the various parameter value of geometric drawing, the measurement calibration needs to be selected.
- The measured geometric drawing includes lines, rectangular, oval, polygon, curve, closed curve and angle.
- All measurement result will be displayed in the Measurement Report Panel.

8.3.1 Line

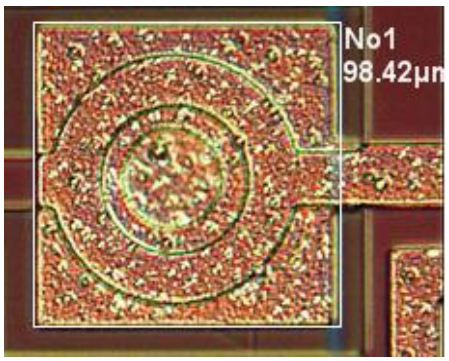
Run Straight Line command to measure the length of a line. The procedures are as follows:

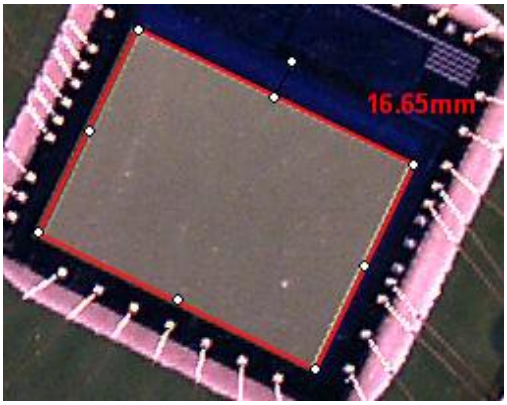


1) Select and click the Measuring Straight line command button, or press hot key L.
2) Move the mouse to the first point need to be measured, and press the left mouse at the same time. Then move the mouse to the second point need to be measured. Release the mouse. While moving the mouse, the measurement information will be updated punctually.
3) If you need to adjust the length or position of straight line, you can move the mouse till the end or half point of the line, then press the left mouse button, the mouse point will be changed to + or. The length or position of straight line can be adjusted by moving the mouse.

8.3.2 Rectangle

Run the Rectangle command to measure the perimeter or area of rectangle need to be measured. The procedures are as follows:

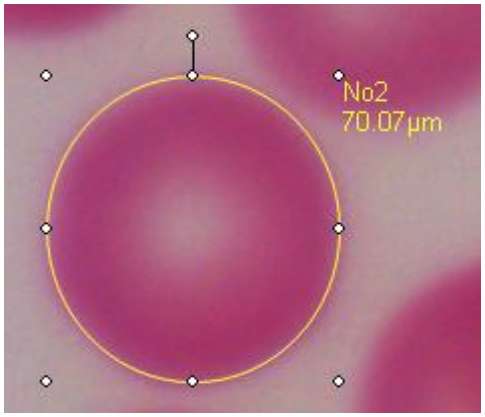


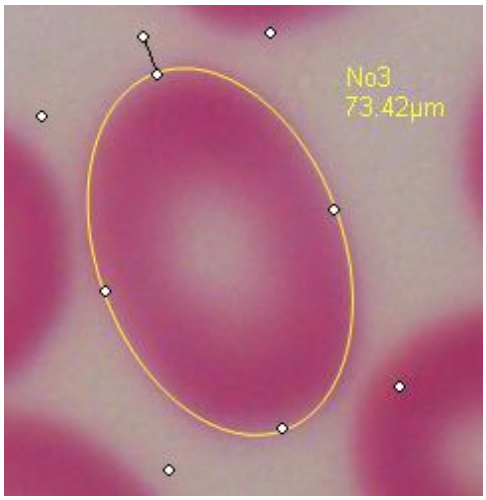


1) Choose rectangle command or use hot key R.
2) Draw a rectangle with similar size to the area need to be measured.
3) Press the mouse left button inside the rectangle area, and keep your press on the mouse left button and move the rectangle to the position need to be measured.
4) By adjusting the control point of rectangle, the shape and size of rectangle can be changed. Keep on adjusting Until it over laps with the area need to be measured. See above figure.
5) If the measured area is not in the clockwise direction, you can move the rotation point on the above of Rectangle to change the rotation angle.
6) In the drawing process, the measurement information can be updated punctually.

8.3.3 Ellipse

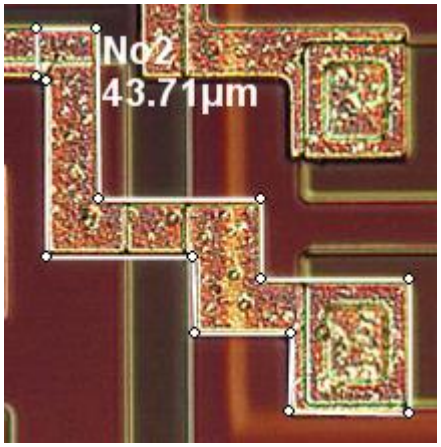
Run the Ellipse command to measure the perimeter and area of the oval, the procedures are as follows:





1) Select Ellipse command or use hot key E.
2) Draw an oval with similar size to the area need to be measured.
3) Press the mouse left button inside the oval area, and keep your press on the mouse left button and move the Ellipse to the position need to be measured.
4) By adjusting the white control point of Ellipse, the shape and size of Ellipse can be changed. Keep on adjusting Until it over laps with the area need to be measured. See above figure.
5) If the measured area is not in the clockwise direction, you can move the rotation point on the above of Ellipse to change the rotation angle.
6) In the drawing process, the measurement information can be updated punctually.

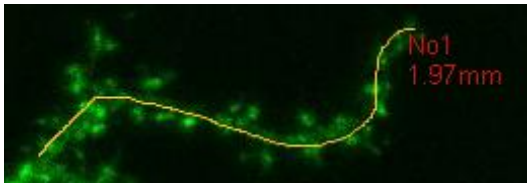
8.3.4 Polygon



1) Select polygon command or use hot key P.
2) At the key point of Polygon area, draw a polygon with similar size to the area need to be measured.
3) Double click the mouse left button to finalize the drawing.
4) By adjusting the control point of polygon, the shape and size of polygon can be changed. Keep on adjusting Until it over laps with the area need to be measured. See above figure.
5) In the drawing process, the measurement information can be updated punctually.

8.3.5 Curve

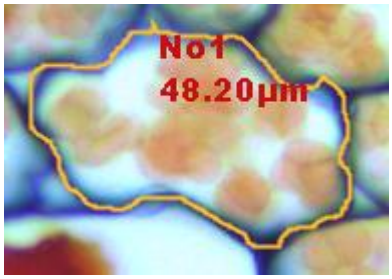
Select the curve command to measure the length of irregular graphics, the procedures are as follows.



1) Select the Curve command or use hot key C.
2) Left click the mouse, and move the mouse along the shape need to be measured.
3) Release the press of mouse at suitable time.
4) In the drawing process, the measurement information can be updated punctually.

8.3.6 Closed Curve

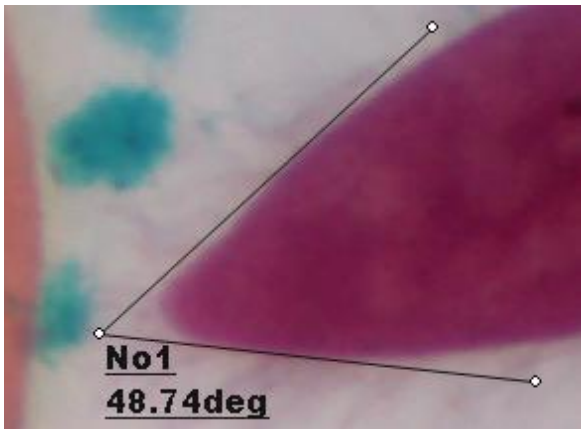
Use the Closed Curve button to measure the perimeter and area of irregular closed curves. The procedures are as follows:



1) Select Closed Curve command or use hot key O.
2) Left click the mouse, and move the mouse along the edge of the area need to be measured.
3) Release the press of mouse at suitable position, the program will automatically close the graphic drawn.
4) In the drawing process, the measurement information can be updated punctually.

8.3.7 Angle

To run the Angle command to measure the angle between two straight lines. The procedures are as follows:



1) Select Angle command or use hot key A.
2) Left click the top position of the angle need to be measured. Make sure it is the top end.
3) Left click another two ends, and draw two straight lines.
4) Adjust the three control points of the graphic till they are perfect for measuring.
5) In the drawing process, the measurement information can be updated punctually.

8.4 Shape Management

Run graphics management command to delete, select, hide and lock the measurement of geometric drawings.

8.4.1 Select All

To run Select All command or use hot key Ctrl + A, to select all geometric drawings.

8.4.2 Deletion

Run deletion graphic command or hot key Delete, to delete the selected geometric drawings.

8.4.3 Reveal or hide

Select reveal or hide command or use hot key Ctrl+D, to reveal or hide all geometric drawings.
If you need to conduct non measurement operation on the current image, hide all measured drawing to achieve better image observation effect.

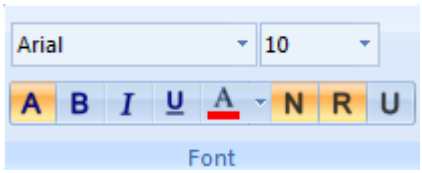
8.4.4 Lock or Unlock

To run Lock or Unlock command or use hot key Ctrl + K, to lock or unlock all geometric drawing.
All measured drawing cannot be edited if in locked status, when you execute again the lock command or draw the measuring graphic with measurement command, all the measuring images will be unlocked.

8.5 Graphic style

The graphic format command includes font style and graphic style.

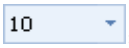
8.5.1 Font style



The user can replace the default font style by changing the Preference, the explanation for using all buttons are as follows;



：Revise or rename the font of measurement text message.



： Revise or rename the font size of measurement text message.



：Display the measurement text message in original font style.



：Display the measurement text message in bolded font.



：Display the measurement text message in inclined font.



：Display the measurement text message in underlined font.



：Revise the font color of the measurement text message.



：Show the serial number inside the measurement text message.

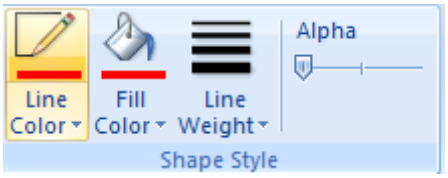


：Show the actual value (length, perimeter, area or angle) inside the measurement text message.

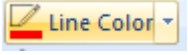


：Show the used unit during measurement inside the text message.

8.5.2 Graphic style



The user can revise or change the line colors, line width, filling color of closed curves, and filling opacity by running the Graphic style command. The user can also change the default font style from the Preferences.
The explanations of using all buttons are as follows:

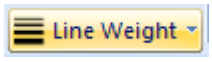


：Change the line color inside the measured graphic.

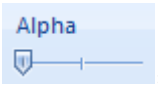


：Revise the filling color inside the measured graphic. This command is only valid to the graphic of

closed curve.



：Change the displaying line width of measured image.



：Revise the opacity of filling color inside the measured image. This command is only valid to closed curve graphic.

9 Short Key List

Operation module	Command	Hot key
File operation	Open	Ctrl+O
	Save	Ctrl+S
	Save as	Ctrl+Shift+S
	Print	Ctrl+P
	Export	Ctrl+E
Capturing and playing	Capturing	Ctrl+Alt+T
	Play	Ctrl+Alt+P
Zooming operation	Fit page	Ctrl+F
	Fit width	Ctrl+W
	Zoom in	Ctrl++
	Zoom out	Ctrl+-
	Zoom out to 100%	Ctrl+1
	Moving	Ctrl+Shift+H
window	Preview panel	F2
	Image list	F3
	Measurement report	F4
	Task panel	F5
Retouching image	Horizontal rotation	Ctrl+Shift+H
	Vertical rotation	Ctrl+Shift+V
	Left 90	Ctrl+Shift+7
	Right 90	Ctrl+Shift+9
	Self defined angle	Ctrl+Shift+8
	Negative image	Ctrl+I
	Grayscale	Ctrl+G
	Blacken and whiten	Ctrl+T
	color	Ctrl+R
	Brightness/contrast	Ctrl+B
	Hue/Saturation	Ctrl+H
	Gamma Value	Ctrl+M
	Image size	Ctrl+Alt+I
Image operation	comparison	Ctrl+Alt+M
Measurement operation	Select calibration	Ctrl+Shift+A
	New calibration	Ctrl+Shift+T
	Merge	Ctrl+Shift+C
	Straight line	L
	Rectangle	R
	Ellipse	E
	Polygon	P

	Curve	C
	Closed curve	O
	Angle	A
	Select all	Ctrl+A
	Deletion	Delete
	Show or hide	Ctrl+D
	Lock or unlock	Ctrl+K
	Regular font	Ctrl+Shift+R
	Bolded font	Ctrl+Shift+B
	Italic font	Ctrl+Shift+I
	Underlined font	Ctrl+Shift+L
	Show or hide serial number	Ctrl+Shift+N
	Show or hide actual measurement value	Ctrl+Shift+V
	Show or hide the measurement unit	Ctrl+Shift+U