Insize Wireless Digital Microscope

User's Manual

Welcome

Thank you for choosing Insize Wireless Digital Microscope!
The Insize Wireless Digital Microscope is an exciting new device that let's you view clear many micro-objects with it, and has a wide scope of 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

- And more…………..

Please read this manual carefully before using Insize Wireless Digital Microscope!!!

Contents

Product Specifications

- Operation system: Windows XP SP2/Vista/7
- PC interface: USB 2. 0
- Image Sensor: CMOS 0.35M pixels
- Video Capture Resolution   720x480, 640x480, 320x240
- Color: YUV or 24bit RGB
- Lens: Dual Axis 27X & 100X Microscope Lens
- Focus Range Manual Focus From 8mm to 300mm
- Magnification Ratio 10X to 200X
- White Balance: Auto.
- Exposure: Auto
- Light Source: 8 adjustable LED White Light
- Power supply: 5V DC from USB Port
- Size: 135mm (L) X36mm (R)
- Transmission distance:≥5m
- Li-ON Battery:
     Full charge time: about 3 hours, continuous working time: about 5 hours, Life: 500 cycle.
- Transmission Power consumption: 10mW
- 4 channels option

Safety Cautions

1. Avoid touching the lens with finger to dirty it and protect the product from electrostatic damage.
2. Do not attempt to disassembly any part of this product.
3. Do not attempt to service this product yourself. Opening the covers may expose you to dangerous voltage points or other risks.
4. Storing and operating Insize Wireless Digital Microscope at Temp: -20 ~ 45°C, Humidity: 45% ~ 85%, as this will extend Product life and prevent damage to the product.
5. 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.
6. Do not use any detergent or volatile solution, which will damage the camera case, painted surfaces and lens. Only use a soft cleaning cloth to clean it.
7. Do not place this product near a heat source or expose direct flame, avoid the lens damaged by high temperature or humidity
8. 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.
9. Need to read Insize Wireless Digital Microscope User's Manual before using and storing it.
10. To avoid electric shock, remove all electricity source before moving PC.

Package Contents

The Insize Wireless Digital Microscope package includes the following:

1. Insize Wireless microscope: USB receiver and wireless microscope
2. CD ROM (Driver and Software)
3. Quick manual
4. 2pcs Transparent Covers
5. USB line and charge line

System Requirements

In order to install Insize USB Wireless Digital Microscope, you will need the following minimal systems:

①. OS: Windows XP SP2 or Vista
②. CPU: Pentium IV 1.0G, Celeron, AMD Athlon
③. CD-ROM drive
④. Available USB port (if it is USB1.1,please use ISM-WM200 partner-Beta.exe application inside CD)
⑤. 256MB RAM
⑥. 100MB available hard disk space
⑦. Graphic card: 16-bit

Recommended PC specification for optimal performance:

√   OS: Windows XP SP2 or Vista SP1 or above
√   CPU: Pentium IV 1.6G, Celeron, AMD Athlon or above
√   CD-ROM drive
√   Available USB 2.0
√   512MB RAM or above

√   10GB available hard disk space or above

√   Graphic card: 16-bit or above

Software Installation process

The following instructions will guide you to through the process of installing the Insize Wireless Digital Microscope:

I.   Power on PC and place installation CD into CD-ROM driver, do not connect USB Cable from USB receiver to PC before software installation.

II.   Select "Install Software", and follow the instructions to complete installation.

III.   As driver installation completed, and if system asking for restarting, please restarting PC.

Window XP OS Installation

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


2.   Select "SOFTWARE" item, you will see the following popup .Press "Next" to proceed or "Cancel" to abort installation.
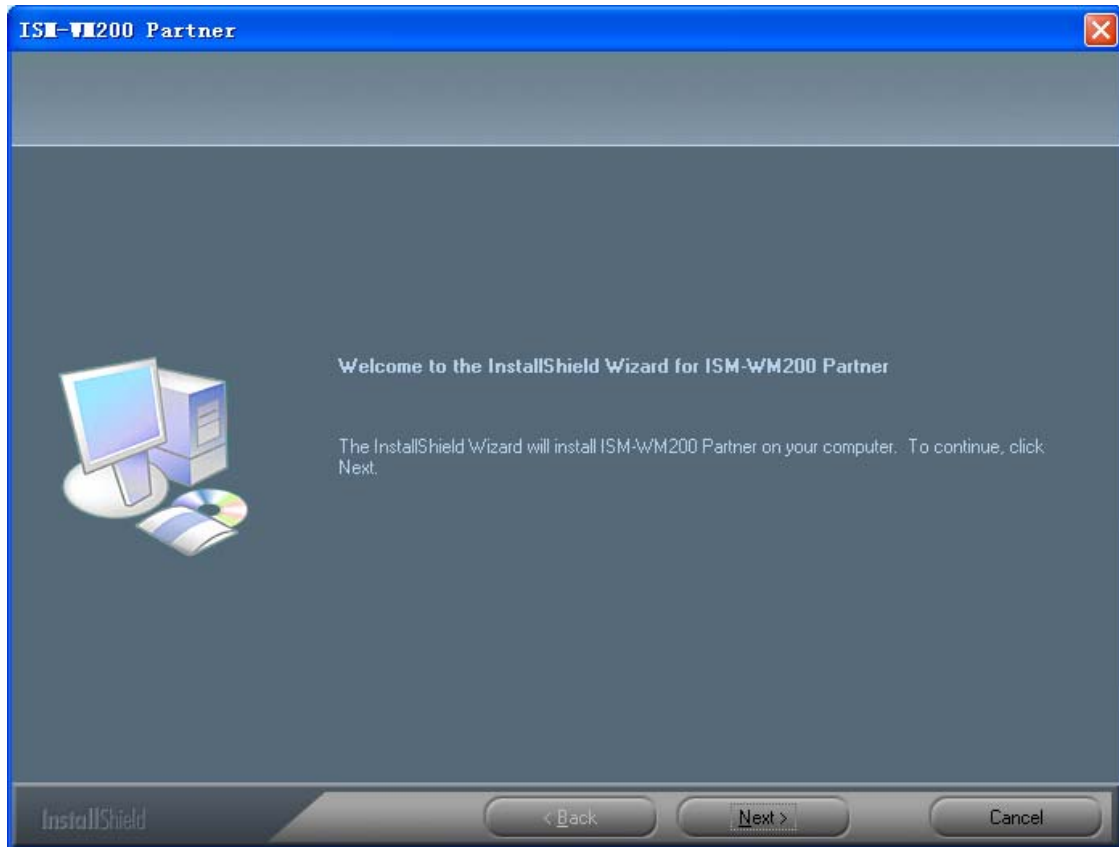
3.   You will see the End User License Agreement. If you accept the License Agreement, then you can Click the "Next" button which is availability to process, or "Cancel" to abort installation.


4.   Click "Next" to start to install the application, click "Cancel" button to abort installation. Click on "Back" to back to read the End User License Agreement again.
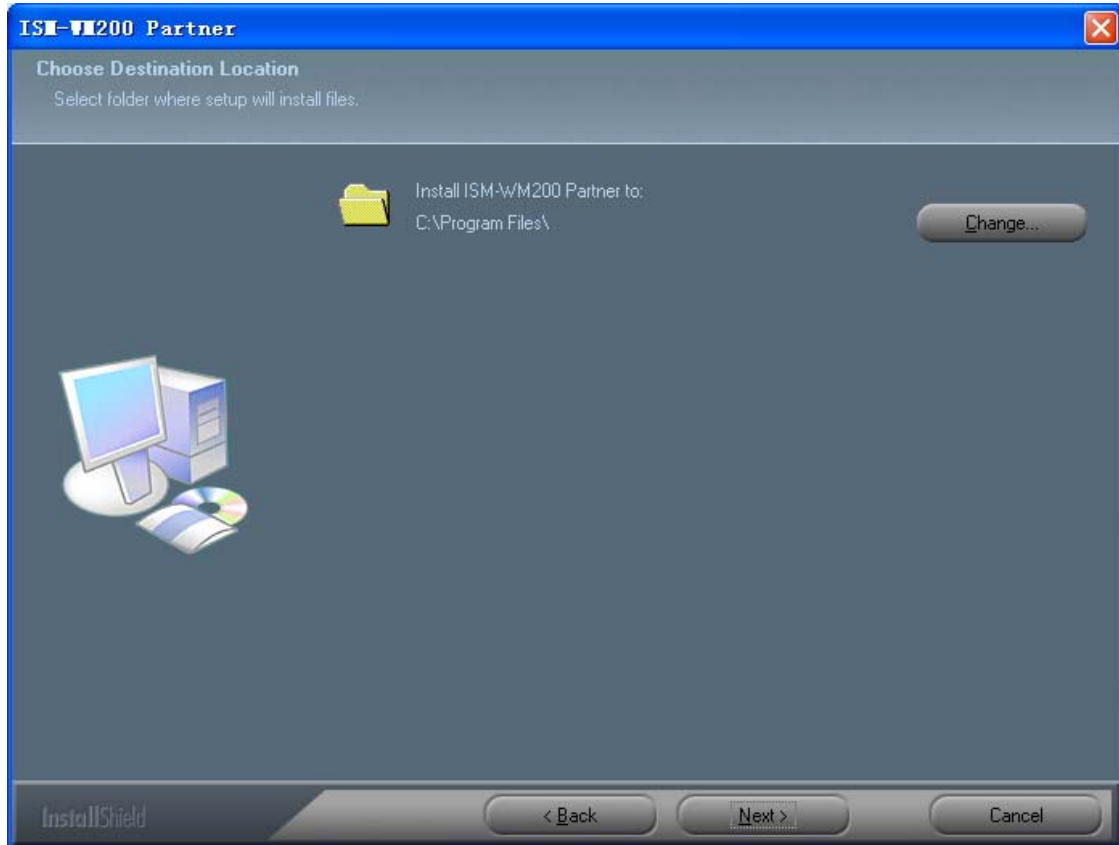
5. You will see the following progress bar below indicating that the installation is proceeding. If click "Cancel" button, it will abort installation.
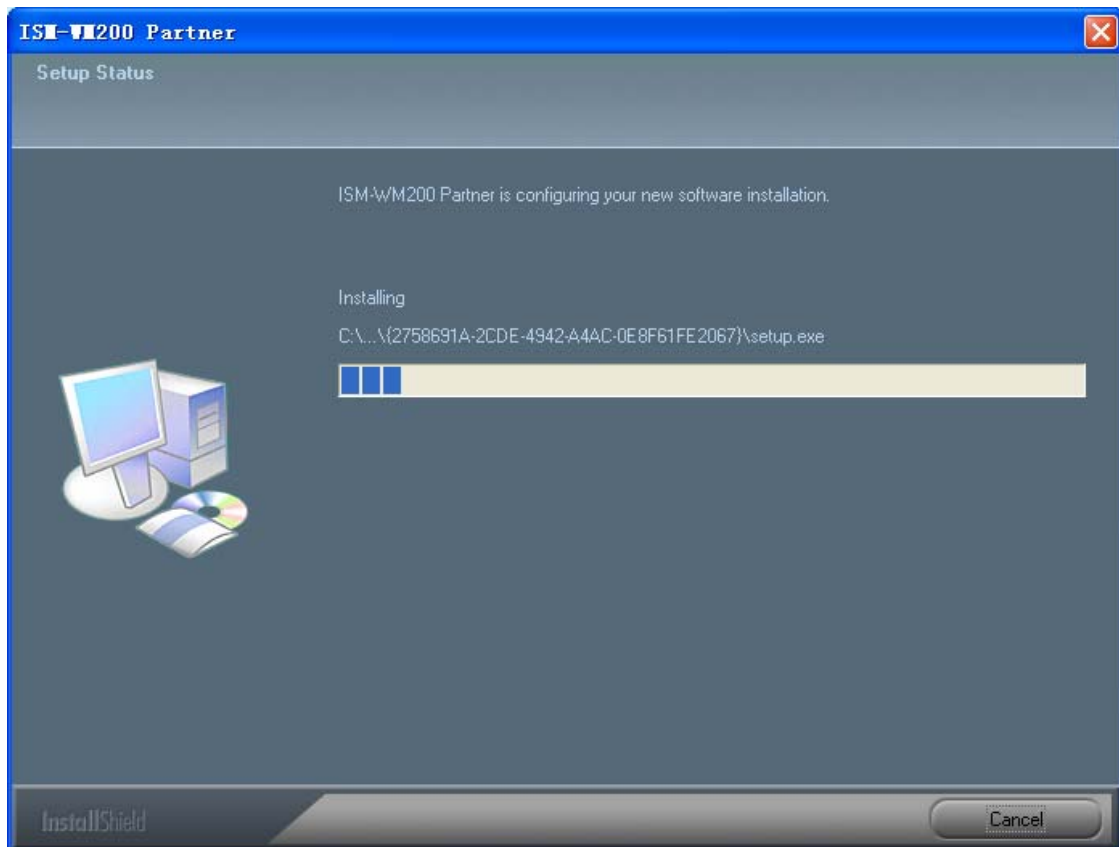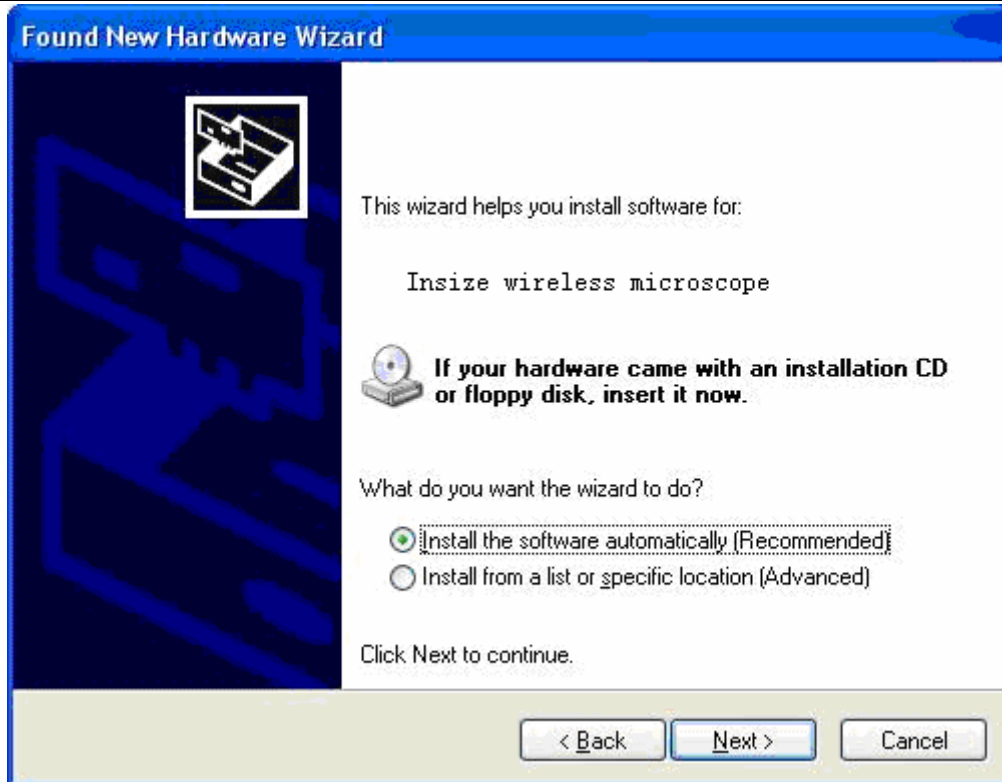

6. Wait until you see the following popup and press "Finish" button.
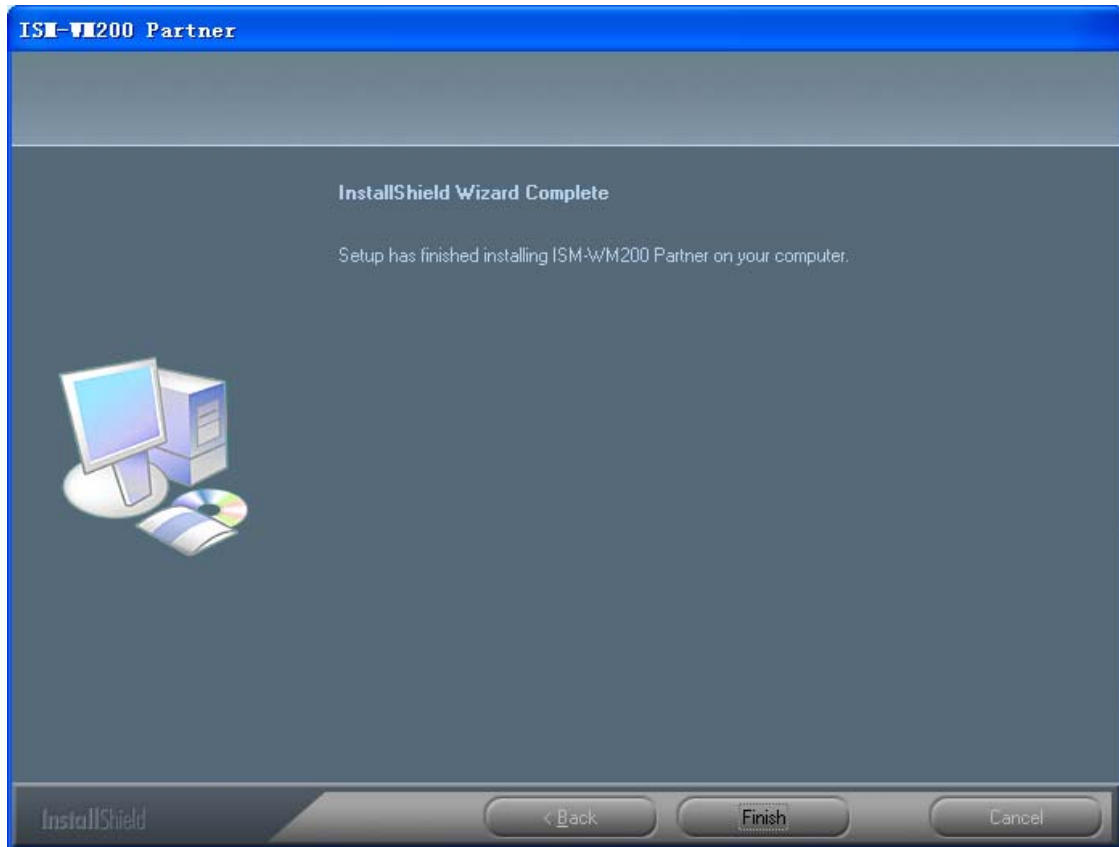
7. Please plug USB cable to USB receiver Device to connect with PC. You will see the following popup window.

8. Please select "No,not this time" and click "Next" to continue.

9.   Please select "Install the software automatically (Recommended)" and click "Next" to continue. It would popup the following window.

10. Please click "Continue Anyway" to continue till pop up the following window.

11. Click "Finish" to finish all software installation.

Now the software installation was completed, you can use free Insize Wireless Digital Microscope.

# Window Vista OS Installation

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

2. Select "SOFTWARE" item, you will see a "User account control" pop up. Please press "Allow" to continue or "Cancel" to abort installation.
3. You will see the following popup .Press "Next" to proceed or "Cancel" to abort installation.
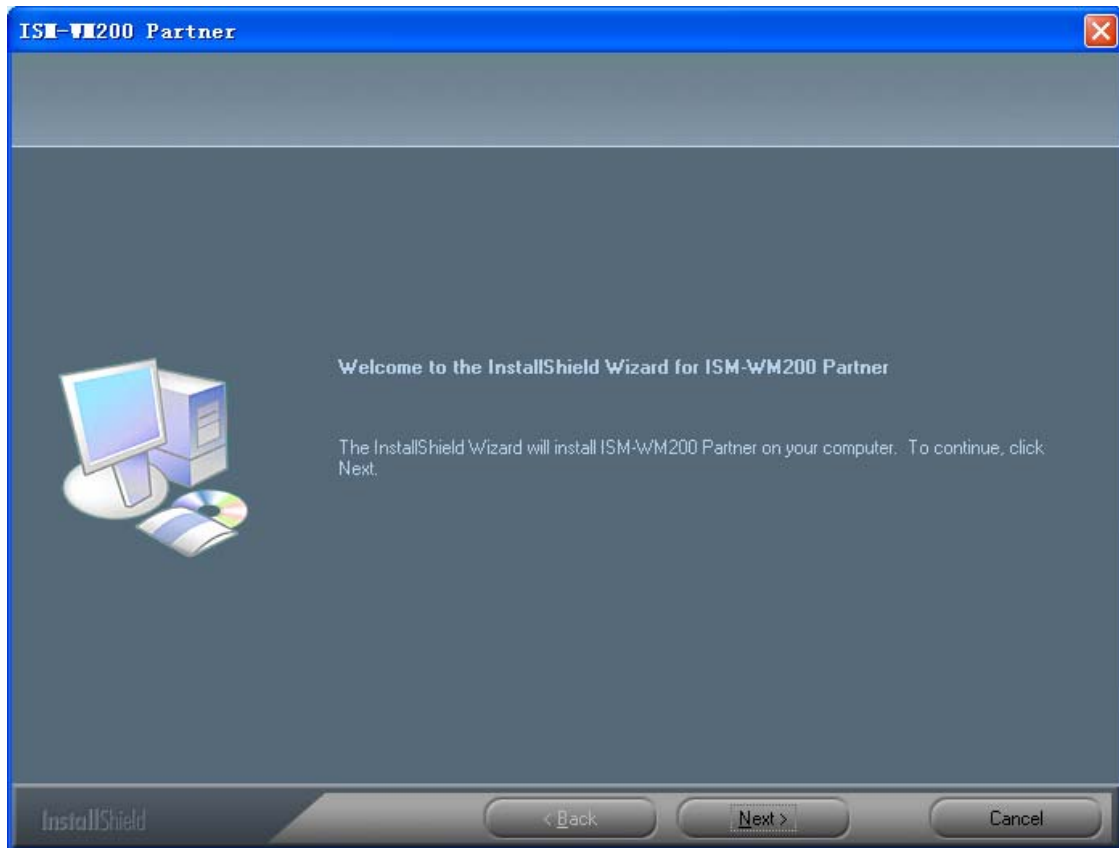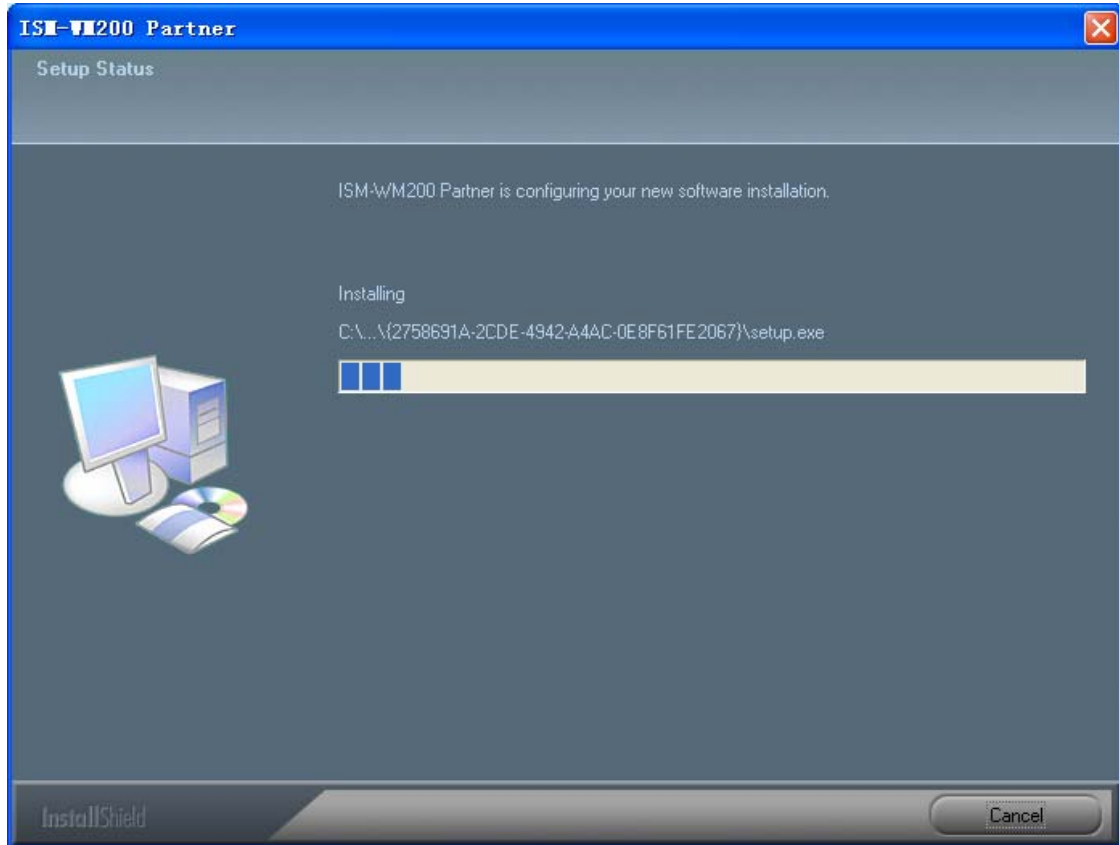

4. You will see the End User License Agreement. If you accept the License agreement, then you can Click the "Next" button which is availability to process, or "Cancel" to abort installation.
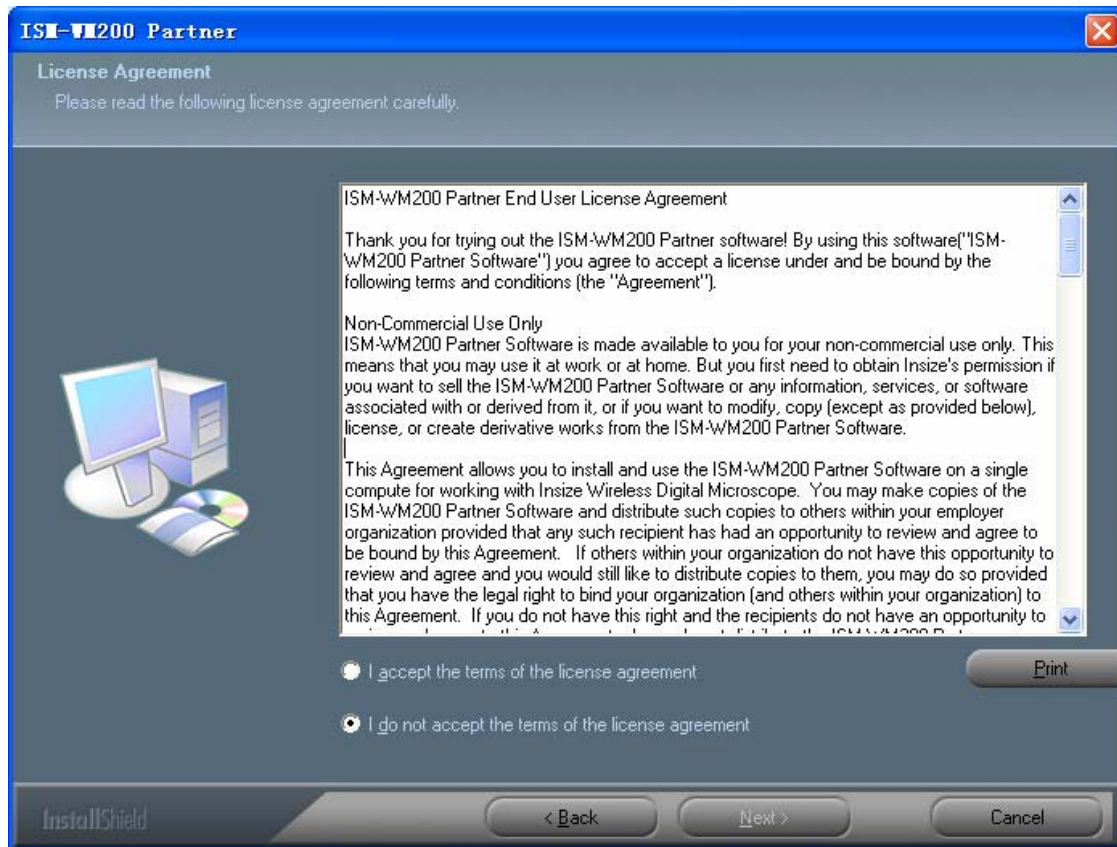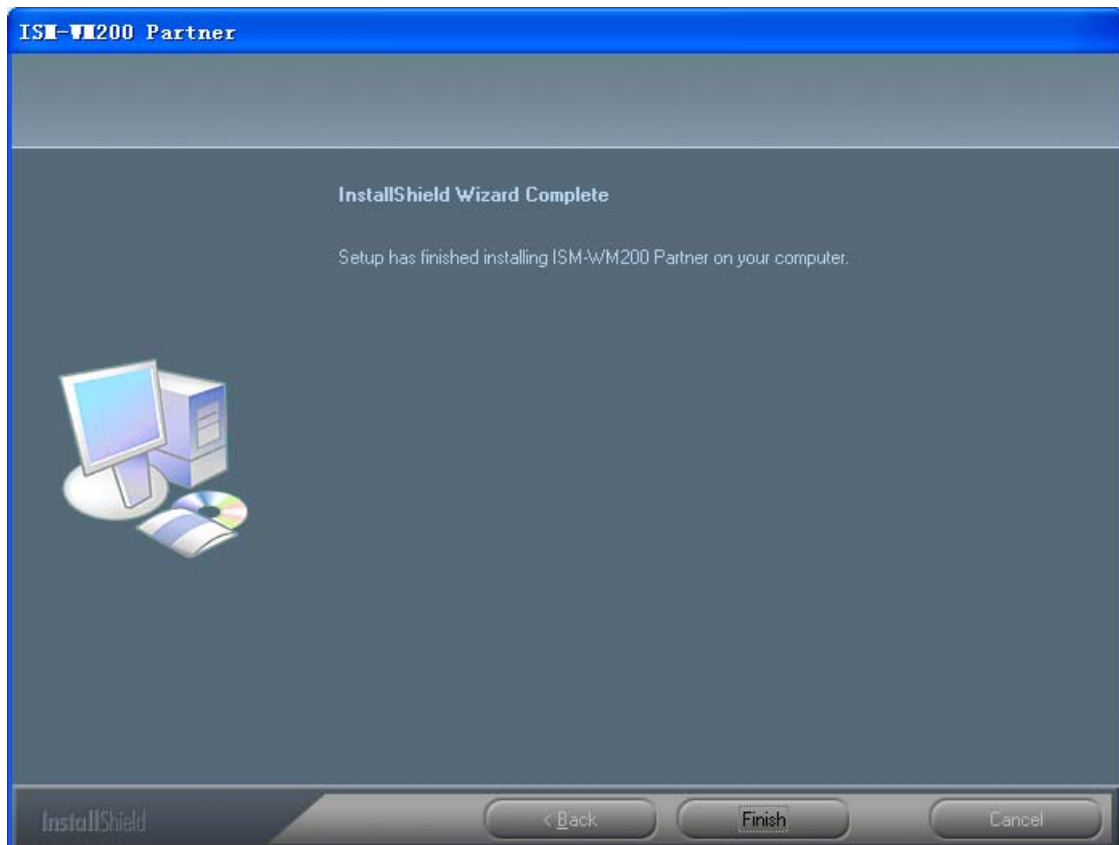
5. Click "Install" to start to install the application, click "Cancel" button to abort installation. Click on "Back" to back to read the End User License Agreement again.
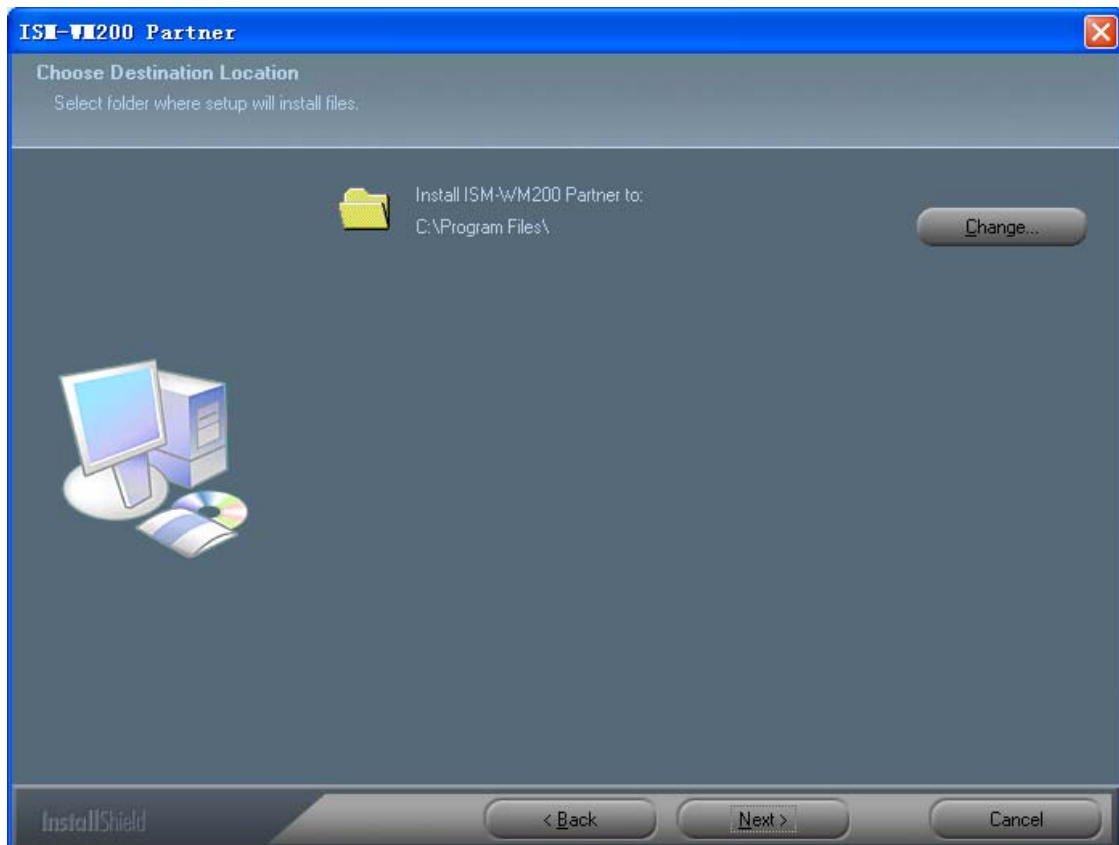
6. You will see the following progress bar below indicating that the installation is proceeding. Click "Cancel" button to abort installation.

ISM-WM200 Partner

Setup Status

ISM-WM200 Partner is configuring your new software installation.

Installing

C:\...\{2758691A-2CDE-4942-A4AC-0E8F61FE2067}\setup.exe

InstallShield

Cancel

7.   If there appears "Windows safety" prompt, click "Always install the driver (I)" to continues.
8.   Wait until you see the following popup and press "Finish" button.

ISM-WM200 Partner

InstallShield Wizard Complete

Setup has finished installing ISM-WM200 Partner on your computer.

InstallShield

< Back   Finish   Cancel

9.   Please plug USB cable to USB receiver 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 free Insize USB Wireless Digital Microscope.

Insize Wireless Digital Microscope Connectting

The following procedure will show you how to properly connect Insize Wireless Digital Microscope with your PC.

    i.   Connect USB Cable on the USB receiver of Insize Wireless Digital Microscope to PC USB port.

    ii.   The Insize Wireless Digital Microscope has 1 switch for power on and LED adjusting on one side as shown:

    iii.   Set the same channel between USB receiver and Insize Wireless Digital Microscope.

Li-ON battery instructions:

Charge LED: Need to Charge - : Red LED lights on and the illumination doesn't shine.

               Ongoing charge - Blue LED flashes

               Finished Charge - Blue LED lights on

   Note: The charge source is from USB 5V DC or DC 5V power supply, shown as below.

Operating Insize Wireless Digital Microscope

The following process will show you how to operate Insize Wireless Digital Microscope.

①. To have a right image, suggested holding Insize Wireless Digital Microscope as shown:

②. Put the to-be-observed object near the Insize Wireless Digital Microscope, the distance between both (object distances) don't exceed to 30CM.

③. Adjust the focus: Use any finger to rotate the wheel, till the image is clear.

④. The Zoom time will be larger as Insize Wireless Digital Microscope is closer to the observed object.

⑤. When the observed object is located at the top of the transparent cover, there are two focus positions you can be found by rotating the roller: long cover—60X and 200X; short Cover—80X and 150X. If you want other zoom time, you must adjust the object distance and ever must take off the transparent cover to adjust it.

ISM-WM200 partner application software

Note: Before start ISM-WM200 partner program, please make sure USB receiver of Insize Wireless Digital Microscope has been connected to PC via USB line.

Double-Click ISM-WM200 partner icon on desktop   , the ISM-WM200 partner main screen

will be shown as below:
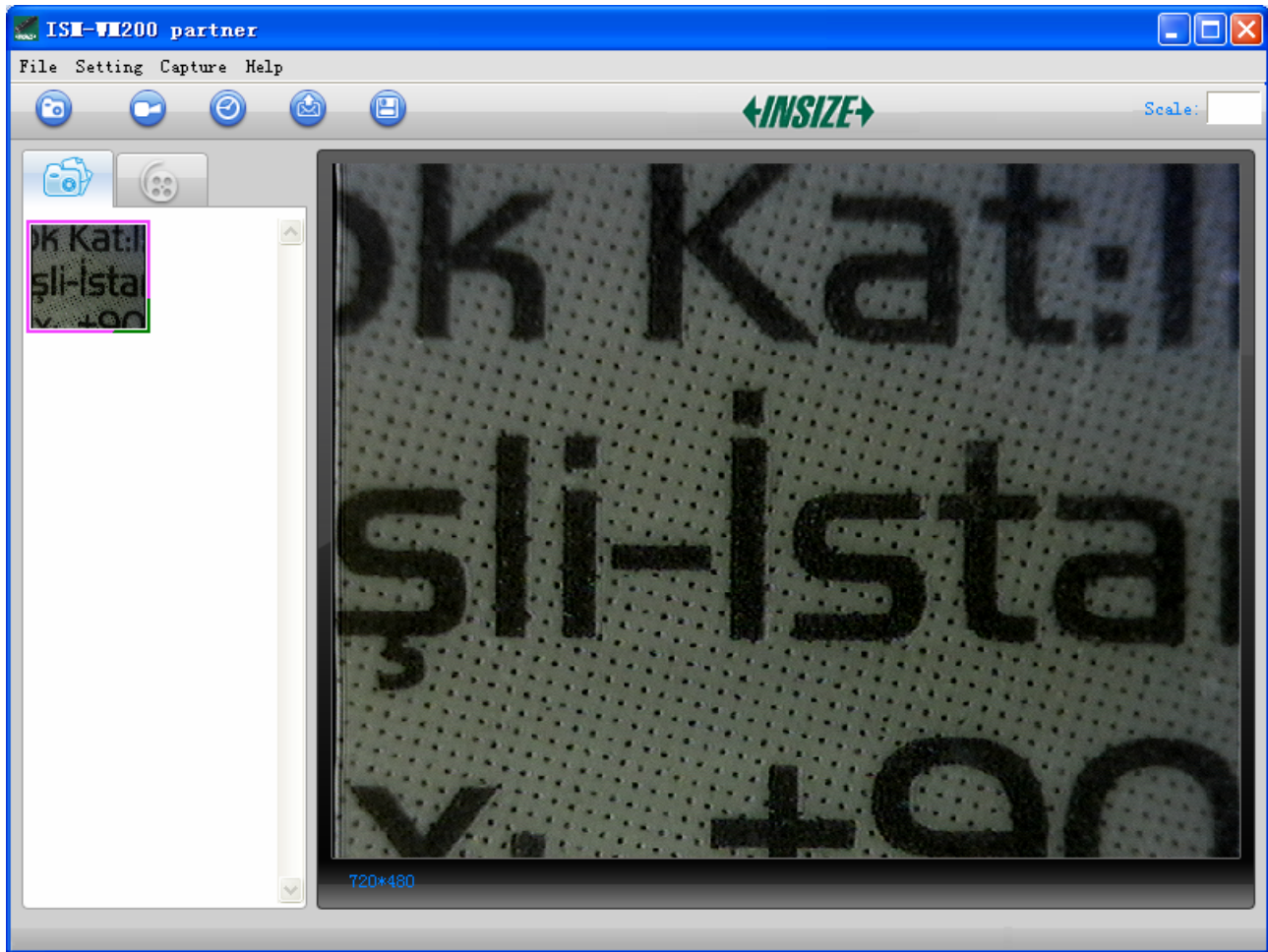
If Insize Wireless Digital Microscope has not been found while opening the ISM-WM200 partner program, the message will be shown as below:
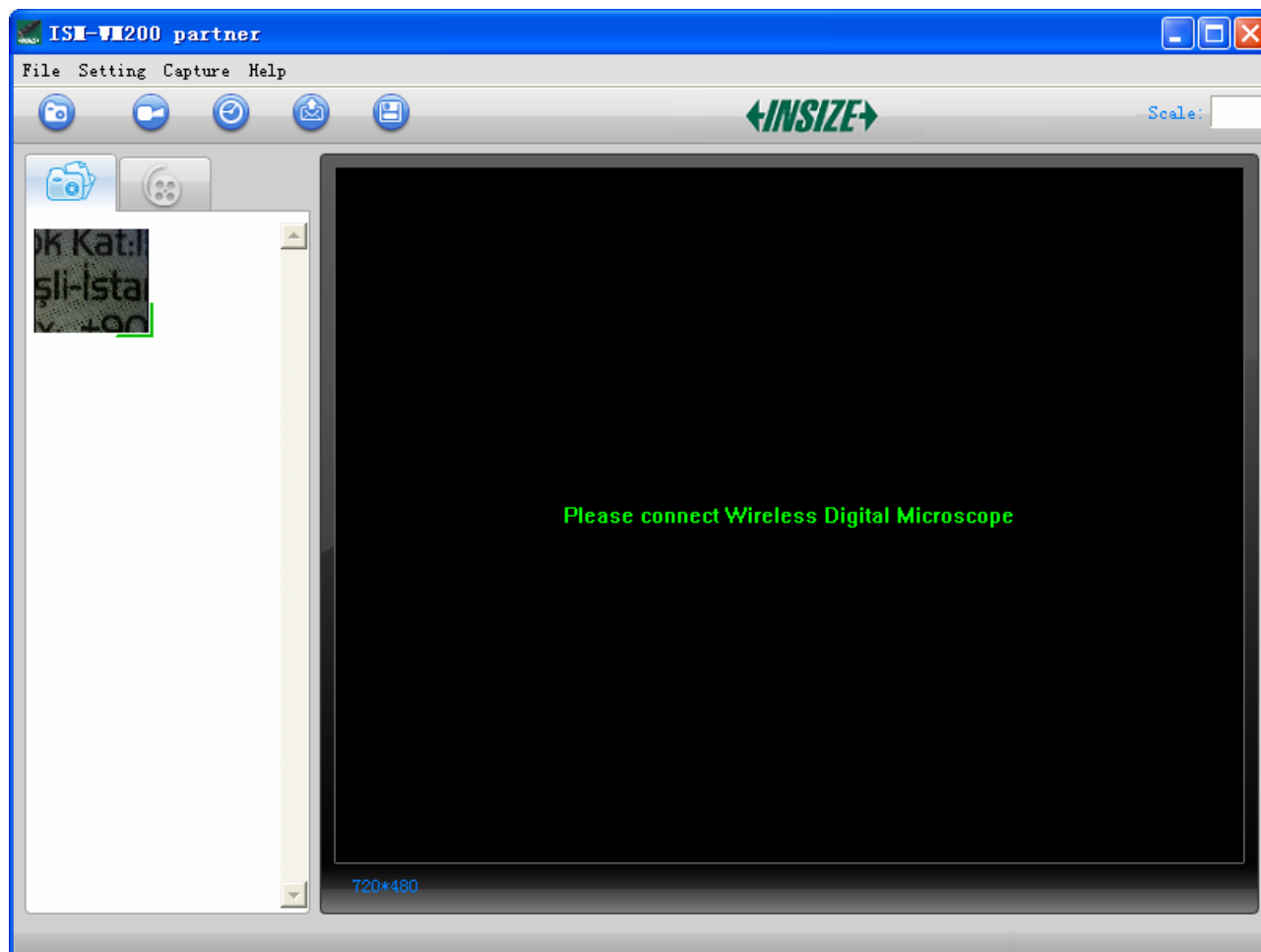
Tool Bar Description

 : **Take Photo**

 : **Take Video**

 : **Take time lapsed Photos**

 : **Email**

 : **Save as--**A took-Photo can be saved as "jpg" or "bmp" to your specified disk.

 Photo / Video Folder

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

The Photos/video in the folder will not be automatically deleted when closing the program. Thus, it is suggested to save manually the needful Photo or video（The captured photo or Video are in "my Document/ISM-WM200"）, and then keep this folder clean for file security and program's performance

concern.

Thumbnails remark

The Photo or video has been saved

The Photo or video has not yet been saved.

The Photo or video is selected, the mouse stay there, then click the right key of mouse to pop a menu, or click the related buttons of tool bar ,it can be viewed by double-clicking、be saved、be mailed、be opened to edit、be deleted.

Take Photo

You can take Photo by clicking the icon on Tool bar or press this button on Insize device (Note: This is Photo folder as below)
*Hotkey: F2*

.
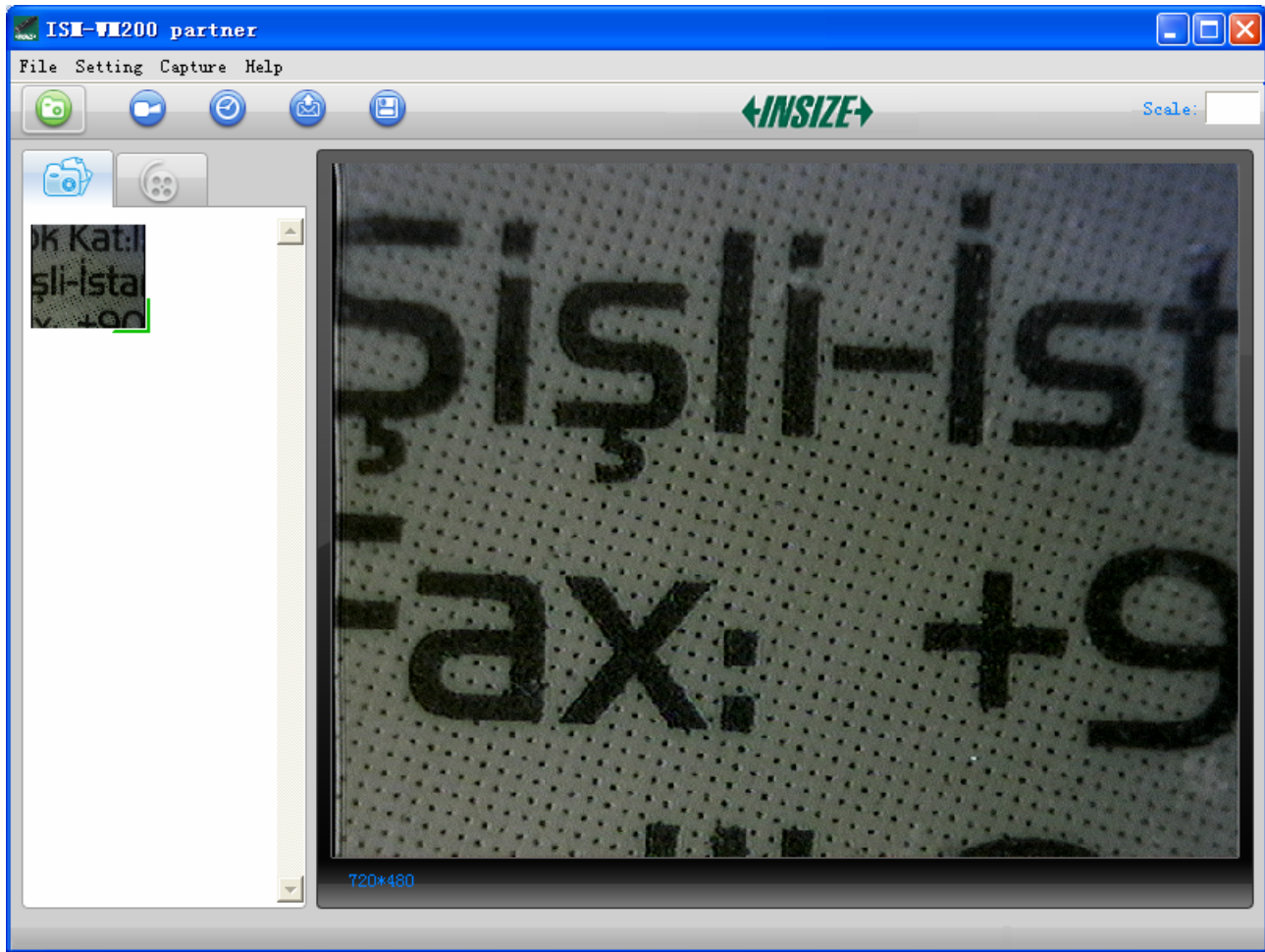
Take Video

The Video can be taken by clicking [icon] 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. **Compress**: click it and you can select the video compressed format to reduce video size. It loads automatically compress programs according to your PC system. The video quality may be varied with different compress program.

Hotkey: F3-Start, F4-Stop
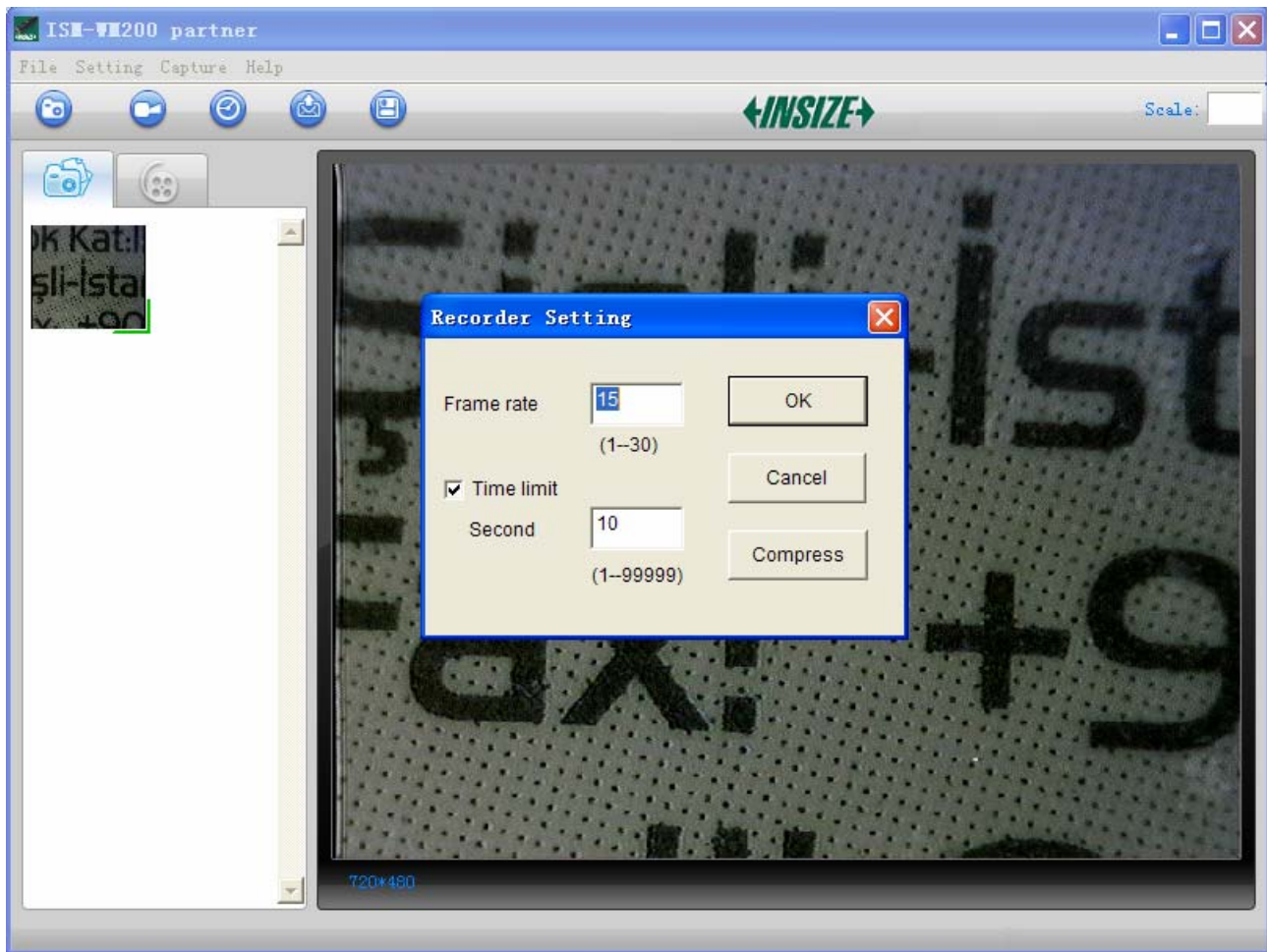
Take time lapsed Photos

You can take time lapsed Photos by click the icon of Tool Bar as below shown.
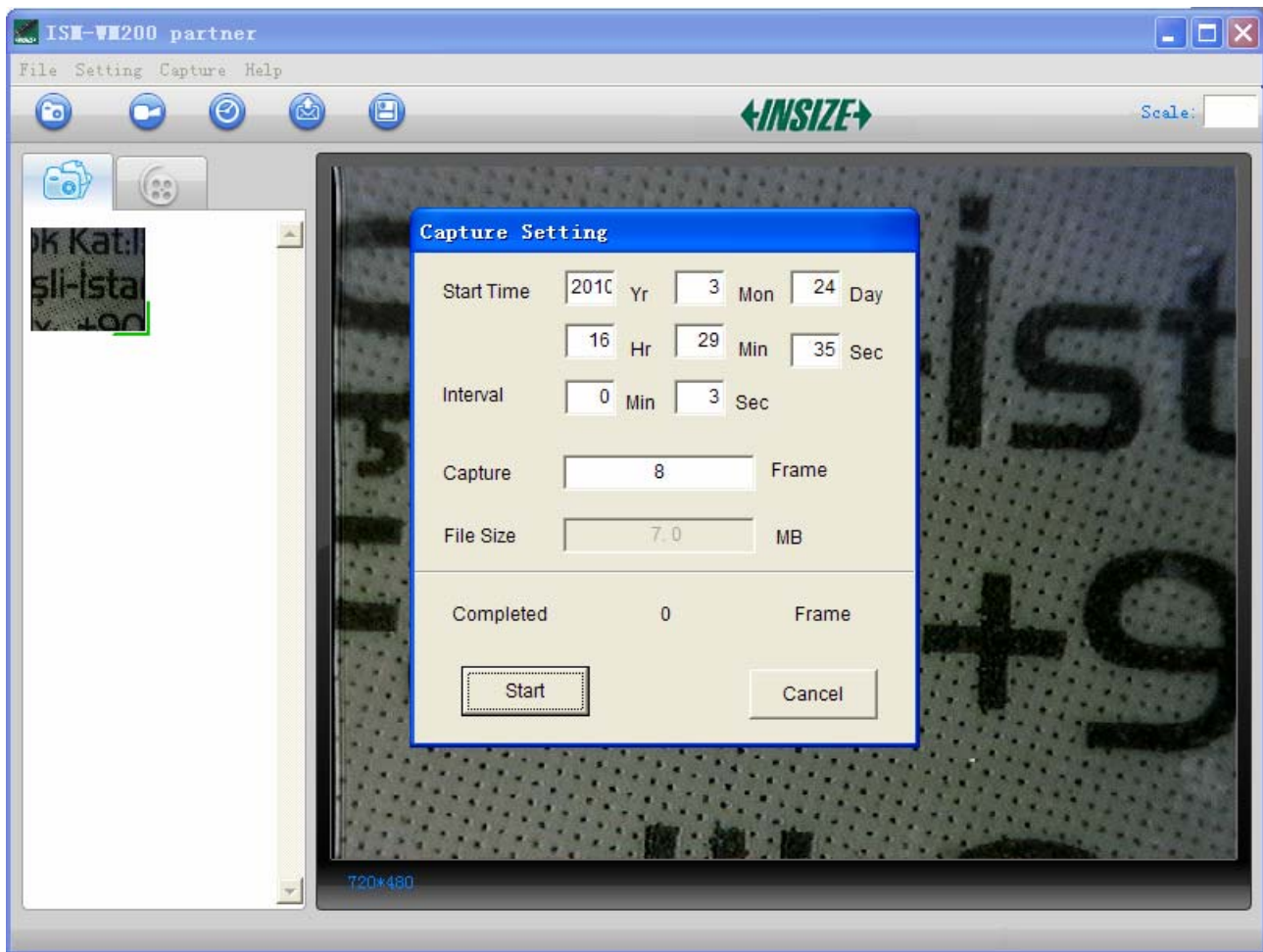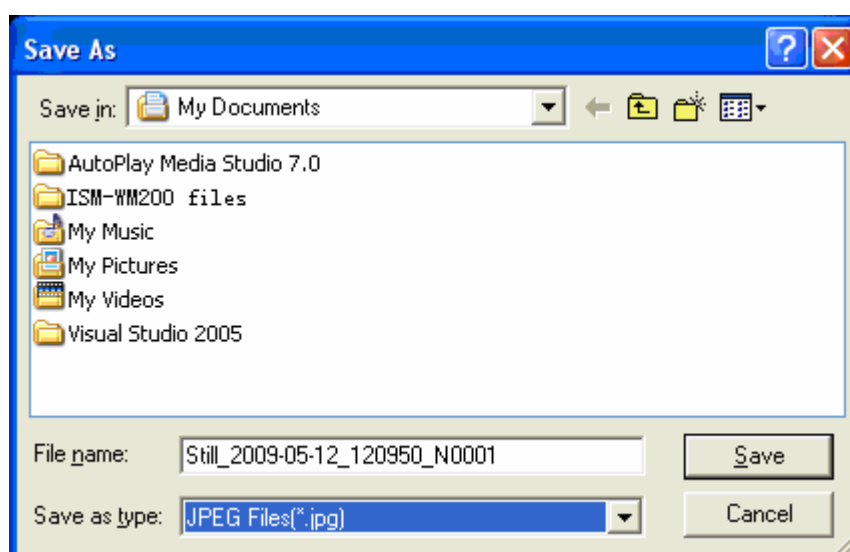
Email

You can send a selected Photo or video as email attachment to other guy by clicking the Icon of Tool Bar.
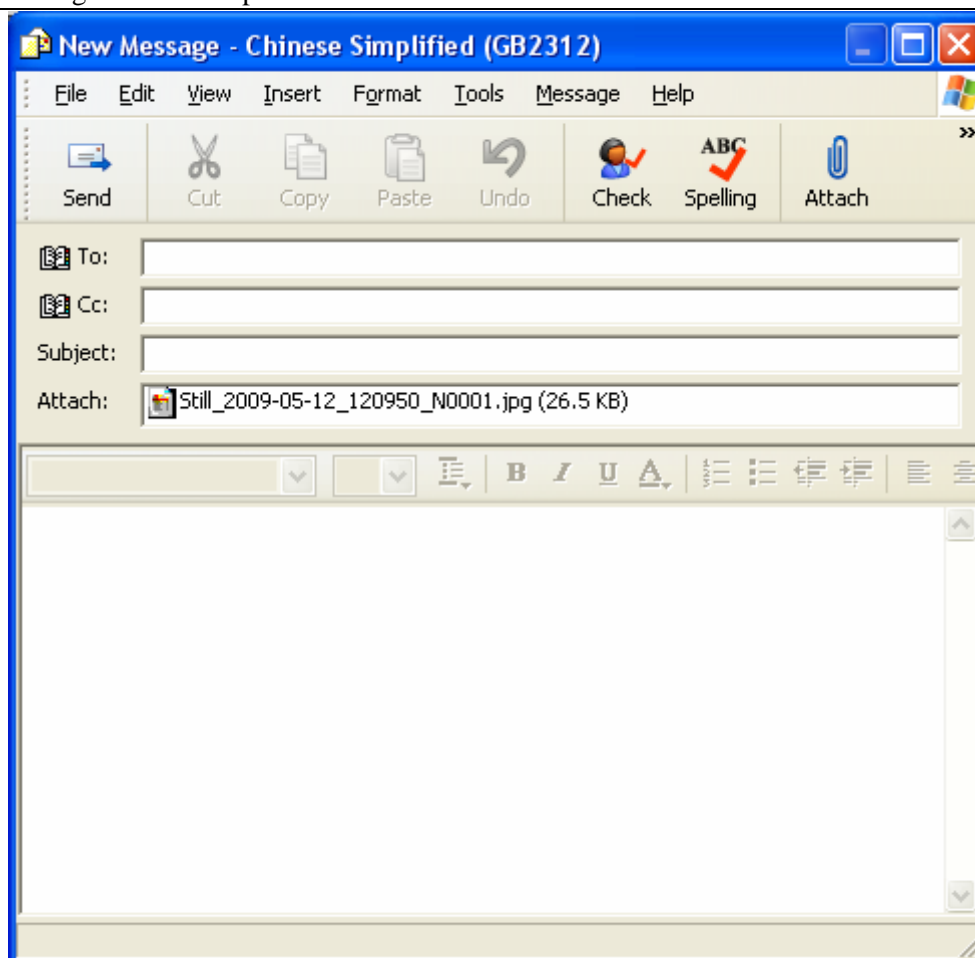
Save as

You can select a Photo or video in Photo/Video folder, and then click the Icon of Tool Bar, the file can be saved as "jpg" or "bmp" Photo or video to your specified disk. As shown below.

Menu Bar Function Description

File

Select a photo or video in Photo or Video folder; click "File" on menu bar or right key of mouse to pup-up the drop-down menu for operating it.

Note: Open - open the selected Image file for measure or playing.

Setting

Click "Setting" on menu bar to pup-up the drop-down menu:

1. Select "Video setting" to pop-up the below window for video parameter setting:
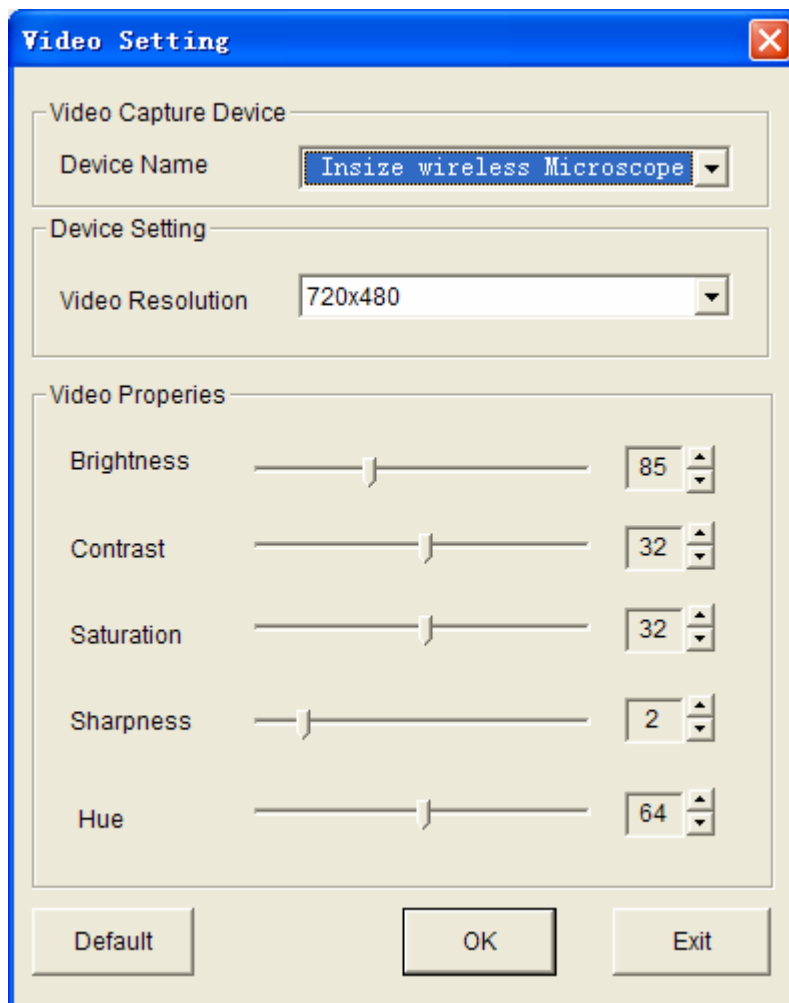
2.   Add in cross line/coordinates/circles/timer on preview area: click "Cross Line/Coordinates/Circles/Timer" on the drop-down menu or click the right key of mouse in preview area to pop a menu as below.
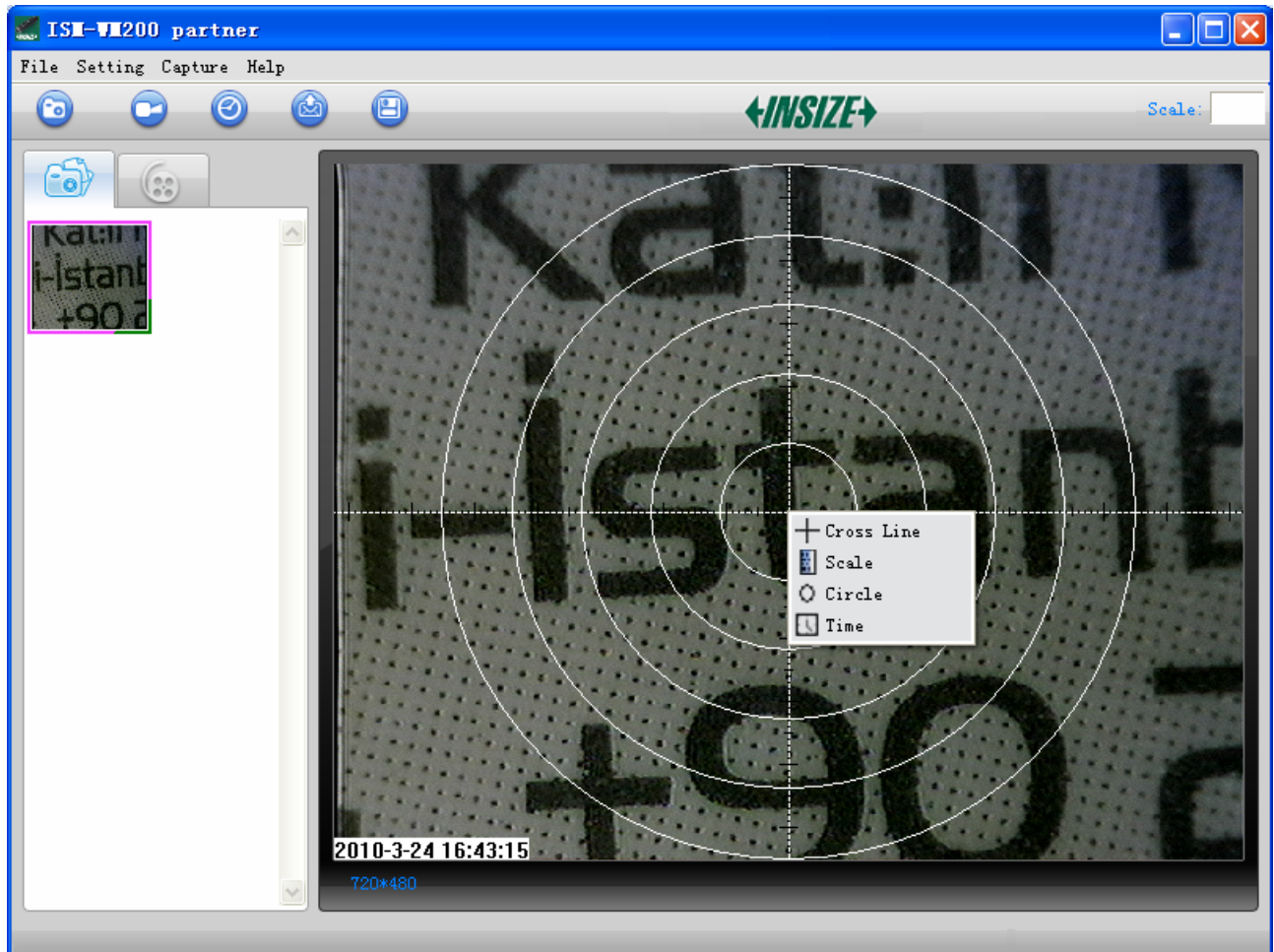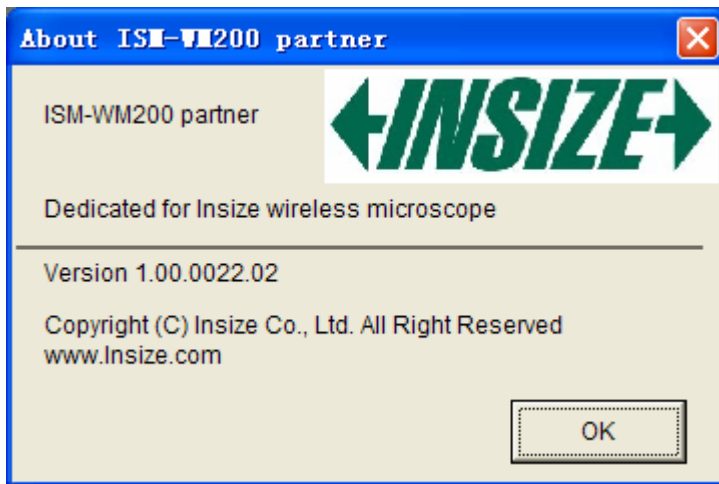
Capture

Click "Capture" on menu bar to pop-up the drop-down menu, these functions are same with 、
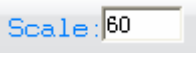
、 functions.

Help

Click "Help" on menu bar to pop-up the following message:

1. ISM-WM200 partner User manual: will instruct you how to use ISM-WM200 partner application software.
2. ISM-WM200 partner Update: you can click it to see if there is any software update.
3. About ISM-WM200 partner: you can check your present version as shown:

Rate

For measurement, it was suggested that put the magnification before capturing on right-up side on the program , the magnification is the value on scale of Roller.

Full Screen Display and return

These displays of real time preview 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.

Photo Viewing, Measure and Calibration

You can double-click the selected Photo in Photo folder to measure and view it as below shown:
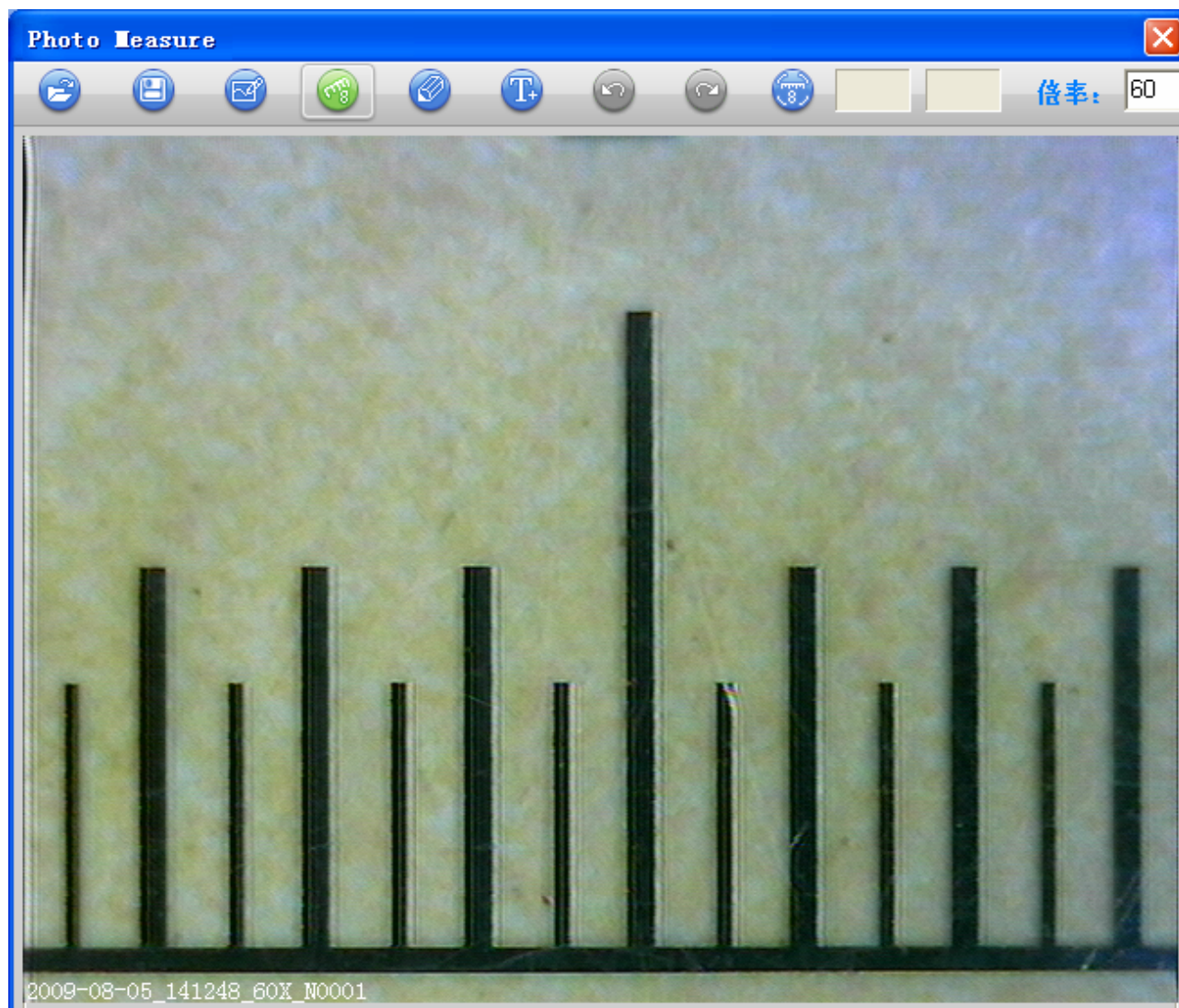
For measure, please put the magnification if there is not number. The number is the scale value of roller at the baseline you captured this image.

Image file name: Still_yyyy-mm-dd_hhmmss_nnnx_Nxxxx is combined by date, time, magnification and serial number. For example, Still_2009-03-06_102949_060X_N0002 figures: Number is 0002, magnification is 60, date is Mar-06-2009, time is AM10:29:49.

The program will auto load the magnification when you measured it if you put the scale before you capture the image.

：Open an image for measure from other folder, but the image must be captured by ISM-WM200 partner.

：Save as.

：Paint: you can draw "Line, Continuous Line, Angle, Rectangle and Circle etc into the image.

：Measure for "Line, Continuous Line, Rectangle, Polygon, Radius Circle, Diameter Circle, Three Points Circle, Angle and Four Points Angle".
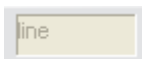
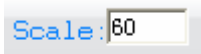：Pen setting for "Paint" and "Measure".

：Add text.

：Undo.

：Redo.

：Calibration

 : Ongoing operation.

：Magnification for measurement

Calibration Manual

1. Select a known measurement standard as the to-be-observed object, such as a ruler, to be used for calibration. Bring image of the selected ruler into focus by turning the "Focus & Magnification adjustment wheel", determine the magnification by taking a reading from the scale on the focus dial, enter the scale value in the "Scale" box in the upper right corner of the screen, and then take the image.
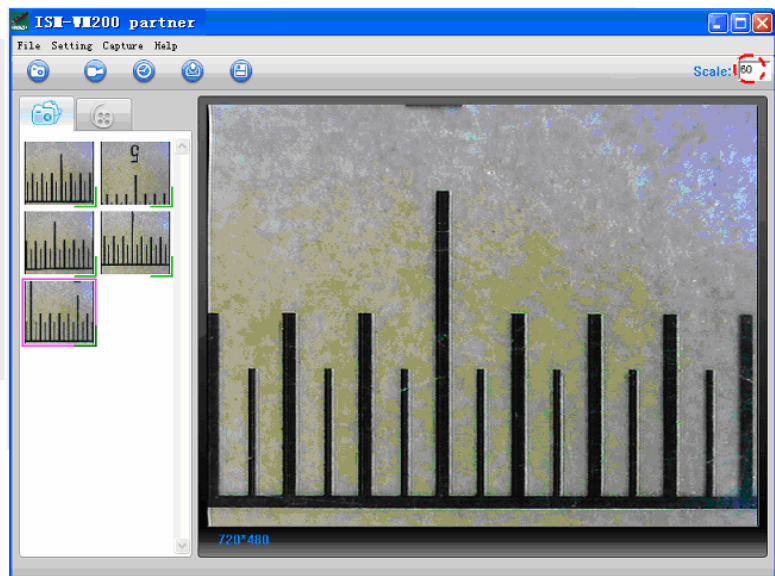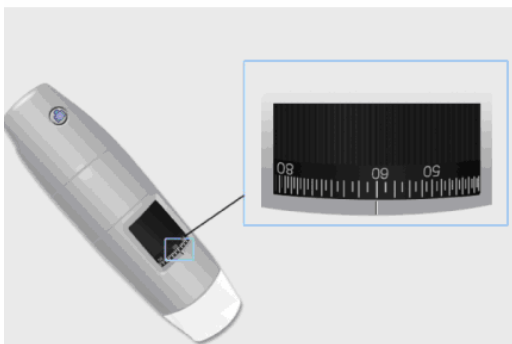

2. Now double click to open the image of the measurement calibration standard, and the scale of magnification will be automatically loaded for measuring.
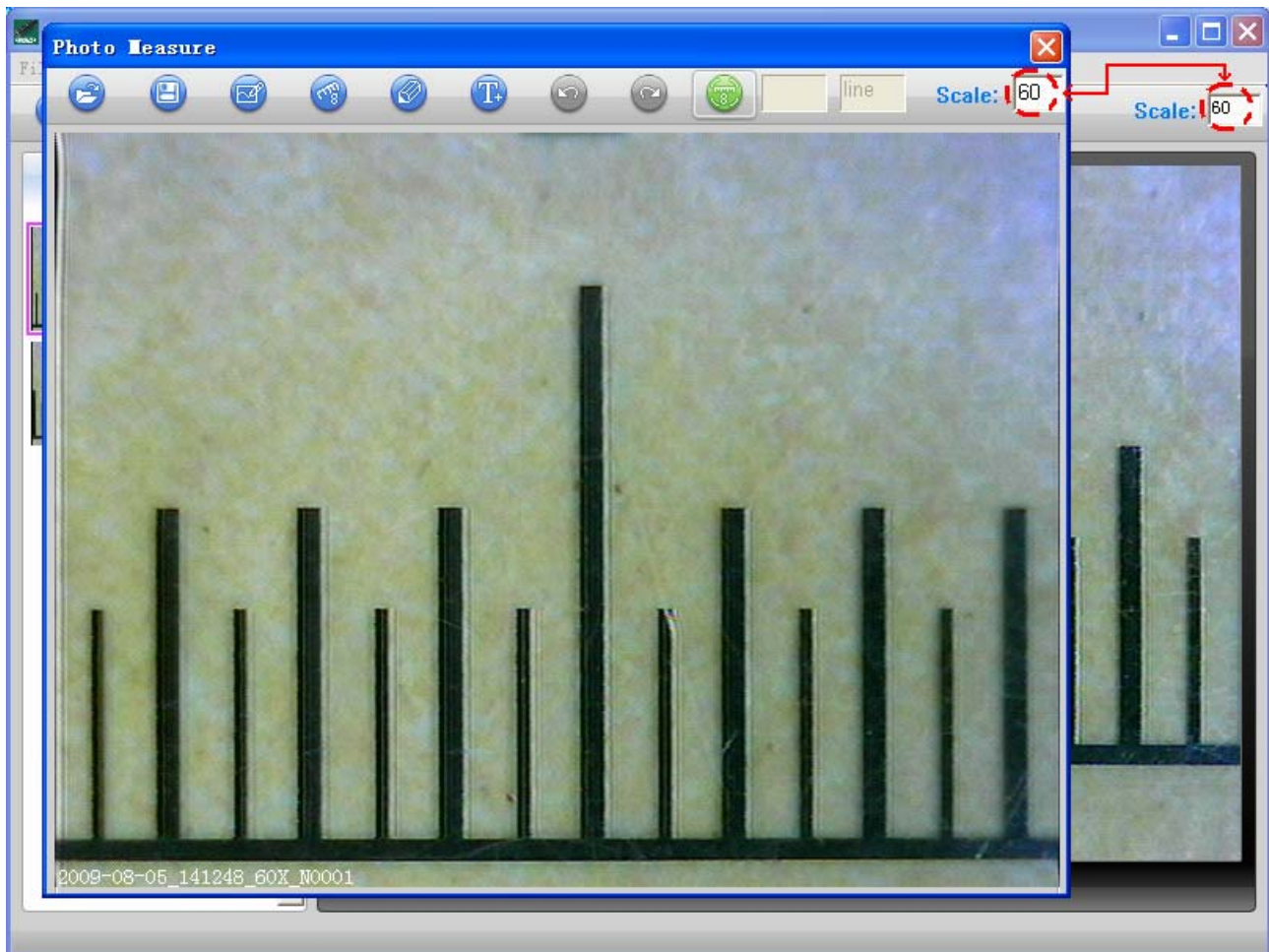
3. Now click the button of calibration to take a sample measurement of the selected calibration standard by clicking beginning and ending points across the known measurement value (such as 4mm). A measurement value before calibration will be displayed (3.885mm in the example below), and then enter the exact known value of the measurement sample (4mm in this example) when the window of Calibration pop-up and then click "OK".
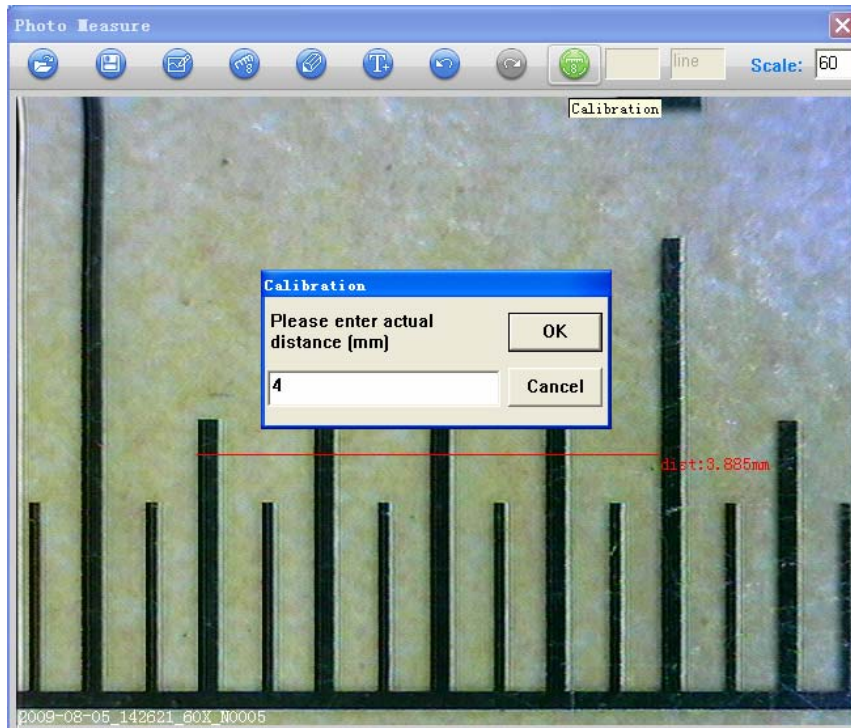
4. The software will automatically calibrate the scale of magnification and will show the calibrated scale of magnification at the right-hand box of calibration button, and also automatically adjust the scale of main program on this focus point.
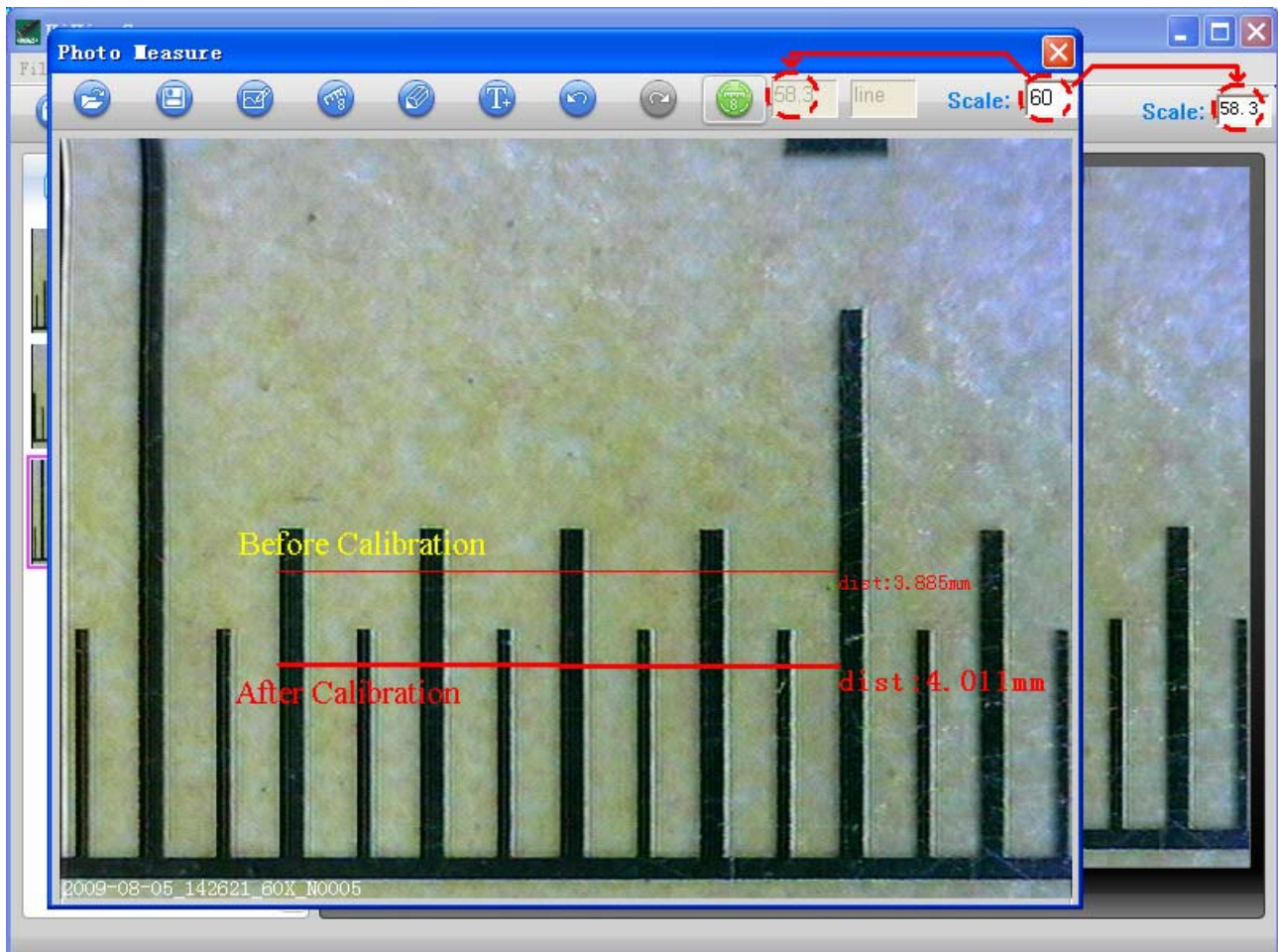
5. Now the software is ready to take new images with the calibrated magnification at this focus point (Don't

adjust the "Focus & Magnification adjustment wheel"), thus the measurement for these captured images after magnification calibration will be very accurate and the error rate of measurement is under 3%.
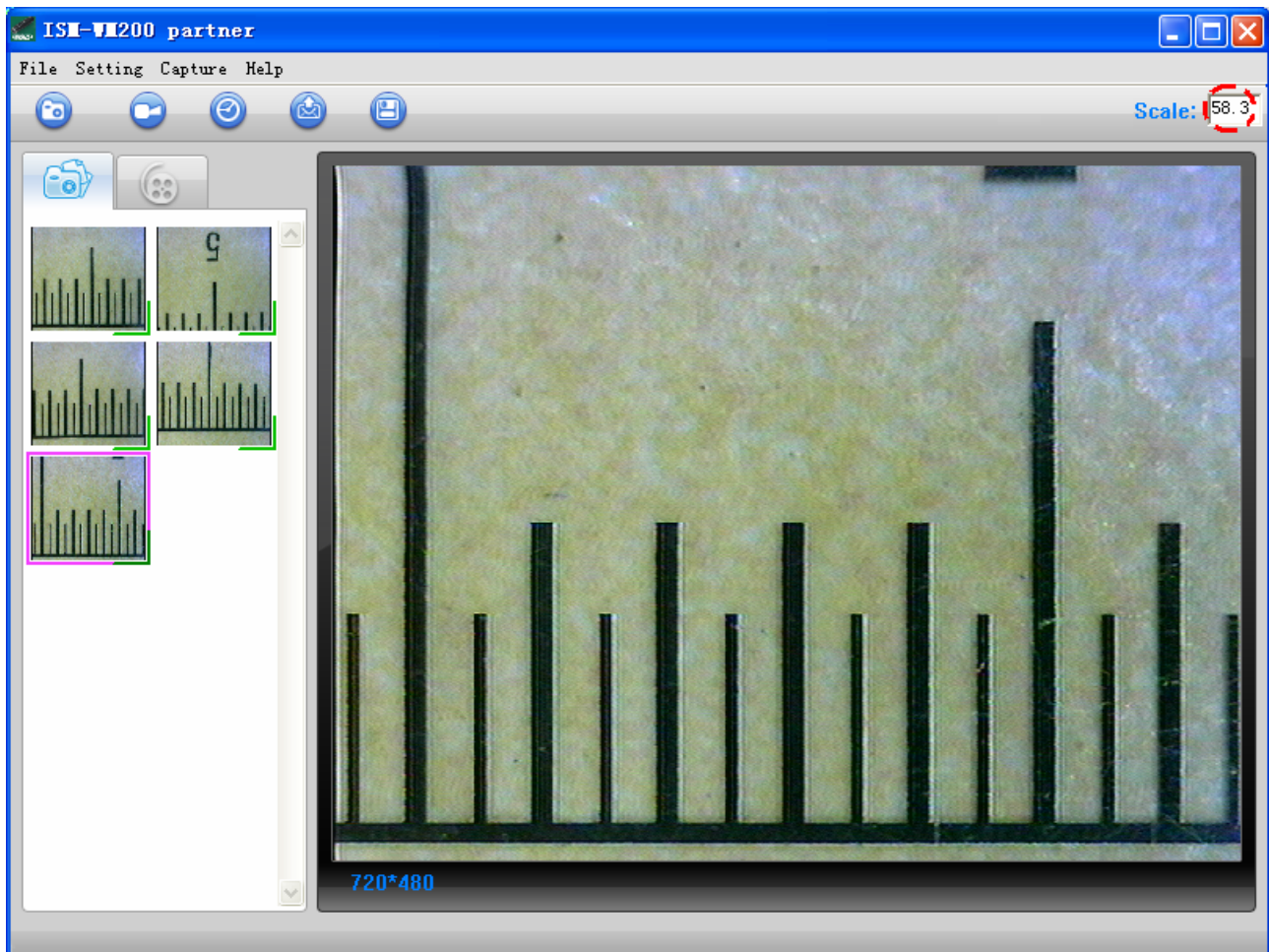
Note: If you change the focus point (i.e. change the "Focus & Magnification adjustment wheel"), you must re-do the calibration.

Video player

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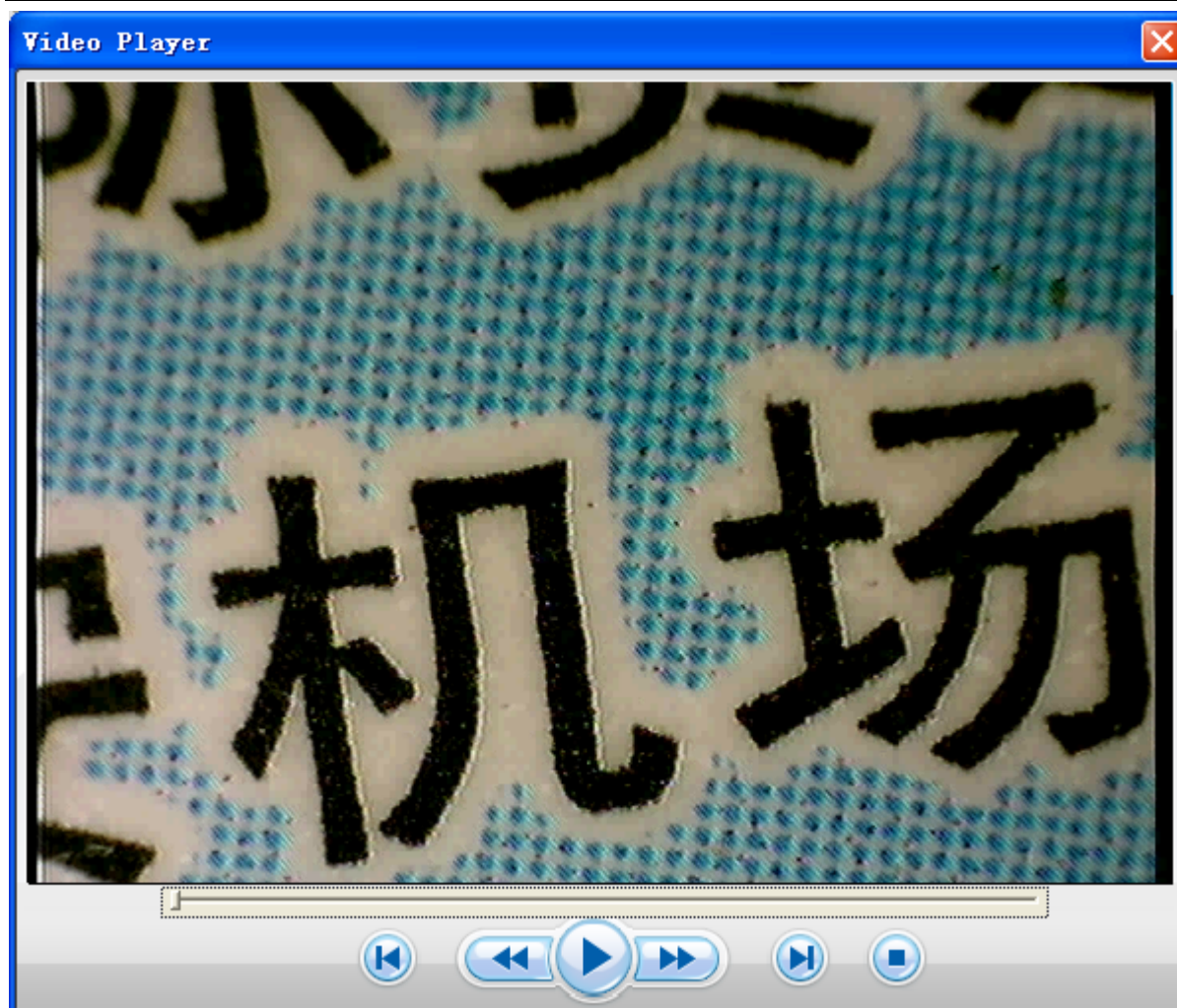
Troubleshooting

Common Fix

A. If Insize device and ISM-WM200 partner application were working OK and suddenly stops working properly, Please try the following:

1. Close ISM-WM200 partner program and power off microscope ,and then unplug USB receiver device from PC.
2. After waiting for 1 minute, plug in USB receiver and power on microscope, open ISM-WM200 partner program to try again.

B. After PC resume from standby or hibernate, maybe ISM-WM200 partner will not work properly, please disconnect the USB receiver and re-open to try.

C. Maybe there is some interference if there are other wireless sources around you, for example, Wireless LAN or Cordless Phone etc, please turn off these wireless sources.