Digital Viewer II™ Digital Microscope

Image Editing and Measurement Software

User Manual

Version: 2.1.1.2

DIGITAL VIEWER II™ DIGITAL MICROSCOPE 1

IMAGE EDITING AND MEASUREMENT SOFTWARE 1

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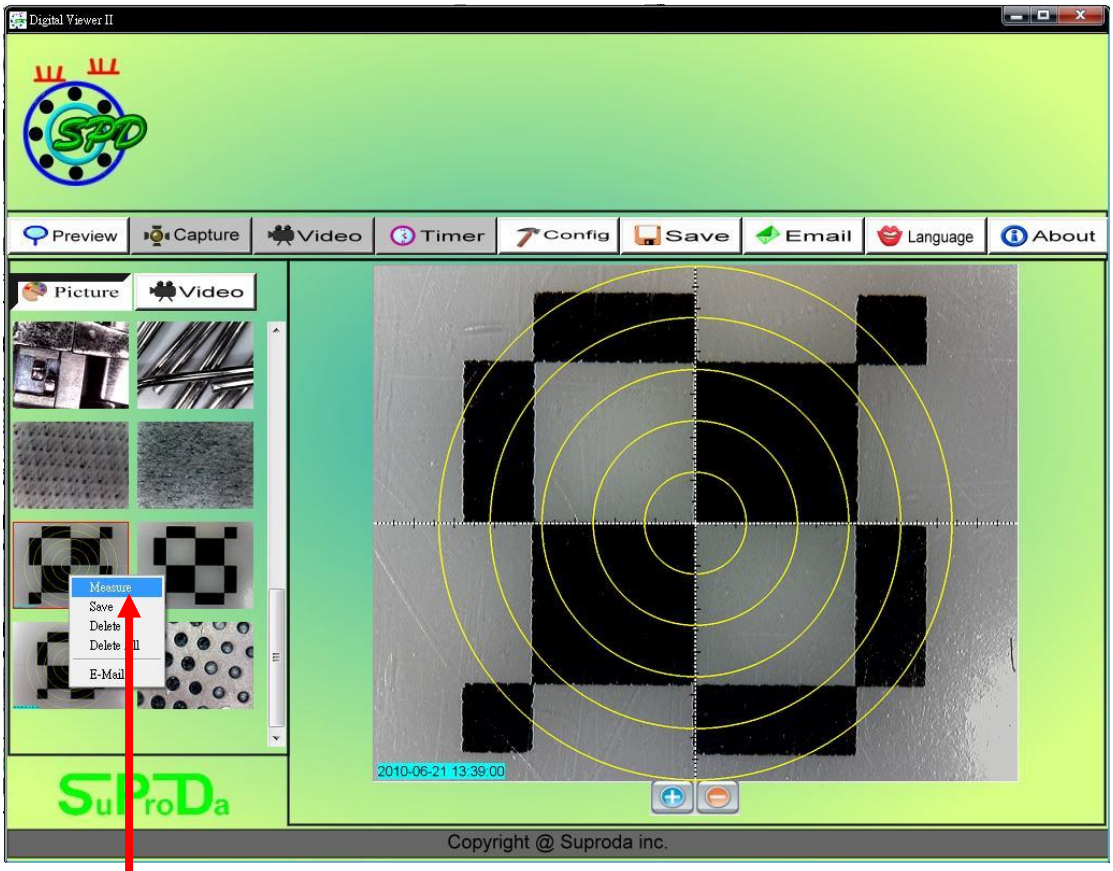
Open the Measurement Software

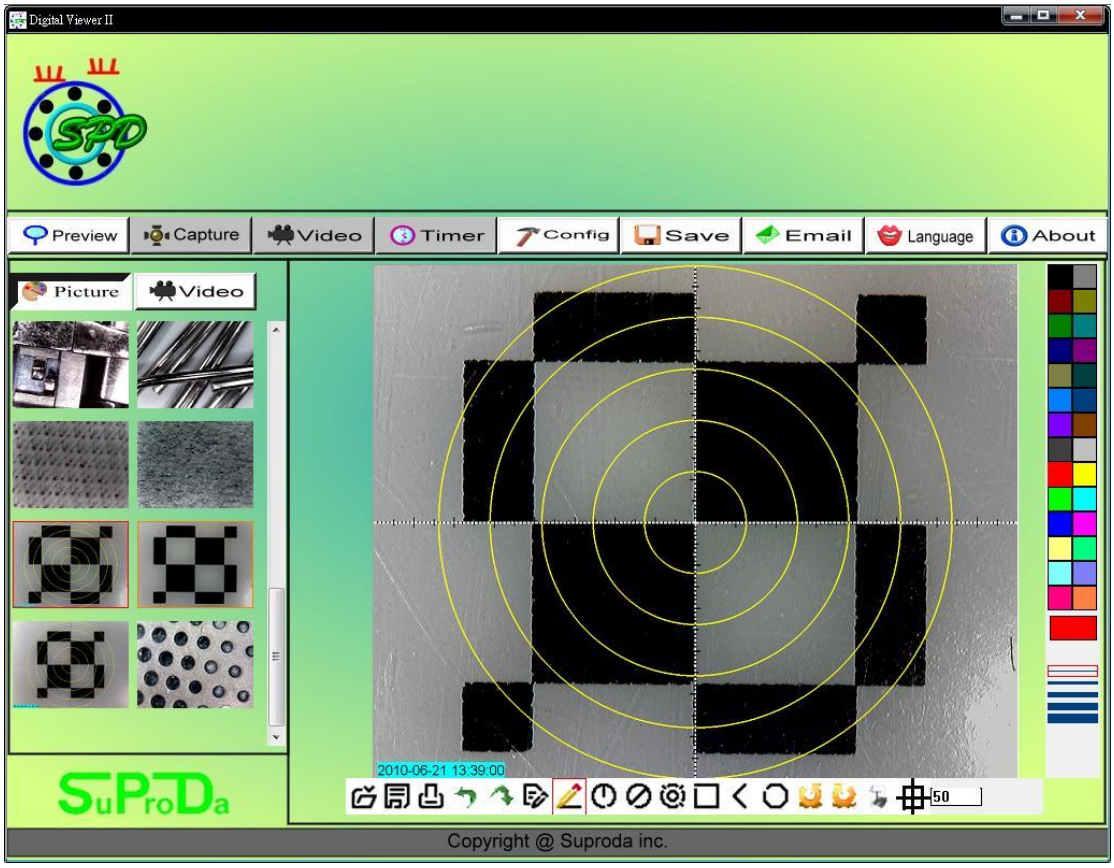
1. **Select an image in preview browsing folder and right clicking the mouse, then pop-up the context menu as below:**



Click " Measure"

Note: The measurement function only can work in resolution 1600x 1200 pixels.

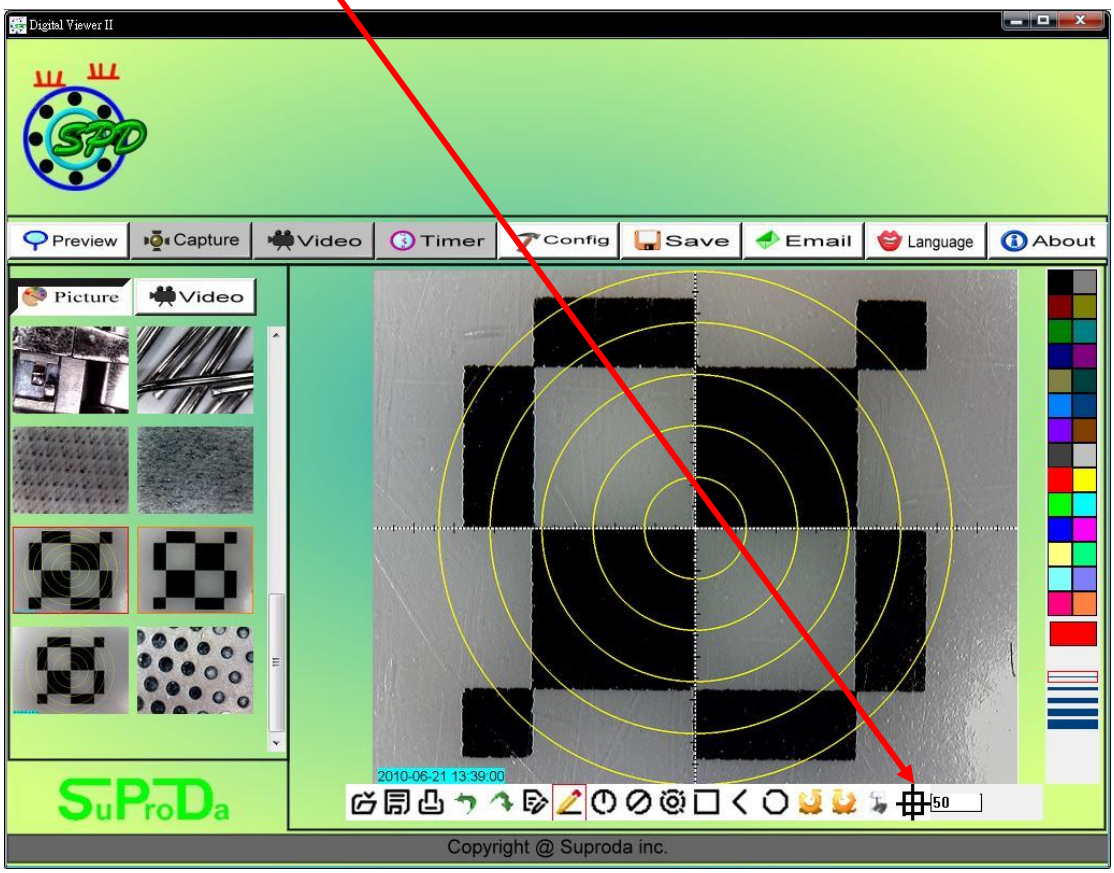
Click the “Measure” key, then the measurement feature will open as below:



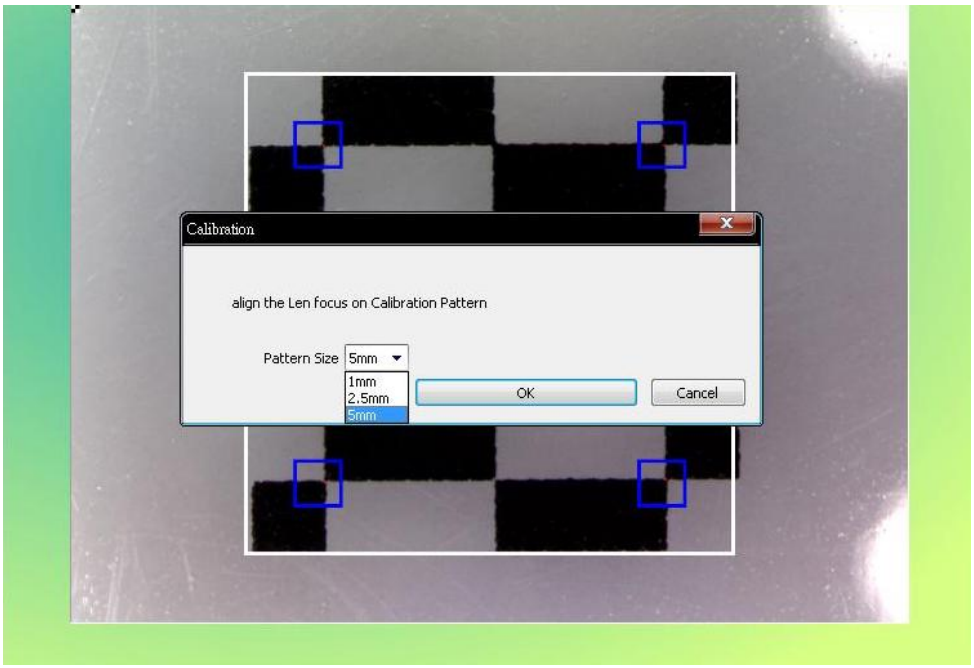
Run the Semiautomatic Calibration before using the Digital Viewer II Digital Microscope to measure your image.

Calibration:

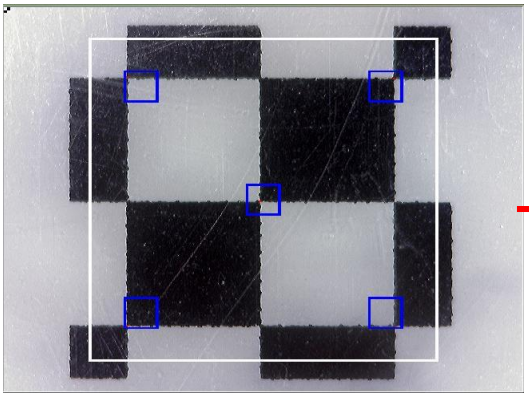
1. **Click Calibration icon “ ”, and set the magnification to 50x for standard.**



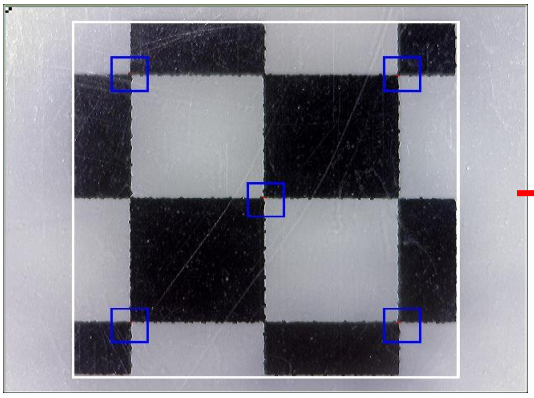
2. **Put the Digital Viewer II microscope on the Calibration Pattern sheet, you can see the black/white block on the screen.**

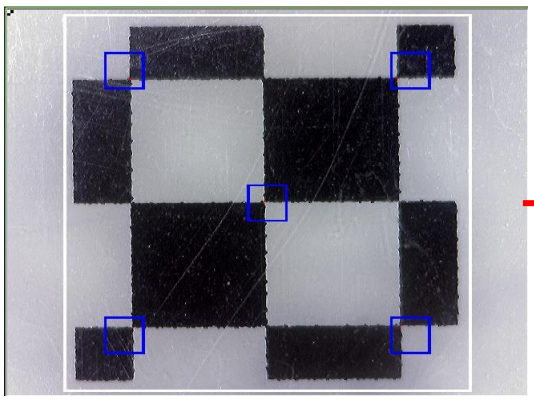


3. **Align the Calibration pattern block (black and white) to the white rectangle edge. (To push the " PgUp" key to enlarge the white rectangle or push the "PgDn" to shrink the white rectangle.)**

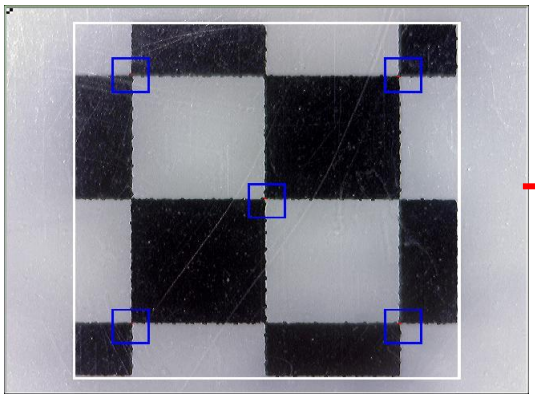


Push "PgUp" key to enlarge the white rectangle

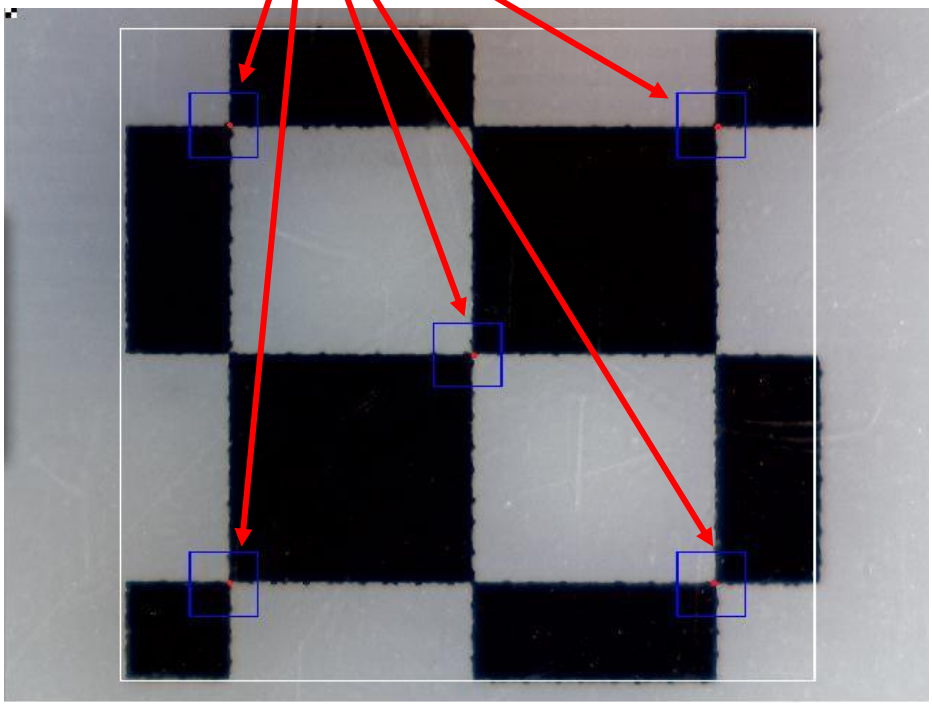




Push "PgDn" key to shrink the white rectangle

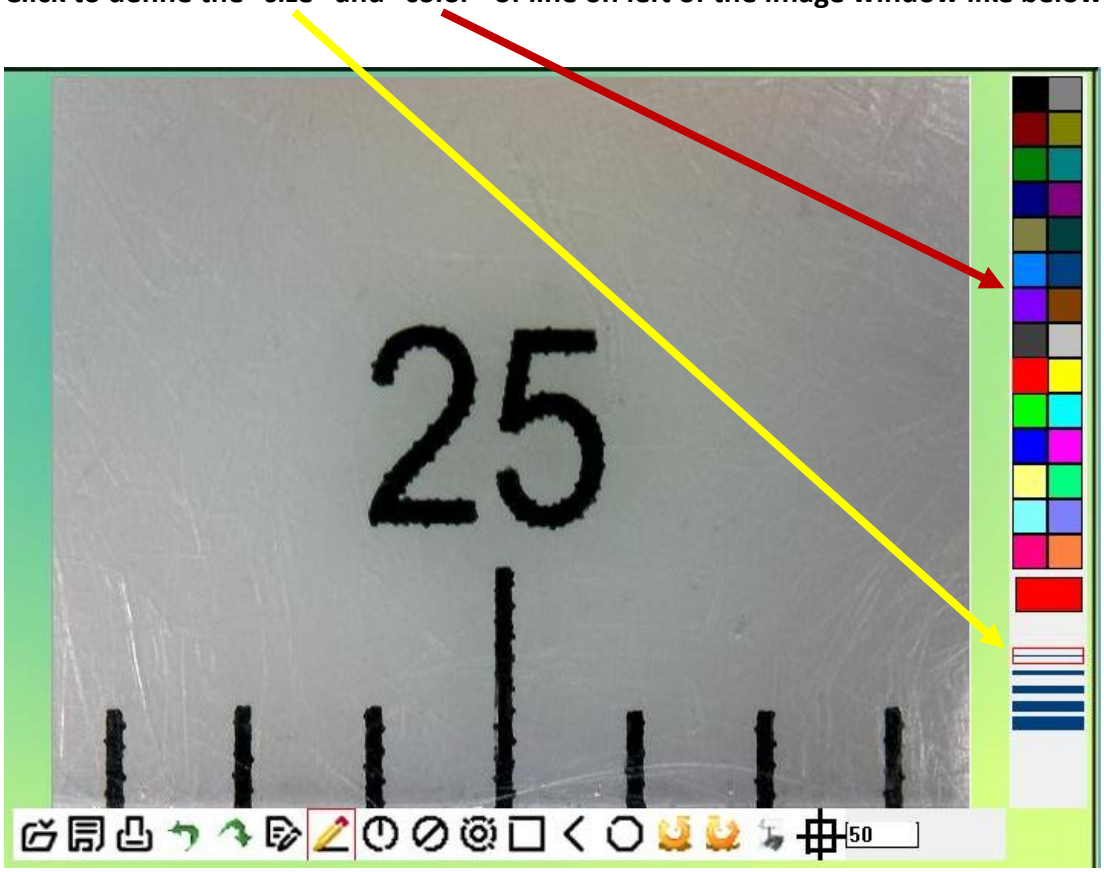


4. **There are 5 blue rectangles in the inside of big white rectangle, and all blue rectangles have one red point. When the 5 red points align on the cross point of black and white block, Please click "OK" or press "enter" key to run Calibration.**



Operation Guide for Drawing with Measurement

Click to define the “size” and “color” of line on left of the image window like below:



Click to select one of the drawing tools on tool-bar below of the image window by drawing, and then start the drawing in image window.

Execute the drawing as per the type of TOOL selected.

To show the measurement data on the image, left click again on the image where you would like the data to be displayed. The data will then appear on the image in the colour and font selected.
(Note: right click will escape the measurement.)

Click the right key of the mouse to end this measurement.

Tool bar description

Open: open a file (“bmp” format is supported), which you want to edit or measure.

Save: save the operating picture in the picture folder.

Print: print the current picture on the current state.

Undo: back to the previous drawing state.

Redo: forward to the next drawing state.

Text: allow to key in text into picture.

Line: draw line and measure the length.

Radius Circle: draw circle with radius and measure the area of the circle

Diameter Circle: draw circle with diameter and measure the area of the circle.

Three Point Circle: draw circle with three points and measure the area of the circle.

Rectangle: draw rectangle and measure the area of the rectangle.

Angle: draw angle and measure the degrees on angle.

Polygon: draw the polygon and measure the area in polygon. (Notice: complete the drawing with “Ctrl+ C” or middle button-wheel of mouse.)

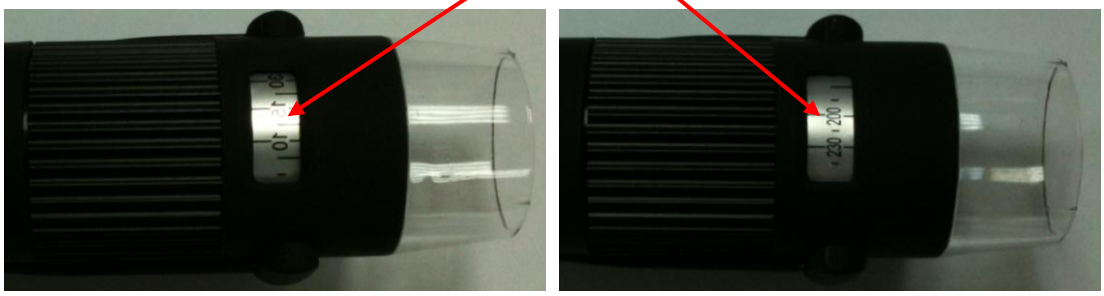
Clockwise: allow to clockwise the picture in the editing window.

Anticlockwise: allow to anticlockwise the picture in the editing window.

Sets font: selecting the fonts, size or colors on character.

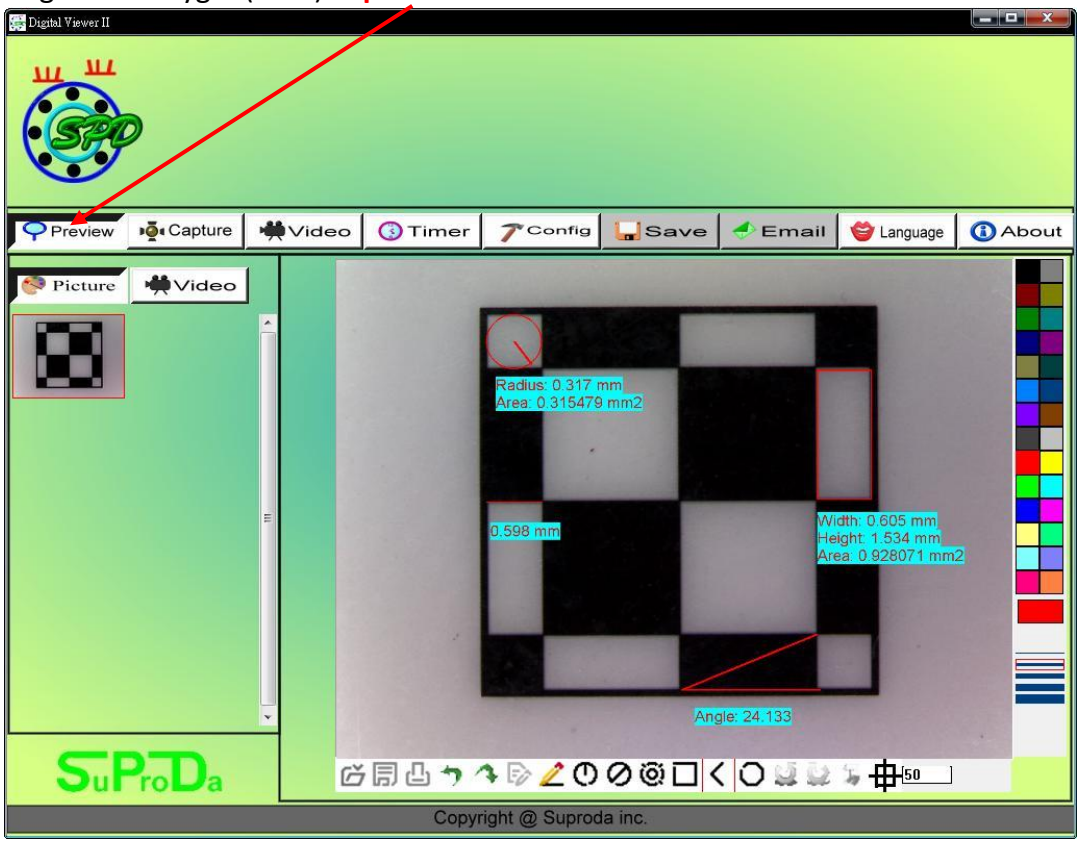
Calibration: semiautomatic calibration by Calibration pattern sheet.

50 **Magnify: key the correct magnification in the block according the "A" Roller indication.**



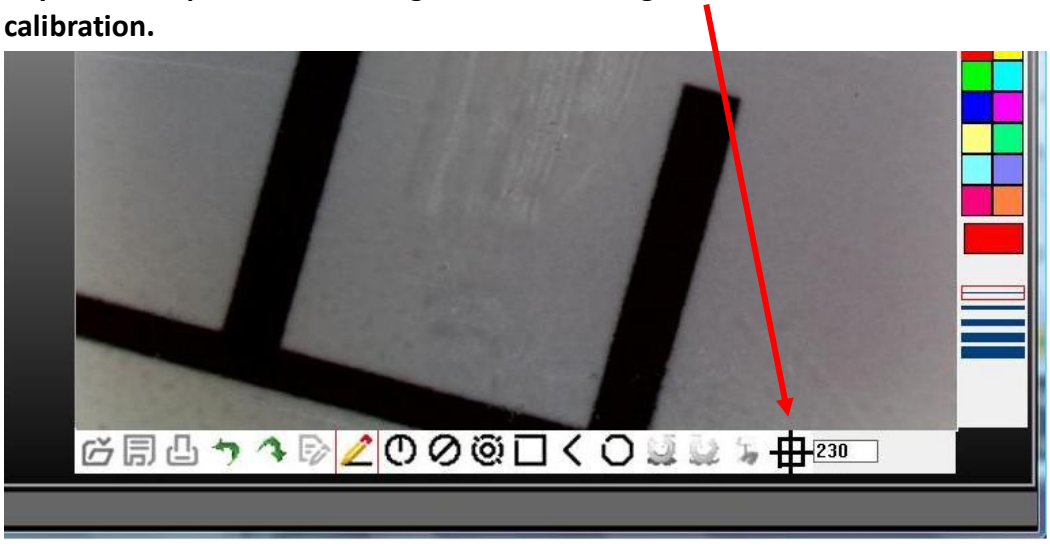
Dynamic Measurement (Real-Time Measurement) (V 2 Ver.)

1. Measure the Line(Length) , Circle(Radius, Area),Rectangle(Width, Height, Area), Angle and Polygon(Area) in **preview**.



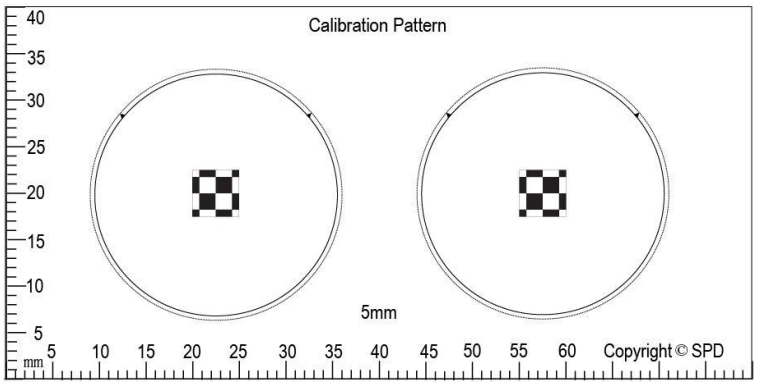
Full Range Measurement Calibration: (V 2 Ver.)

1. **Key in the scope indication Magnification on magnification window before calibration.**



2. **Select suitable scale pattern size:**

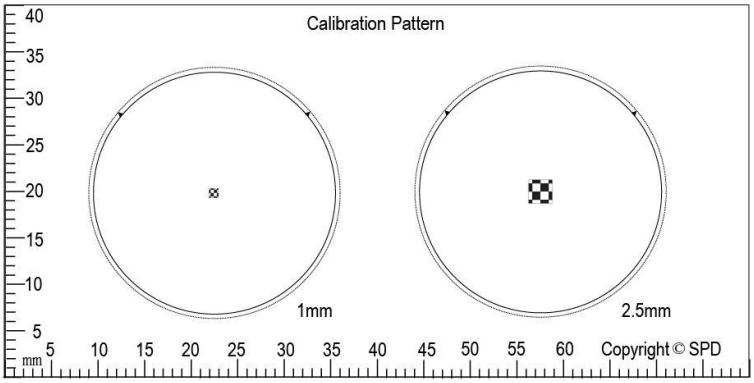
   a. **5.0 mm Calibration Pattern : 10X ~ 70X**



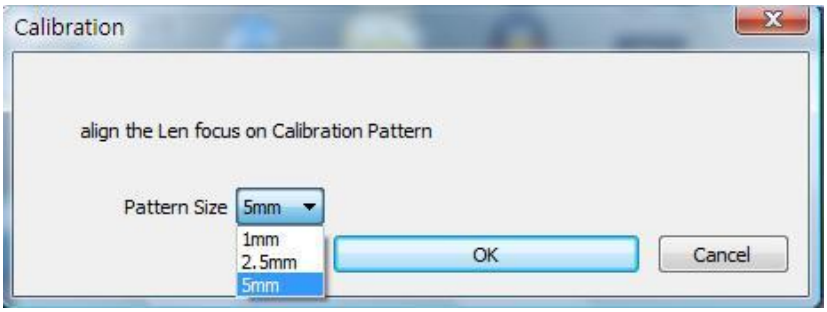
5mm Calibration Pattern

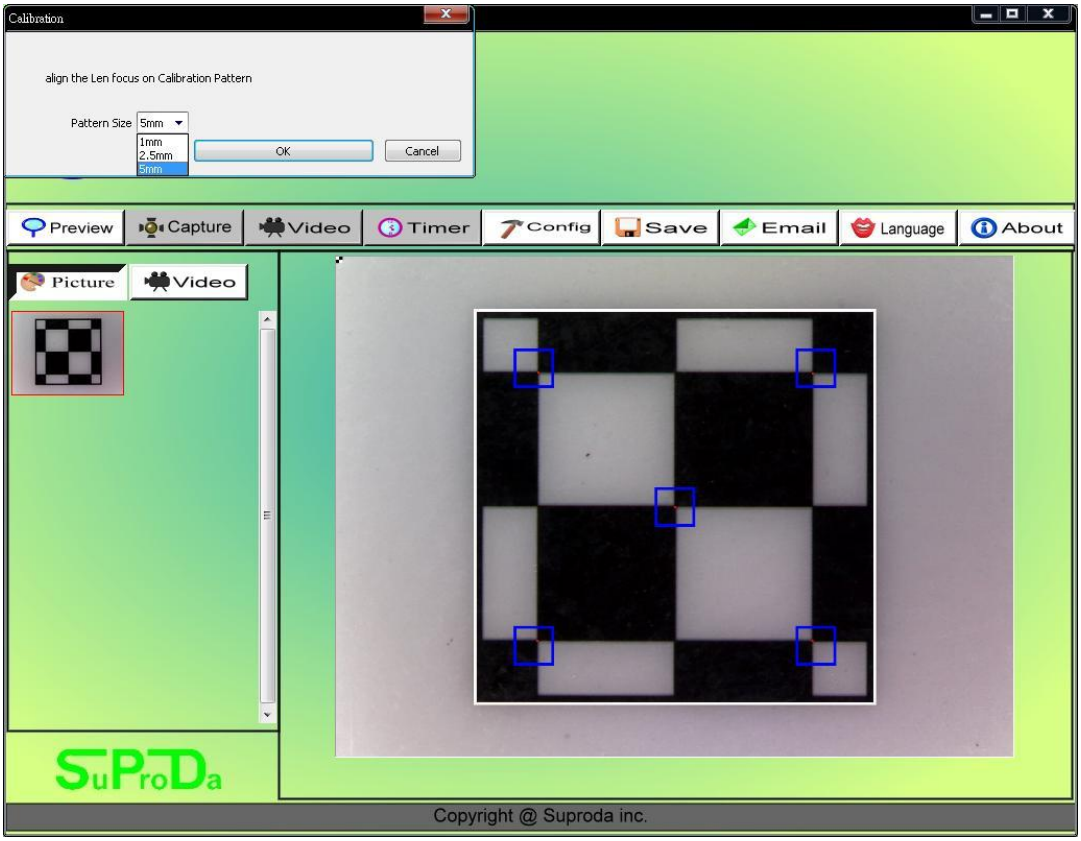
   b. **2.5 mm Calibration Pattern: 55X ~ 130X**

   c. **1.0 mm Calibration Pattern: 110X ~ 230X**

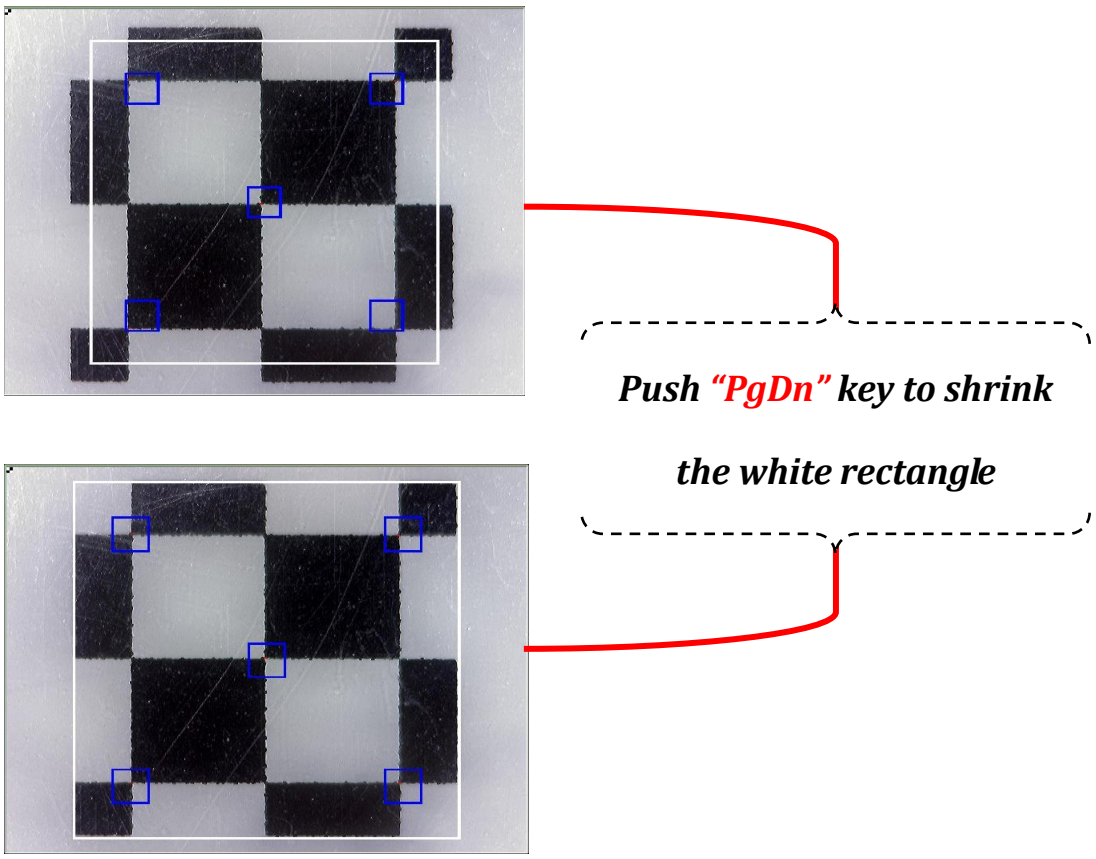


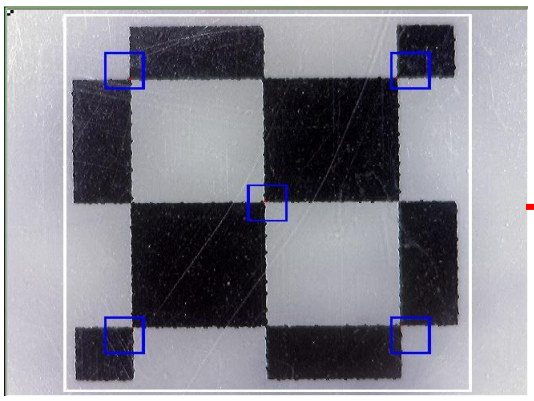
1.0mm and 2.5mm Calibration Pattern



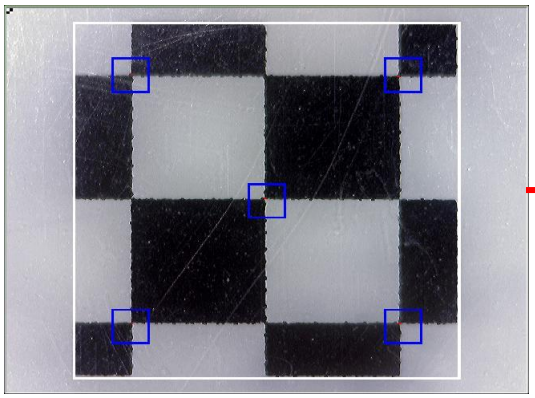


3. **Align the Calibration pattern block (black and white) to the white rectangle edge. (To push the " PgUp" key to enlarge the white rectangle or push the "PgDn" to shrink the white rectangle.)**

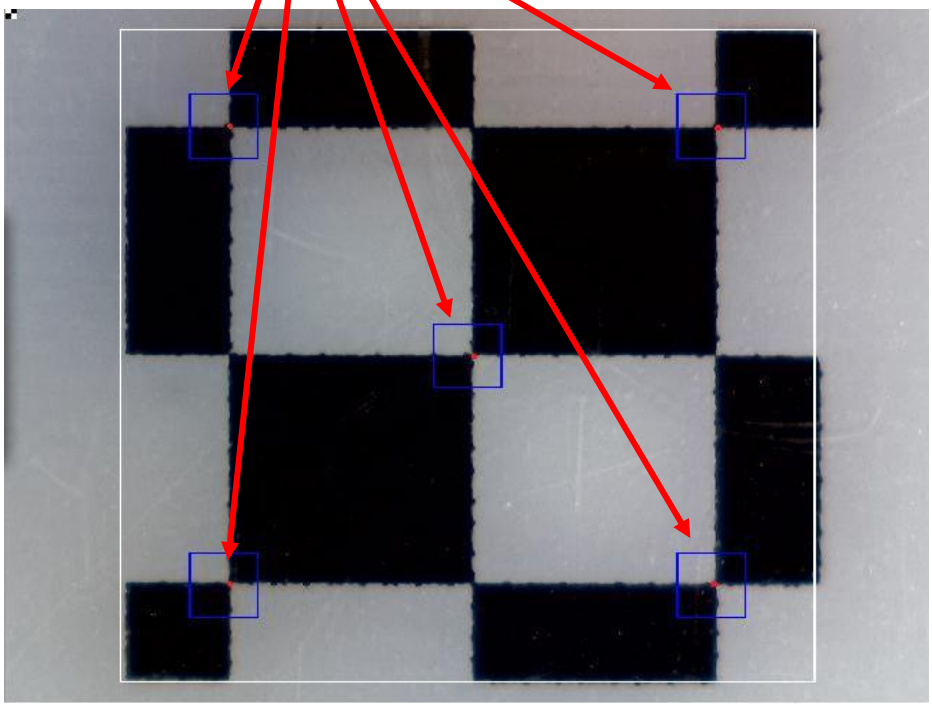




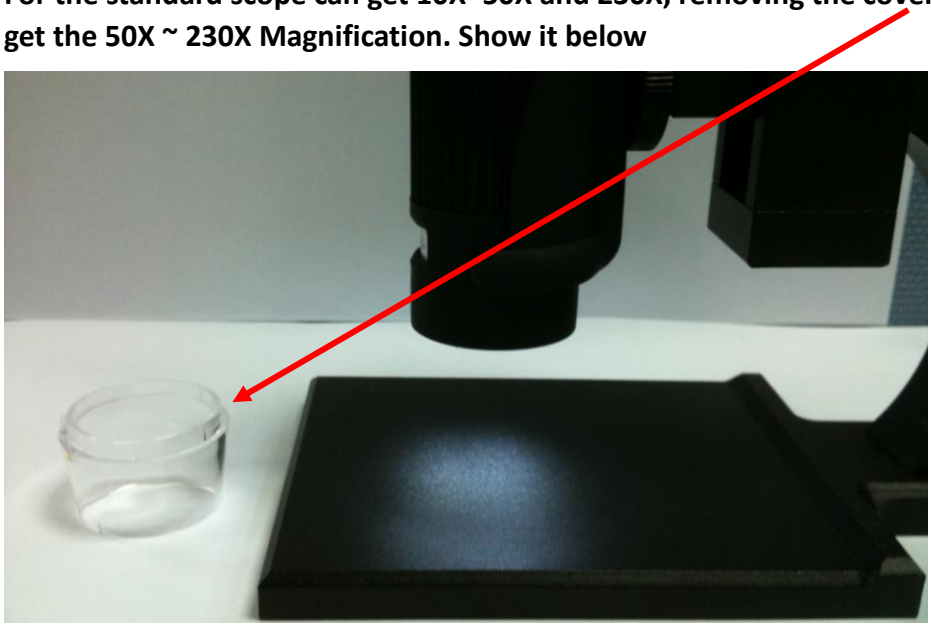
Push "PgUp" key to enlarge the white rectangle



4. **There are 5 blue rectangles in the inside of big white rectangle, and all blue rectangles have one red point. When the 5 red points align on the cross point of black and white block, Please click "OK" or press "enter" key to run Calibration.**



5. **Using metal high end stand(optional) to get the 50X~230X magnification: For the standard scope can get 10X~50X and 230X, removing the cover tip to get the 50X ~ 230X Magnification. Show it below**



Digital Viewer II™ Digital Microscope

User's Manual

Welcome

Thank you for choosing Digital Viewer II™ digital microscope!

The Digital Viewer II™ digital microscope is an exciting new device to clear micro objects and has a wide applications, such as,

- ✓ ***Industrial Inspection***
- ✓ ***Computer Parts Inspection***
- ✓ ***Telecom Module Inspection***
- ✓ ***Scientific Teaching Tool***
- ✓ ***Medical Analysis***
- ✓ ***School Research Tool***
- ✓ ***Insect Dissection / Examination***
- ✓ ***Plant Dissection / Examination***
- ✓ ***Skin Examination***
- ✓ ***Textile Inspection***
- ✓ ***Collections / Coin/ Jewelry Inspection***
- ✓ ***Printing Inspection***
- ✓ ***…etc.***

V.2.1.1.2

Please read this manual carefully before using Digital Viewer II™ Digital Microscope.

Digital Viewer II™ Digital Microscope 1

User's Manual 1

Welcome 1

Please read this manual carefully before using Digital Viewer II™ Digital Microscope. 2

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Product Specifications

- *Operation system: Windows XP/Vista and Windows 7*
- *PC interface: USB 2. 0 interface*
- *Image Sensor: 1/3.2 inches*
- *Effective Pixels: 1600(H)x1200(V), 1280(H)x1024(V), 640(H)x480(V), 320(H)x240(V)*
- *Frame Rate: 1600 x1200/15ftps or 640 x480/30ftps*
- *Magnification: 10X -230X(17"LCD display)*
- *White Balance: Auto.*
- *Exposure: Auto*
- *Illumination: 8 white adjustable LEDs*
- *Power Consumption:Max.0.75W*
- *Size: 102mm (L) X30mm (R)*

Safety Cautions

- *Avoid touching the lens with finger to dirty it and protect the product from electrostatic damage.*
- *Do not attempt to disassembly any part of this product.*
- *Do not attempt to service this product yourself. Opening the covers may expose you to dangerous voltage points or other risks.*
- *Storing and operating Digital Viewer II digital microscope at Temp: 0°C ~ 45°C, Humidity: 45% ~ 85%, as this will extend Product life and prevent damage to the product.*
- *Do not allow this product to have contact with water or other liquids. If water or other liquids enter the product interior, immediately unplug the product from PC. Continued use of the product may result in fire or an electrical shock.*
- *Do not use any detergent or volatile solution, which will damage the camera case, painted surfaces and lens. Only use a kens brush on soft cloth to wipe clean.*
- *Do not place this product near a heat source or expose direct flame, avoid the lens damaged by high temperature or humidity*
- *If the lens is dirty, please use a kens brush on soft cloth to wipe clean. Avoid touching it with your fingers. Exercise care to avoid scratching the lens.*
- *Need to read Digital Viewer II digital microscope User's Manual before using and storing it.*
- *To avoid electric shock, remove all electricity source before moving PC.*

Package Contents

The Digital Viewer II digital microscope package includes the following:

1. *Digital Viewer II Digital Microscope Device*
2. *CD (Driver)*
3. *Tripod Stand),Brick Stand*
4. *Travel bag*
5. *Calibration pattern(5mm) x 2pcs, Calibration pattern(2.5mm&1.0mm) x 1pcs*
6. *Dust cover x2pcs*
7. *Gift Box*

System Requirements

PC's system requirements:

1) *OS: Windows XP /Vista and windows 7*
2) *CPU: Pentium IV 1.0G, Celeron, AMD Athlon or above*
3) *CD-ROM driver*
4) *Available USB2.0 port*
5) *Above 256MB RAM*
6) *HDD storage space: at least 100MB*
   (for driver and application software installation)
7) *Graphic card: 16-bit or above support Direct 9.0C*

Recommended specification for performance:

1) *OS: Windows XP SP2 or Vista SP1 or above*
2) *CPU: Core2- 2.0GHz or , AMD Athlon 64x2- 2.0GHz above*
3) *CD-ROM driver*
4) *Available USB 2.0 port*
5) *1.0Gb RAM or above*
6) *10GB available hard disk space or above*
7) *Graphic card: 32-bit above support DirectX 10 or above*

Software Installation Process

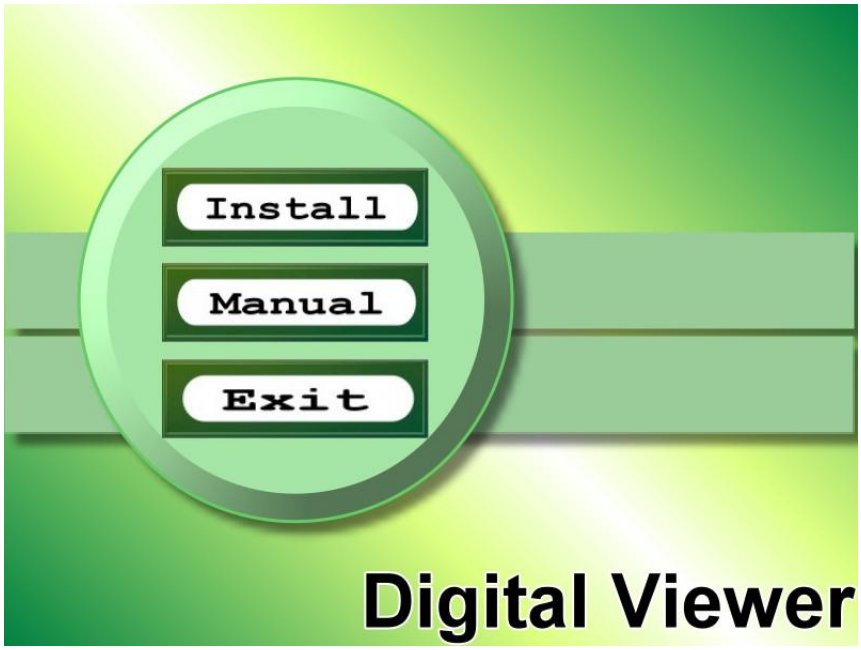
The following instructions will guide you to through the process of installing the Digital Viewer II digital microscope:

- *Power on PC and place installation CD into CD-ROM drive, do not connect USB Cable from Digital Viewer II device to PC before software installation.*
- *Select software installation, and follow the instructions to complete installation.*
- *As driver installation completed, and if system asking for re-start, please re-start the windows OS.*

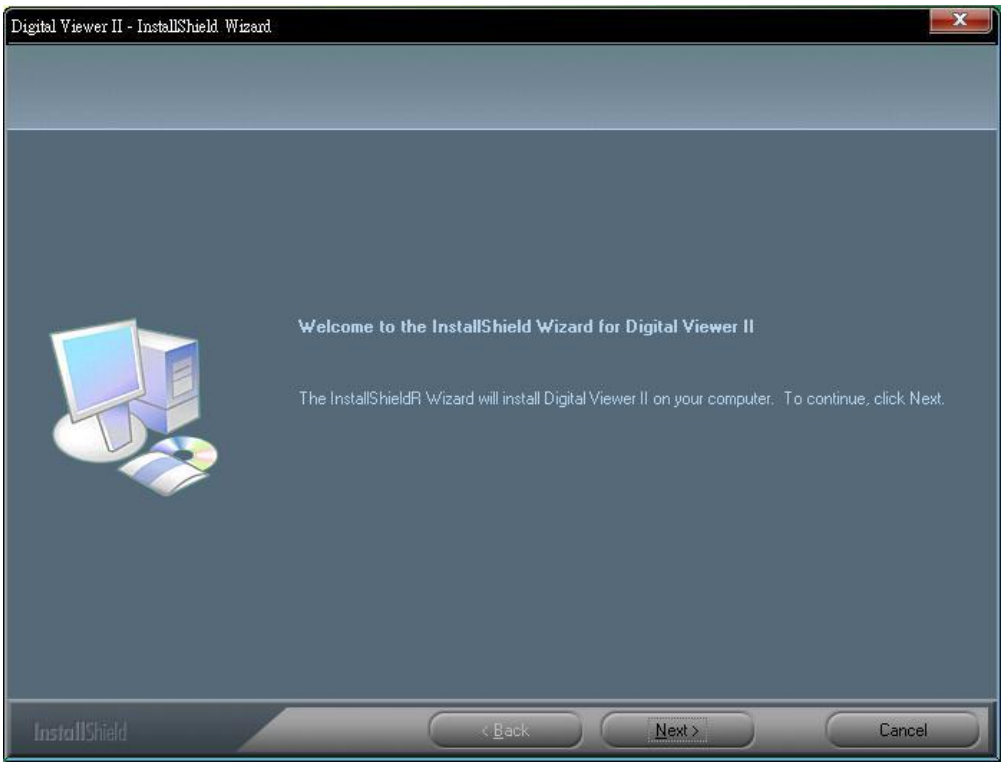
Note: The driver needs to be installed only once for each computer.

Installation the Digital Viewer II Application Software

1. *Place the installation CD into CD-ROM drive, the installation program should be started automatically. Otherwise, please execute the Digital Viewer II.EXE directly from the CD.*

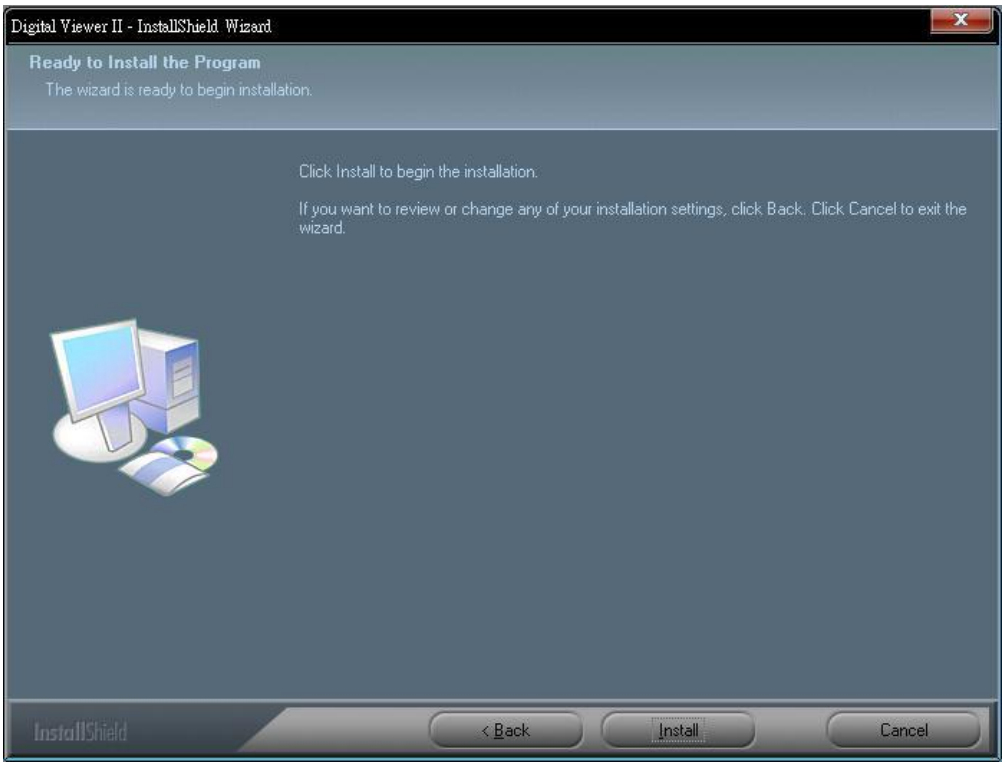


2. *Press the key "Install Software", you will see the following popup .Press "Next" to proceed or "Cancel" to abort installation.*

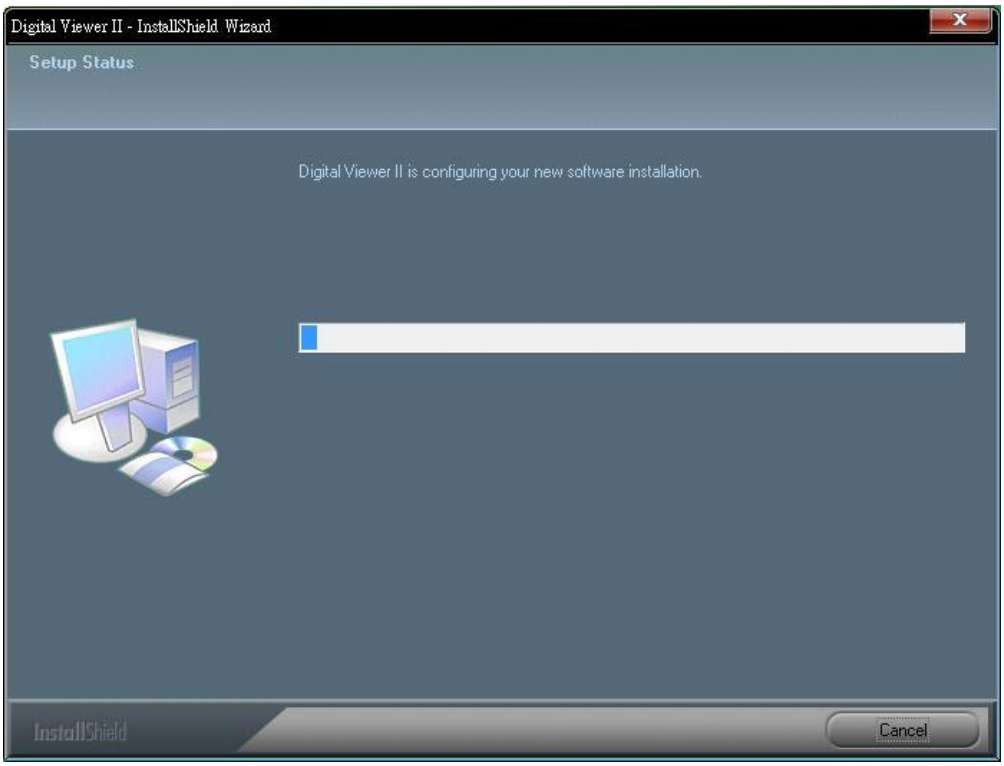


3. *You will see the End User License Agreement. If you accept the License Agreement, then you can Click the "Next" button which is available to process, or "Cancel" to abort installation.*

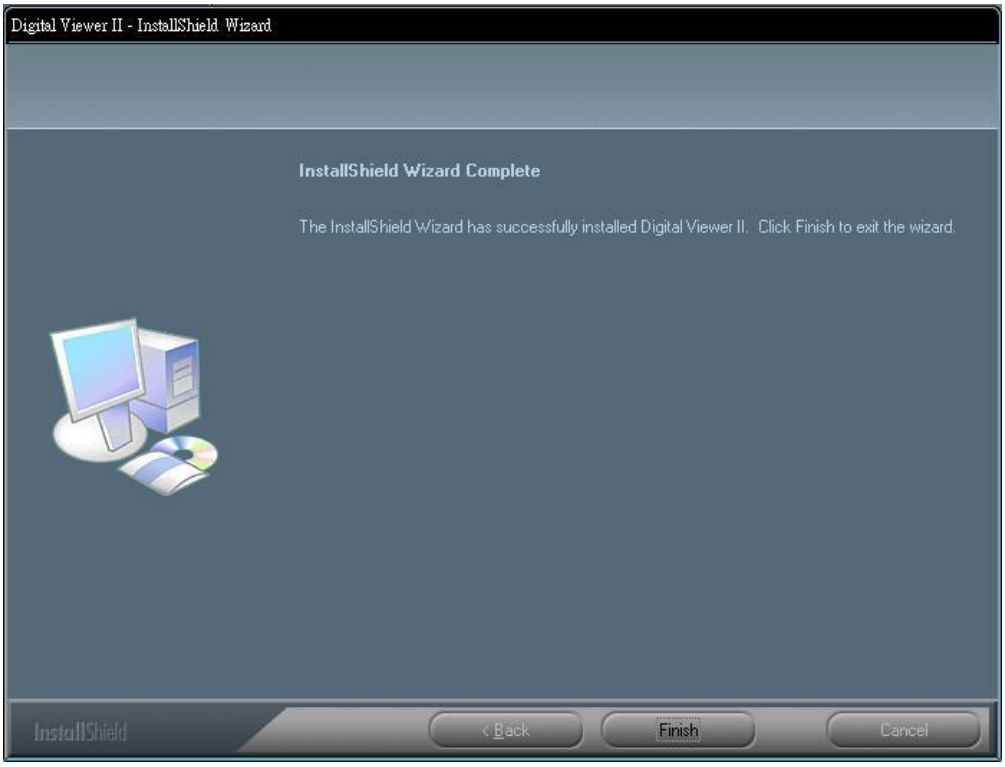
4. *You will be able to install the application. Click "Install" to start to install, click "Cancel" button, it will abort installation. Click on "Back" if you wish to read the End User License Agreement again.*



5. *You will see the following progress bar below indicating that the installation is proceeding. If click "Cancel" button, it will abort installation.*



6. *Wait until you see the following popup and press "Finish" button.*



7. *Please also install "ffdshow". And press "Next" to complete the installation.*

8. *Please plug USB cable to Digital Viewer II digital microscope Device to connect with PC. System will automatically search and install the driver. Wait until you see this message that system show "Your new hardware is installed and ready to use".*

Now the software installation was completed, you can use Digital Viewer II digital microscope.

Digital Viewer II Digital Microscope Connection

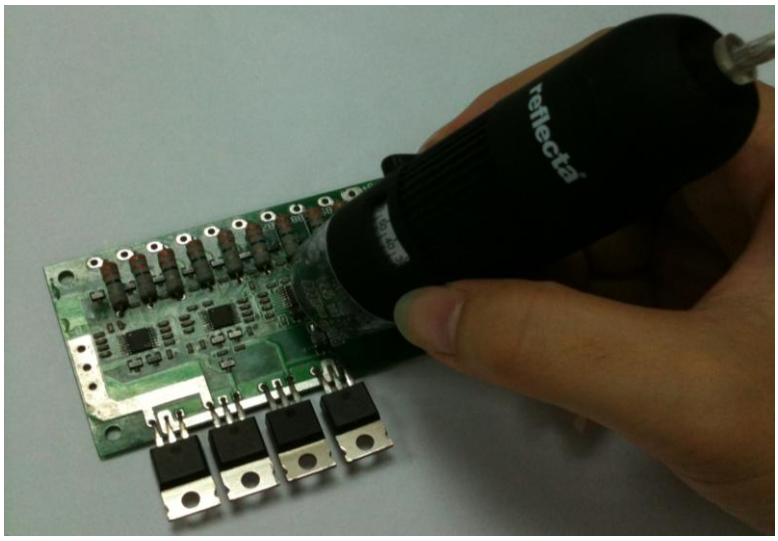
The following procedure will show you how to properly connect Digital Viewer II digital microscope with your PC.

Connect USB Cable on Digital Viewer II digital microscope to PC USB port

Digital Viewer II Digital Microscope Operation

The following process will show you how to operate Digital Viewer II digital microscope.

i. *To have a right image, suggest holding Digital Viewer II digital microscope as shown:*



ii. *Put the to-be-observed object near the Digital Viewer II digital microscope, the distance between both (object distances) don't exceed to 15CM.*

iii. *Adjust the focus: Use any finger to rotate the "A" roller as shown, till the image is vivid.*

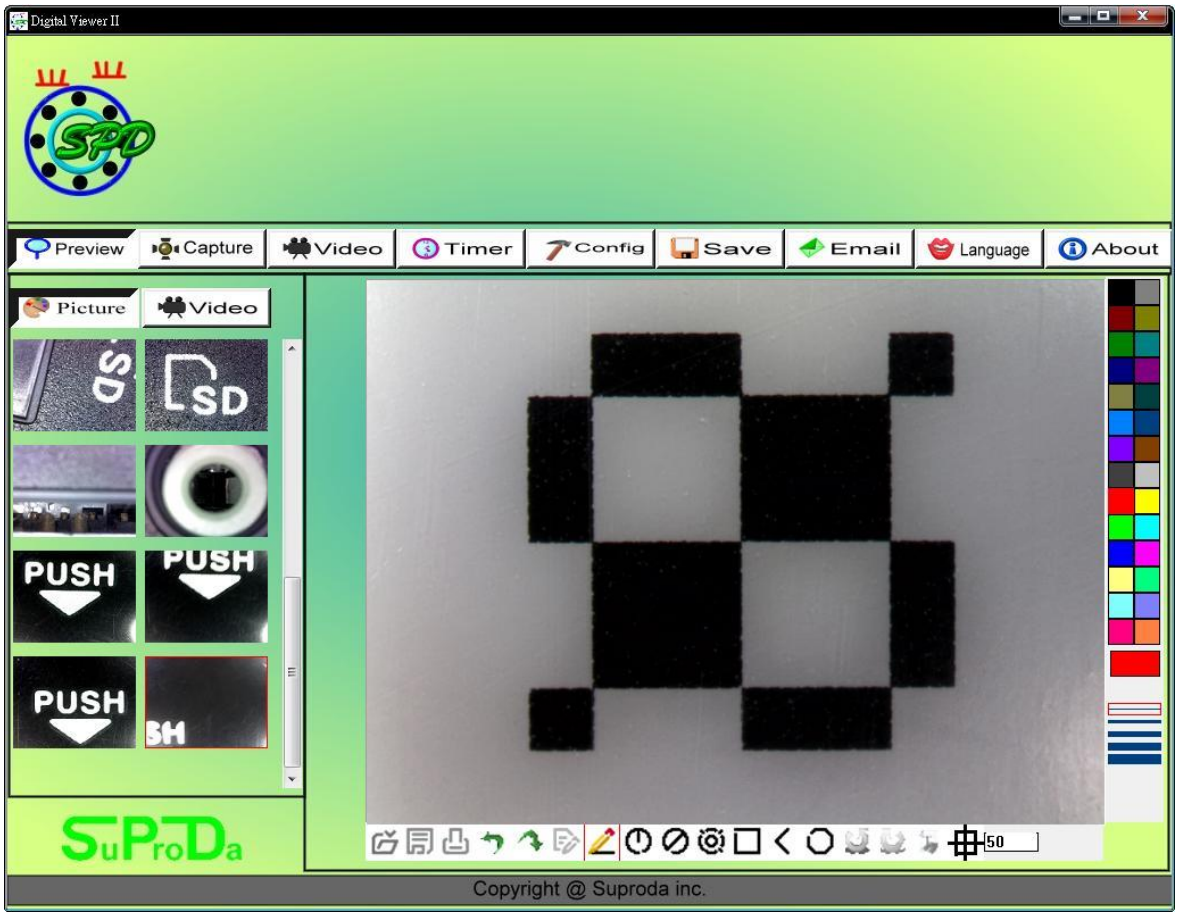
iv. *The Zoom times will be larger as Digital Viewer II digital microscope is closer to the observed object.*

v. *When the observed object is located at the top of the transparent cover, there are two focus positions, each with different zoom times (230x and 50X), can be found by rotating the roller. If you want 51X~229X and 231X~250X zoom times, you must take off the transparent cover to adjust the object distance.*

Digital Viewer II Application Software

Note: Before start Digital Viewer II, please make sure Digital Viewer II digital microscope has been connected to PC via USB line

Double-Click Digital Viewer II icon on desktop , the Digital Viewer II main screen will be shown as below:



Tool Bar Description

1.

: Two statuses as below: Real-time images show on Preview area under the microscope viewing.

   Ready to view Pictures or video has been taken.
2.

: Take Picture
3.

: Take Video
4.

: Take time lapsed Pictures
5.

: Setting--Picture and Video setting
6.

: Save as--A took-picture can be saved as "jpg", "bmp", "png" or "gif" to your specified disk..
7.

: Email
8.

:Language
9.

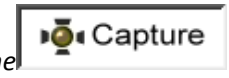
: About
10.

:Picture / Video Folder

Picture/Video Folder is on the left side of the program, which contains the thumbnails of picture or video captured by the program.

The Pictures/video in the folder will not be automatically deleted when closing the program. Thus, it is suggested to save manually the needful picture or video, and then keep this folder clean for file security and program's performance concern.

Take Picture

You can take picture by clicking the 

icon on Tool bar or press this "Capture button-< C >" on Digital Viewer II USB Cable Control device.

.

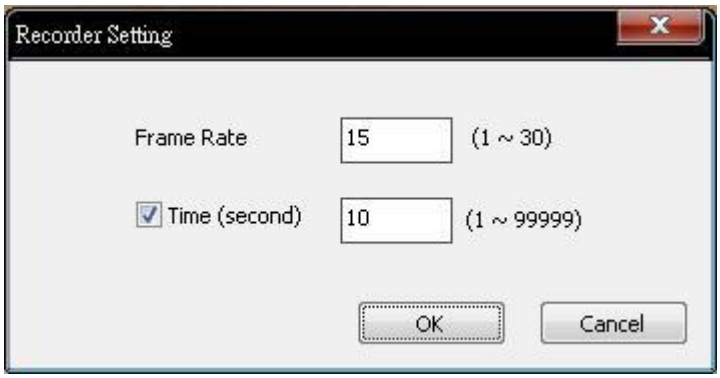
Take Video

The Video can be taken by clicking

icon on Tool bar. (Note: This is Video folder as below).

Recorder setting:

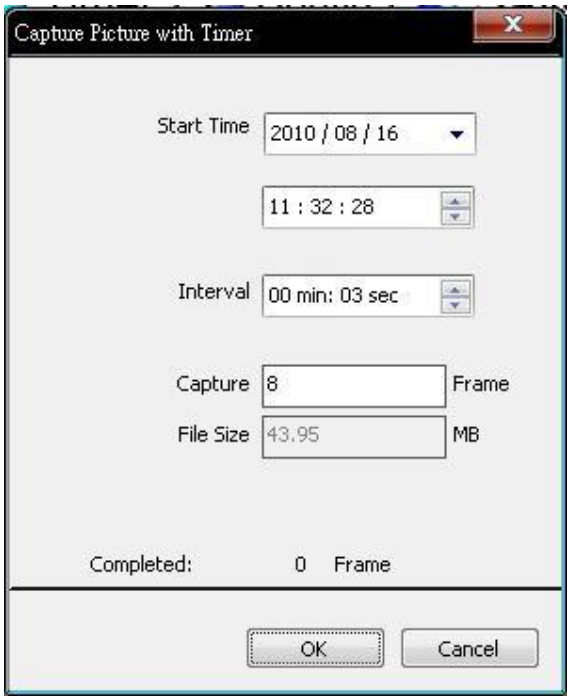
1. *Frame rate: it is the number of frames or images that are projected or displayed per second. The number range is 1~30*
2. *Timer limit: it is the time of video recording to avoid video file size exceed to the space of disk. The number range is 1~99999*
3. *Stop: it is available to stop the video recording before the timer setting.*



Take time lapsed Pictures

You can take time lapsed Pictures by click the

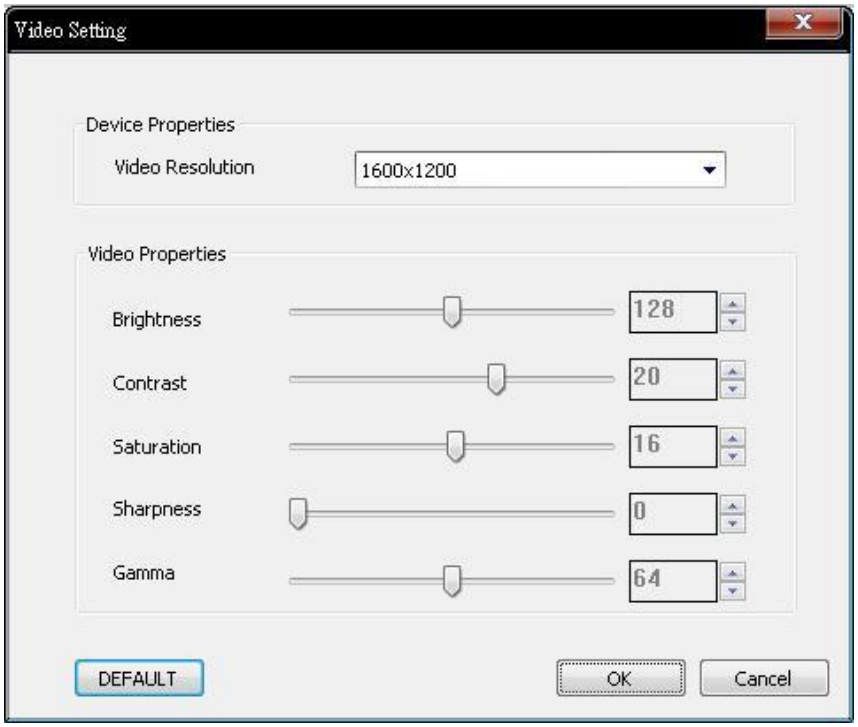
icon of Tool Bar as below shown.



Setting

You can select video resolution and set the parameter of video properties by click the

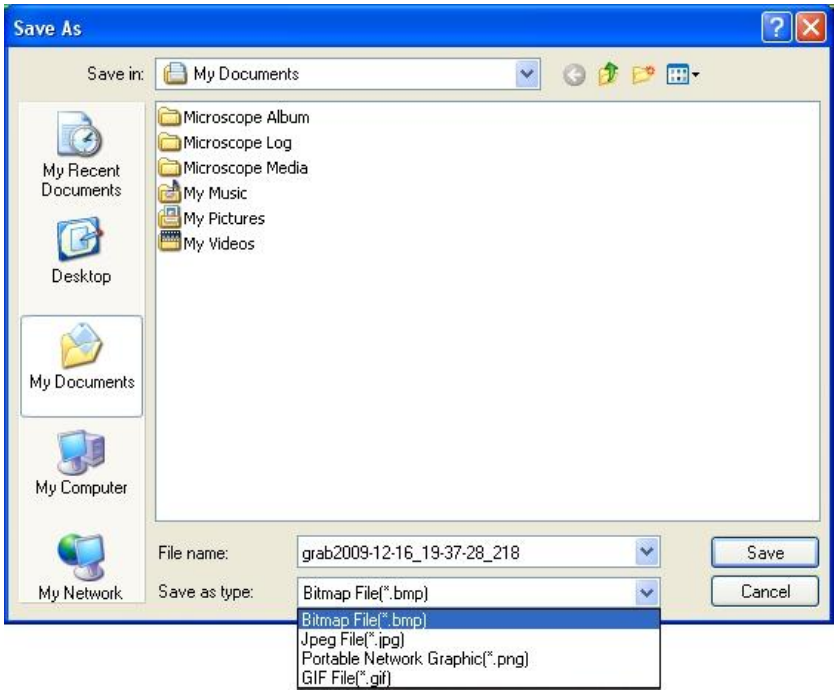
button.



Save as

You can select a picture or video in Picture/Video folder, then click the

Icon of Tool Bar, the file can be saved as "jpg", "bmp", "png" or "gif" picture or video to your specified disk. Show as below.

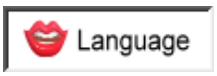


Email

You can send a selected picture or video as email attachment to other guy by clicking the

Icon of Tool Bar.

Language

You can click the 

icon to change the Application panel display language.

About

You can click the

icon of Tool Bar for help. It will pop the following message: About Digital Viewer II: you can check your present version via it as below shown:

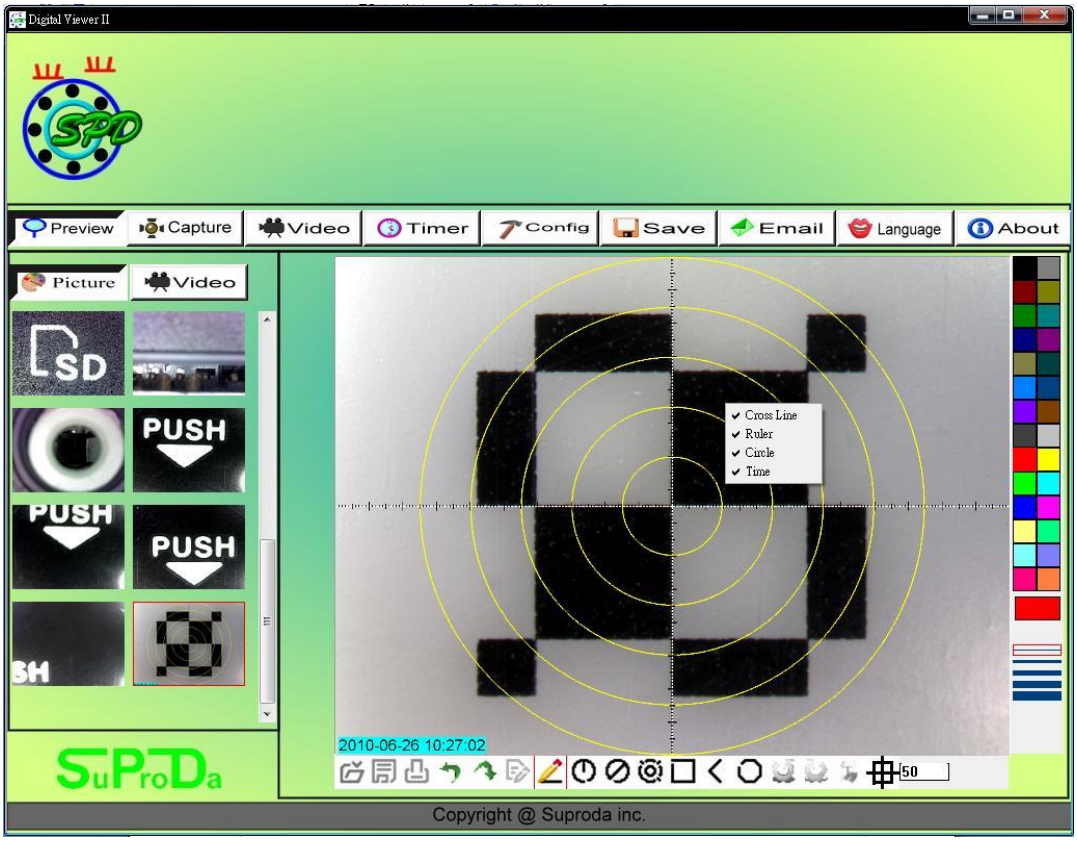
Full Screen Display and Return

These displays of real time preview or picture view/video playback can be enlarged to full screen by clicking the *icon on right-top of program screen or double-clicking the left key of mouse in a site of the preview area.*

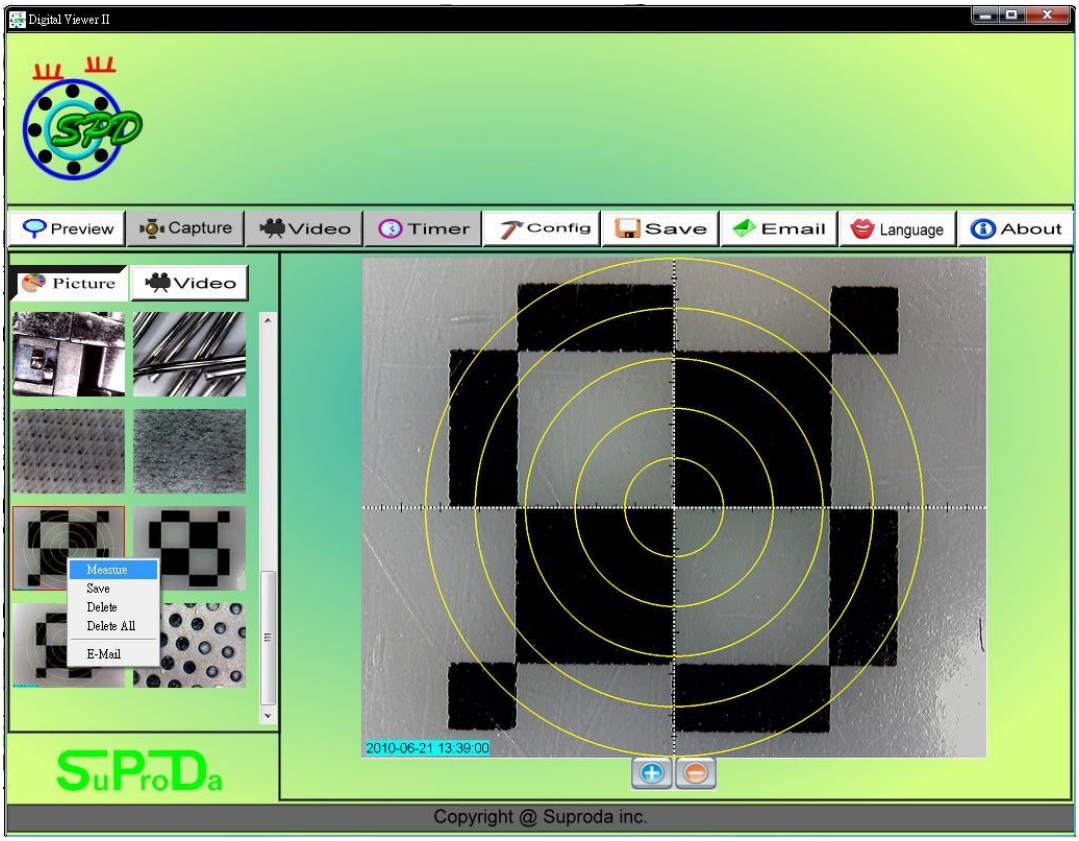
To return from full screen display mode, please press "ESC" key of keyboard or double-clicking the left key of mouse.

Menu Function List

1. *Add in cross line/coordinates/circles/timer on preview area: The mouse stay in the preview area, then click the right key and pop the menu as below. You can click the item you want. You also can capture the picture with cross line/coordinates/circles/timer mark.*



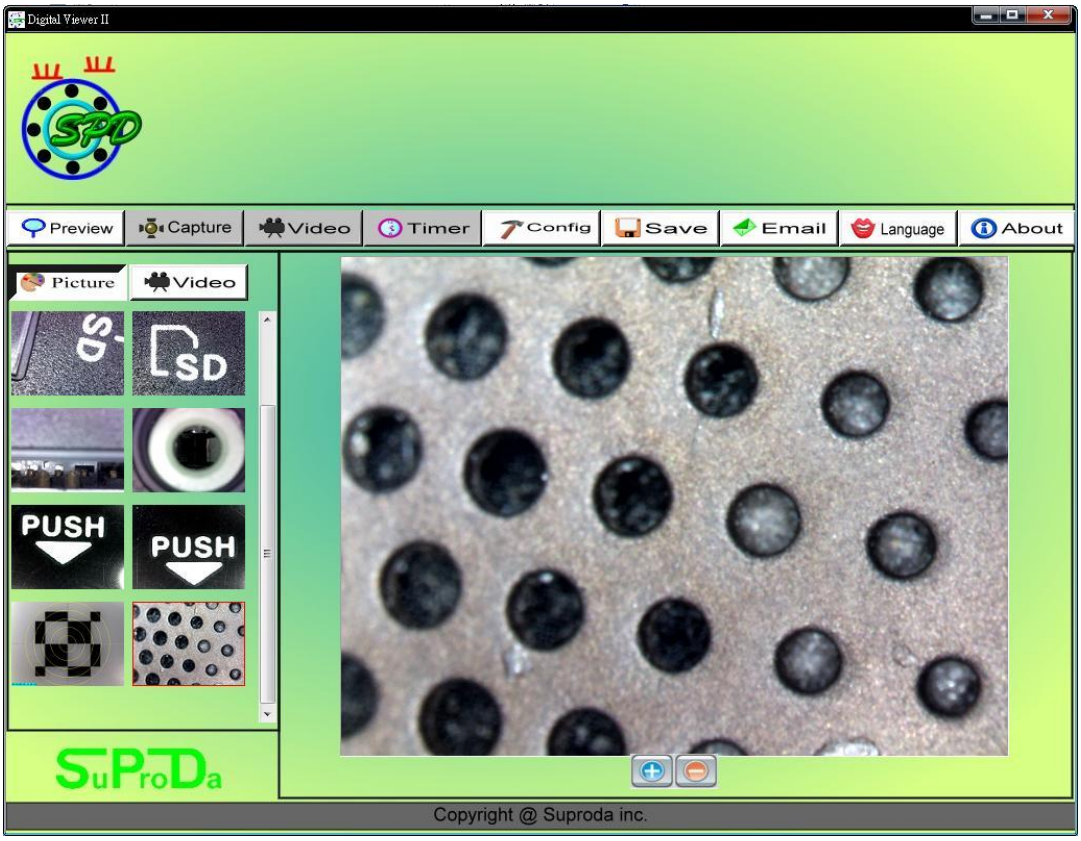
2. *Select a file in picture/video folder, then clicking the right key of mouse and pop the menu as below.*



Note: Open-- use "paint" to open it for picture file; use "windows media player" to open it for video file.

View Picture

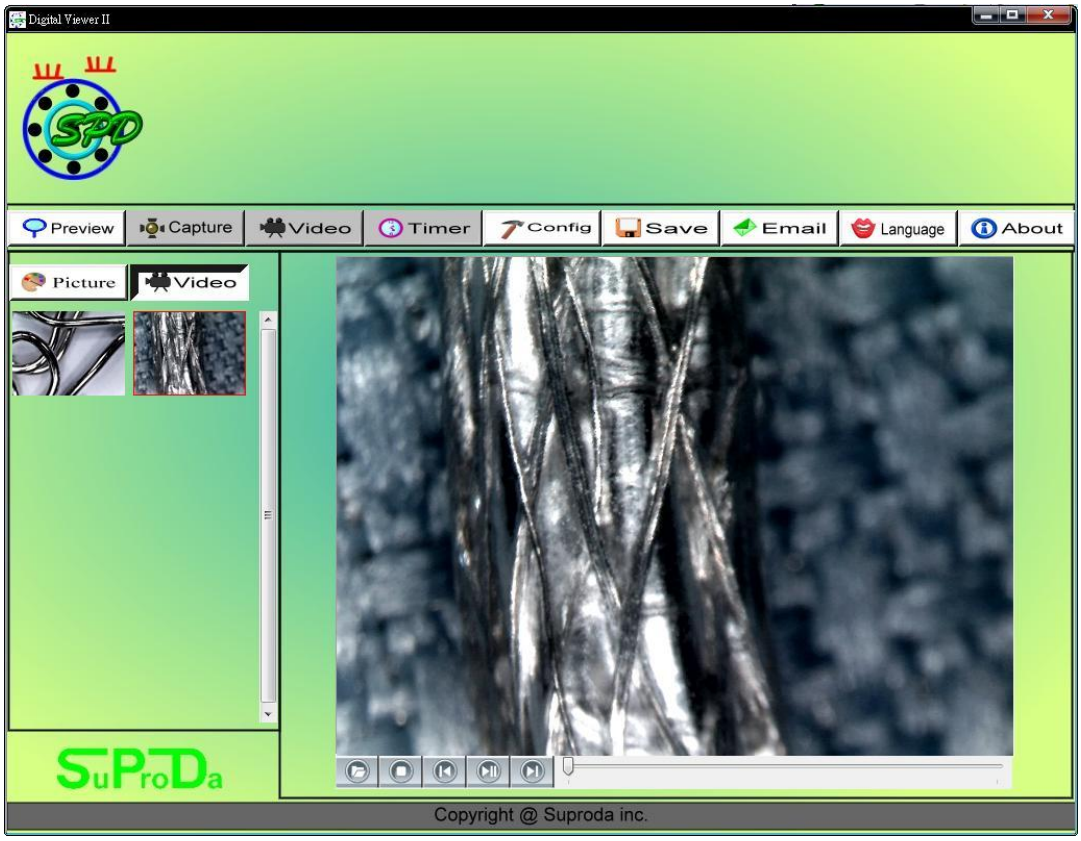
You can double-click the selected picture in Picture folder to view it as below shown;



: *Zoom In* *:Zoom Out*

Video Playback

You can double-click the selected video in video folder to play back it as below shown



: *Play/Pause*

: *Stop*

: *Open a avi file*

: *Start*

: *Last*

Troubleshooting

Common Fix

A. *If Digital Viewer II device and Digital Viewer II application were working OK and suddenly stops working properly, Please try the following:*

1. *Unplug or Power off Digital Viewer II device from PC*
2. *Close Digital Viewer II program*
3. *After waiting for 1 minute, plug or power on Digital Viewer II device*
4. *open Digital Viewer II program*

B. For under Recommended PC specification (see 4th page), maybe Digital Viewer II program does not work properly, Please use the application like AMCAP.exe: direct open it to work,(maybe need these steps: ToolBar->Device: select "Digital Viewer II device; ToolBar->Option: select "Preview")

C. For Vista first version OS system (Not Vista SP1), maybe there is this issue: there are not any images (black screen) on preview area, please try: Toolbar->setting->default->Ok)

D. After PC resume from standby or hibernate, maybe Digital Viewer II will not work properly, please close it and re-open to try.

Q&A

Q1. Why the object cannot be found on the display of the Digital Viewer II microscope?
A: a. Please check the all connection of all necessary cable and adapter are right
b. Please check the power Led on Digital Viewer II device is light.
c. Please put power switch on LED, then the illumination LEDs are light.

Q2. Why cannot work when connect to PC?
A: a. Check driver and Digital Viewer II installation are completed.
b. The USB cable is connected correctly to Digital Viewer II Microscope and PC USB Port
c. Please try to pitch all switches on varied status.

Q3. How to install Digital Viewer II application and driver?
A: a. Do not connect USB cable to Digital Viewer II Microscope before driver installation completed.
b. Place installation CD into CD-Rom drive, select a right product name of "driver installation".

Q4. How to connect "Digital Viewer II"?
A: a. complete driver installation, connect USB cable to Digital Viewer II Microscope, and then

Execute "Digital Viewer II" application Program.

b. Please check: open Digital Viewer II->setting to see if "Device name" item has an optional device.

Q5. How to uninstall driver and Digital Viewer II software?

A: In order to uninstall driver and Digital Viewer II software, click on the uninstall utility from the Start button ->Control Panel -> Add or Remove Programs.

Q6. When connecting to PC, why the real-time display is slow or unsmooth?

A: a. Probably your PC's configuration is not sufficient enough. Please check the Recommended PC specification as mentioned in this User's Manual.

b. Probably your PC's CPU or memory is overloaded by executing too many applications software. Try to shut down other applications and restart your PC to release the memory.

c. Probably your system has being attacked by virus, which may dramatically degrade your system's performance.

Q7. What should we do, if Digital Viewer II Microscope is not working normally?

A: a. Please restart the system by disconnecting all the cables from Digital Viewer II Microscope, Wait for about 10 sec., re-connecting the cables to restart.

If there are still some issues on Digital Viewer II Microscope, please contact: service@suproda.com.