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Thank you for purchasing our microscope product. To avoid any misuse and damage, please read the operation instruction carefully before operation. This is a color USB2.0 digital image system that captures microscope images and displays real-time live video on your PC screen. It comes with a high-resolution digital camera, built-in reduction lens, user-friendly software, and adapters for all sizes of microscopes.

1 Introduction

1.1 Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Sensor</td>
<td>1/3.2” CMOS</td>
</tr>
<tr>
<td>Valid Pixel</td>
<td>1280×1024 (1.3M Pixel)</td>
</tr>
<tr>
<td>Pixel Size</td>
<td>2.8um×2.8um</td>
</tr>
<tr>
<td>Digital Output</td>
<td>24-bit (color)</td>
</tr>
<tr>
<td>Image Format frame rate</td>
<td>1280×1024 7.5 fps</td>
</tr>
<tr>
<td></td>
<td>800×600 30 fps</td>
</tr>
<tr>
<td></td>
<td>600×480 30 fps</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>1.8v@550um/lux/s</td>
</tr>
<tr>
<td>Exposure</td>
<td>Manual/Auto Exposure Process, Exposure Time Adjustable (1～500ms)</td>
</tr>
<tr>
<td>SNR</td>
<td>42.3dB</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>71dB</td>
</tr>
<tr>
<td>Connecting Mode</td>
<td>Insert it into Eyepiece Tube of Microscope Directly or Using Standard C Mount</td>
</tr>
<tr>
<td>Image Output</td>
<td>USB2.0, Directshow and Twain</td>
</tr>
<tr>
<td>Working Temperature</td>
<td>-30°C ~ 70°C</td>
</tr>
<tr>
<td>System</td>
<td>Windows 2000/XP/Vista</td>
</tr>
</tbody>
</table>

• With High Resolution chip(1.3M), Providing High Quality Image and Widely Used in Academic and Medical Field for High Precision and Resolution Image Capturing and Processing;
• Very convenient to Use, just insert it into Eyepiece Tube or Top Tube of Trinocular Head;
• By USB2.0, getting Real-time and Non-compressing Video Data and Capturing Image Directly;

1.2 About ScopeImage 9.0

High resolution image processing software is especially designed for digital microscope; it has friendly operation interface, stable performance and powerful function, very easy to operate. And can be widely used in various optical micro fields, such as teaching, researching, electronic checking and so on.
1.3 Features

ScopeImage 9.0 is image-processing software professionally designed for digital microscope. It allows you to view, capture, edit, record, zoom, measure, and process microscope images. Specific features include as the follows:

1) Active image preview, freezing preview, fit to window preview, real preview, full screen preview... various preview modes make you preview the active images with great ease.

2) Convenient color adjustment of the active image, containing brightness, contrast, saturation, RGB value, white balance and so on, very convenient to adjust the color during previewing.

3) Special design color database, we can associate the parameters of the color to the database, and can store or delete the color scheme.

4) Various image measurement tools, including line, angle, rectangle and circle, can move, delete or set the color of the objects. And you can also burn all the objects into the image for further using.

5) Automatic measurement and real-time measurement result display.

6) Basic image operations like other similar software are included in the Image menu. You can adjust the image at ease.
7) Image flip function, include horizontal flip and vertical flip of the active image, and rotate 90 degree, 180 degree, 270 degree or any angle degree of the captured image.

8) Image Zoom: Contain image zoom in, zoom out, 1:1.

The follow is the image captured by the camera as example.

---

2. Installation Instruction

2.1 Minimum System Requirements

System Requirements
- Operating System Windows 2000, XP or Windows Vista 32bit or 64bit.
- Windows 2000 need to install the DirectX9.0 to obtain better picture quality.
- Video adapter supports 24bit color or more and 1280*1024 or 1024*768 resolution
- CPU with 2.0GHz or more
- System Memory 256MB or more, Display Memory 128MB or more
- **USB2.0 interface**
- Hard Disk Space 1GB for installation plus additional space for captured images

*Since video processing is hardware intensive, a faster computer with a fast hard disk drive and extra memory will yield better results.*
2.2 Common sense about hardware and software

Here introduce the basic sense of digital camera. Generally speaking, it includes two sections: one is the hardware driver; the other is the software application.

The driver is combining with the hardware (the chip of the digital camera) closely. The computer can operate the hardware, only when it has installed the right driver. Say in brief, it’s the question of can and can not.

The application, as we know the ScopeImage 9.0. The application perform the task that the users need; it’s the question of how to operate.

Connect the Camera to the Computer
Connect USB devices to a computer while the computer is turned on. This “hot plug” capability is a convenient feature of USB products. To connect the camera to a computer, do as follows:
Plug one end of the USB cable to an open USB port on your computer, and the other end to the camera. When you connect it rightly, the computer’s Operating System should recognize it, and pops up a found new hardware dialog. The camera’s RED LED should on. Please follow the clue to install the driver and software of the camera device.

Attention:
Please use the same USB2.0 port; otherwise you need to update your driver again to make the camera work normally. And refer to chapter 3 to update the driver.

Before installation
Please link the digital microscope to the computer with the USB2.0 cable before you run the setup.

There’re a few differences among the camera installation in Windows XP, Vista and 2000, here shows the introduction in Windows XP for an example.

2.3 Install Introduction

Put the CD into the CD driver, it will prop out an installation wizard, just click the relevant button and follow the clue to finish the installation, and then we can use the camera.

Attention: the first three buttons containing ‘Driver’ ‘Software’ and ‘Video Codec’ is necessary for the camera, and must be installed.
Driver: Please link the camera with the PC before running the driver setup, if the system has not detected the camera, there will come out a dialog reminding you to insert camera to the PC first, as the picture shows below.

In Windows XP system, there will be two warning dialogs when installing the driver, as the pictures below, just click ‘Continue Anyway’. 
Software: Click the software button to install the microscope image processing software – ScopeImage 9.0. Follow the clue to finish the installation.

Video Codec: Click the video codec button to install video encoding and decoding software, this is necessary for recording videos. Otherwise you will find you can not record or record error.

Adobe Reader: If you can not read the user manual, please install the Adobe reader first, for the user manual is pdf format, and pdf files can only be read after you have installed the Adobe Reader. After installation, you can open the 'User Manual. pdf'.

User Manual: Operation manual about how to operate the software.

Browse CD: Click this button to browse the CD.

Exit: After the installation, click this button to exit and close the installation wizard.

Attention in Windows 2000 and XP System

In the Windows 2000 System, you need to install DirectX9.0 to obtain better picture quality.
Please click Browse CD button to open the CD, and then double click the dxsetup.exe under the folder “DirectX9.0” to run the DirectX installation.
2.4 Check whether the device is rightly installed

(1). After the installation, there will be a quick launch icon on the desktop, as follows:

(2). Check the Start Menu as follows, Camera-H1C is the driver of the camera, and the ScopeImage 9.0.1 is the software:
3 Workspace

Besides image windows, many other windows or user interface elements reside within the main window of ScopeImage 9.0. These include menu, toolbars, status bar and control windows providing additional information about the images or control of the camera.

3.1 Menu

The menu can be either docked or floating. Double-click its grip or caption bar to toggle between the two states. When the menu is docked, it can be docked to any of the four sides of the main window. Drag the grip or caption of the menu to adjust its position or to dock it to a particular side of the main window. The grip of the menu is the dot matrix at the left or top of the menu in docked state.

Video model menus

File  View  Window  Help

Image model menus

File  Edit  View  Image  Variant  Measure  Window  Help

3.2 Tools Bar

ScopeImage DynamicPro has four toolbars. Each toolbar can be either shown or hidden. When a toolbar is shown, it can be either docked or floating. Double-click its grip or caption to toggle between the two states. When a toolbar is docked, it can be docked to any of the four sides of the main window. Drag the grip or caption of a toolbar to adjust its position or to dock it to a particular side of the main window. The grip of a toolbar is the dot matrix at the left or top of the toolbar in docked state.

Floating state:

3.3 Camera Pane

Camera pane is where camera control commands are issued. It is further divided into three
sub-panes (Video, Adjust and Capture) for specific aspects of the imaging process.

Sub-panes are shrinkable. To shrink a sub-pane, click the arrows at its top right corner. To expand a shrunk sub-pane, click again the arrows at this to right corner. The arrows at the top left corner of a sub-pane point upward in expanded state and downward in shrunk state. Camera pane also maintains a history of the panes shown.

If all the three sub-panel have been opened, the panel will be too long to display all the contents, so there will be two arrows at the top and the bottom of panel, put the mouse on it, the panel will expend upward or downward to display the other part contents.

Use the idler wheel of the mouse to extend the contents of the camera pane: click to select the camera pane, when it displays as yellow, roll the idler wheel to upward or downward display the contents of the camera pane.

Double click the title bar of the 'Camera Pane' (the yellow part of the image above), can turn to floating state, drag the grip or caption of the menu to adjust its position or to
dock it to any of the four sides of the main window. Double click to return back, as the pictures shows below.

Camera pane can close, hide and display.

<table>
<thead>
<tr>
<th></th>
<th>Camera Pane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locking state</td>
<td>Camera Pane</td>
</tr>
<tr>
<td>Hiding or Hanging state</td>
<td>Camera Pane</td>
</tr>
</tbody>
</table>

When it is in hiding or hanging state, click the ‘Camera Pane’ or just put your mouse on it, the camera pane will display.
4 Operation

ScopeImage 9.0 mainly divides into two parts operation, one is for the video operation, and the other one is for the image operation; The Video mode menu: File, View, Window, Help; The Image mode menu: File, Edit, View, Image, Variant, Measure, Window, Help; “Alt + the first letter of the menu” can open the relevant menu. Here we introduce you both the operation of the video and the image mode.

4.1 Video Mode

4.1.1 Video Preview

Video preview mode, the new preview button is gray; When the preview window is closed, the video preview button is activated; Push the button can create a new preview window.

<table>
<thead>
<tr>
<th></th>
<th>New Preview</th>
<th>Push to new a new preview window; the equivalent command is the “File-&gt;New Preview” menu;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capture</td>
<td></td>
<td>Push to acquire an image based on the current camera settings and store into the disk;</td>
</tr>
<tr>
<td>Capture to field</td>
<td></td>
<td>Capture a frame to the field;</td>
</tr>
<tr>
<td>Record</td>
<td></td>
<td>Push to record ,the equivalent command is the record button on the camera pane;</td>
</tr>
<tr>
<td>Suitable preview</td>
<td></td>
<td>Suitable preview mode is fit to the window preview. This mode is best for finding the right field of view to capture. In this mode, the full field of view is visible, albeit possibly in a reduced resolution.</td>
</tr>
<tr>
<td>Real Preview</td>
<td></td>
<td>Real Preview mode is best for finding the right focus position. In real preview mode, maximal details are shown, although the field of view may be partially visible.</td>
</tr>
<tr>
<td>Full screen</td>
<td></td>
<td>Full screen display the active image.</td>
</tr>
<tr>
<td>Horizontal flip</td>
<td></td>
<td>Flip the active image by the Vertical axis, click to set or reset a flip state.</td>
</tr>
<tr>
<td>Vertical flip</td>
<td></td>
<td>Flip the active image by the horizontal axis, press to set or reset a flip state.</td>
</tr>
</tbody>
</table>
4.1.2 Video Control

The ‘Live’ and ‘Pause’ button can switch between active and static image

<table>
<thead>
<tr>
<th>Live (Video preview mode)</th>
<th>In video preview mode, the image is activating, we usually call it active image, it is fit for observing specimen or slice.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pause (Freeze preview mode)</td>
<td>In freeze preview mode, the image has been frozen; it is fit for observing the detail information of the specimen.</td>
</tr>
</tbody>
</table>

Image flip

The image flip contains horizontal flip 🔄 and vertical flip ❄️.

**Horizontal Flip:** Flip the active image by the Vertical axis.

Original Image  | After click the Horizontal Flip button

**Vertical Flip:** Flip the active image by the Horizontal axis.

Original Image  | After click the Vertical Flip button
**Horizontal and Vertical Flip:** Flip the active image by both of the Vertical and Horizontal axis.

**4.1.3 Color Adjust**

The color adjust function contains the adjustment of the brightness, saturation, contrast, Gamma, sharpness, Red, Green, Blue, and also contain the auto white balance, recovery to the default setting and the color database.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brightness</td>
<td>Adjust the brightness of the camera.</td>
</tr>
<tr>
<td>Saturation</td>
<td>Adjust the saturation of the camera. Saturation is a measure of a color's pureness and brilliance.</td>
</tr>
<tr>
<td>Contrast</td>
<td>Adjust the contrast of the camera.</td>
</tr>
<tr>
<td>Gamma</td>
<td>Adjust the gamma of the camera. Gamma is an image quality enhancement function that offers a richer image by brightening the darker portions of the image without altering the brightness of the brighter portions.</td>
</tr>
<tr>
<td>Sharpness</td>
<td>Adjust the sharpness of the camera.</td>
</tr>
<tr>
<td>Red</td>
<td>Increase the Red value of the active image.</td>
</tr>
<tr>
<td>Green</td>
<td>Increase the Green value of the active image.</td>
</tr>
<tr>
<td>Blue</td>
<td>Increase the Blue value of the active image.</td>
</tr>
<tr>
<td>Auto Whitebalance</td>
<td>Click 'Auto Whitebalance' button, the system will do auto white balance. Click again to manual white balance. Attention: If you set it to auto white balance, you can not adjust the other values.</td>
</tr>
</tbody>
</table>
Recovery to the default setting.

The management of the built-in database can allow you to store the current image parameters, which brings you great ease for adjusting the color.

The database of the color parameters

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Bright...</th>
<th>Saturation...</th>
<th>Image...</th>
<th>Gamma</th>
<th>Sharp...</th>
<th>Red</th>
<th>Green</th>
<th>Blue</th>
<th>White...</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>example</td>
<td>11</td>
<td>2</td>
<td>12</td>
<td>150</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5200</td>
</tr>
</tbody>
</table>

Apply  Apply the select item to the active image.

Add    Add a new item to the active image.

Del    Delete the select item.

Cancel Exit the ‘ColorParm’ dialog window.
4.1.4 Capture

2. Capture
Push to acquire an image based on the current camera settings and store into the disk as jpg or bmp file format;

3. Record Video
Click the button
Set the route and the file name.

Click the ‘Start’ button to begin to record.

Click the ‘Stop’ button to stop recording

4. MultiCapture

ScopeImage 9.0 is able to acquire a sequence of images automatically, an operation referred to as multi-capture. Before acquire, we can set the wait time, interval time, amount, prefix, type, path and so on. After setting, a sequence of the image will be acquired according to the camera settings at the time when the acquisition action occurs.

<table>
<thead>
<tr>
<th>Wait(s)</th>
<th>The time to wait before beginning capture, in seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval(s)</td>
<td>Time interval, it means take image every 2 seconds, and can be referred as frequency.</td>
</tr>
<tr>
<td>Images</td>
<td>The amount to acquire.</td>
</tr>
<tr>
<td>Prefix</td>
<td>Set the prefix of the file name.</td>
</tr>
</tbody>
</table>
### 4.2 Image Mode

#### 4.2.1 Image Process

After we capture images, we can do image process, flip, measurement to the image.

<table>
<thead>
<tr>
<th>Invert</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color reversal, can turn a positive image to a negative image, or turn a negative image back to a positive image. A negative image performing higher contrast and higher color saturation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do average filter to the image, to clear the image noise;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Median</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do mediate filter to the image, the median filter is much better at preserving sharp edges than the average filter.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sharpen</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>All digital photographs lose a certain amount of sharpness. That means that most photographs will look a bit blurred and their details won’t be as prominent. Basically, sharpening makes the edges of a photographed object appear more distinct.</td>
<td></td>
</tr>
</tbody>
</table>
Emboss | The Emboss filter makes a selection appear raised or stamped by suppressing the color within the selection and tracing its edges with black
---|---
Brightness | Change the brightness of the image;
Contrast | Change the brightness of the image;
Saturation | Change the brightness of the image;

4.2.2 Image Flip

The image flip operation is as the commands of the image flip menu.
ScopeImage 9.0 image processing software

<table>
<thead>
<tr>
<th>Icon</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>📀</td>
<td>Open an image, support bmp and jpg format;</td>
</tr>
<tr>
<td>📀</td>
<td>Save the image, or the changes to the image;</td>
</tr>
<tr>
<td>📰</td>
<td>100% display the image;</td>
</tr>
<tr>
<td>🔍</td>
<td>Magnify display the image;</td>
</tr>
<tr>
<td>🔍</td>
<td>Reduce display the image;</td>
</tr>
<tr>
<td>🔥</td>
<td>Image flip by the vertical axis;</td>
</tr>
<tr>
<td>🔧</td>
<td>Image flip by the horizontal axis;</td>
</tr>
<tr>
<td>🔓</td>
<td>Retort 90 degree of the image;</td>
</tr>
<tr>
<td>🔔</td>
<td>Retort 180 degree of the image;</td>
</tr>
<tr>
<td>🔒</td>
<td>Retort 270 degree of the image;</td>
</tr>
<tr>
<td>🔄</td>
<td>Retort any angle of degree of the image;</td>
</tr>
<tr>
<td>🔄</td>
<td>Use the <em>Undo</em> command to reverse the most recent action that has modified the image. The equivalent command is the undo function under the Edit menu.</td>
</tr>
<tr>
<td>🔄</td>
<td>Use the <em>Redo</em> command to undo an <em>Undo</em> operation. The equivalent command is the redo function under the Edit menu.</td>
</tr>
</tbody>
</table>

### 4.2.3 Image Measurement

The system supports several measure tools, such as the line, circle, rectangle, angle, and so on. The measure result can be displayed in real-time on the image and can be merged into the image and saved for further use.

The function is equivalent to the commands under the Measure menu.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Function</th>
<th>Function Introduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>📈</td>
<td>Move</td>
<td>Move or adjust the objects, containing line, angle, circle, and rectangle.</td>
</tr>
<tr>
<td>🕹</td>
<td>Line</td>
<td>Add line objects. Each line object is defined by two endpoints. Press left</td>
</tr>
</tbody>
</table>
mouse button to specify one of the endpoints. Move the mouse to the other endpoint, while keeping the left mouse button pressed, to draw the line. Release the left mouse button to complete the line drawing. The above procedure may be repeated to create more lines. A line object has two resizing handles, located at the two endpoints. The length of the line will appear over the image at the same time.

### Angle

Use the *Angle* command to measure angles. Click to specify three controlling points. The angle made by the line passing through the 1st and the 2nd point, and the line passing the 2nd and 3rd point, will be measured. The degree of the angle will appear over the image at the same time.

### Circle

Click to specify two controlling points. The 1st point as the center of the circle, move the mouse to the 2nd point while keeping left mouse button pressed to draw the circle. Release left mouse button to complete the creation of this circle. The line between the 1st and the 2nd point as the radius. Repeat the procedure above to add more circle objects. Drag the handles at the corners to adjust the size of the circle simultaneously. Drag anywhere else within the circle to move the circle object. The area and radius of the circle will appear over the image at the same time.

### Rectangle

Each rectangle is specified by two diagonal vertices. Press down left mouse button to specify one vertex. Move the mouse to the other vertex while keeping left mouse button pressed to draw the rectangle. Release left mouse button to complete the creation of this rectangle. Repeat the procedure above to add more rectangle objects. A rectangle object has four resizing handles. Drag the handles at the four corners to adjust width and height of the rectangle simultaneously. Drag anywhere else within the rectangle to move the rectangle object. The area of the rectangle will appear over the image at the same time.

### Delete one

Use the *Delete one* command to remove the selected object on the image.

### Delete All

Use the *Delete All* command to clear all the objects on the image.
<table>
<thead>
<tr>
<th><strong>Generate measurement data</strong></th>
<th>This command will clear background image, and generate an image that just will the measurement marker.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calibration</strong></td>
<td>The system micrometer consists of the sampling intervals in horizontal and vertical directions. In the calibration process both of the two sampling intervals should be calculated. Details please see chapter 3.2.4 Image Calibration. IMPORTANT!!! Calibration should be done on an image before measuring.</td>
</tr>
<tr>
<td><strong>Show/hide calibration ruler</strong></td>
<td>Click this button to show the calibration ruler, click again to hide it.</td>
</tr>
<tr>
<td><strong>Measure setting</strong></td>
<td>Set the color of the coordinate, line, adjuster and text,</td>
</tr>
</tbody>
</table>

![Image Calibration GUI](image)

### 4.2.4 Image Calibration

The system micrometer consists of the sampling intervals in horizontal and vertical directions. In the calibration process both of the two sampling intervals should be calculated as there’s tolerance error between the two directions.

Here shows the calibration under 10× object lens for an example.

1. For the calibration can only do to the static image, we should take a picture first.
First, put the 0.1mm micro-ruler in the video window, adjust to display clear, then turn around the camera, make the active images parallel to the horizontal line, and click the button on the tools bar to capture a frame to the field, as the picture shows below.

2. In the image field, click the button to move the scale, you can also click the or button to magnify or reduce the current image in order to convenient the calibration. Here shows the calibration result when it is reduced to 50%.
3. Click the icon 📐 to display the calibration scale, click the icon ⏫ to move the scale to the right position, confirm the begin point and the end point, as the picture shows below.

4. Click the calibration icon 📐 to set the ‘X-Ruler Unit’, Input the actual length 100um, and click the button ‘Save As’ to save the calibration for X axis.
5. Click input a calibration file name on the box, and click ‘Save’ to save it, then click ‘OK’ to exit, now we have finished the calibration for the X axis.

The calibration for the Y axis is as follows.

6. The calibration for the Y axis is similar to the X axis. First, we turn around the camera to make the micro ruler vertical to the horizontal line, click the button on the tools bar to capture a frame to the field, as the picture shows below.
7. Click the calibration icon on the tools bar, then click 'Lode' button, and select the file of calibration for X axis we have just done, click 'Open'.
8. Now we keep the X axis don’t move, and do calibration to the Y axis, move the scale to the right position, confirm the begin and the end point;

9. Click the icon, input the actual length in the “Y-Ruler Unit”, and click “save” to save the calibration result for further using. Click “OK” to exit, now we have finished the calibration for both X axis and Y axis, and we can find that there is a little difference between them.
Check the calibration result:

The calibration has been finished, now we check it.
Use the micro ruler, and capture a frame to the field, load the calibrations we have just done, and do line measure, as the picture below:

We can find the measurement is close to the actual length, take the tolerance error for account, the measurement result is right.
**4.3 Full Screen Mode**

As we know, it is very convenient to preview the live image in the full screen mode. Double click the live image or click the button on the tools bar can enter into the full screen mode, double click or click the button “Close Full Screen” to exit full screen mode.

![Full Screen Mode Image](image_url)

**5 Trouble Shooting**

**5.1 Attention**

1. please link the camera with PC before running the driver installation; and when there comes out warning dialog, just click ‘Continue Anyway’, as the pictures show below:
2. Error hint: Cannot preview successfully. Please check whether the camera has linked with the PC, and whether the driver has been installed rightly. If not, please refer to the next chapters 5.2.

![Hint]

Cannot preview successfully. Please check your camera.

![OK]

3. Can not record or record error. Please check whether you have installed the ‘Video Codec’ in the CD.

4. When launching the software, there will be several seconds displays as black preview, please don’t worry, it is normal, because the camera needs time to do some pretreatment to ensure the stable working of the camera. The same reason for the recording, when you begin to record, it will displays as black preview for several seconds, and when the images display normal, the recording begins.

5. USB2.0 is a mandatory, not optional. This camera cannot work on the computers with USB1.1 ports. In order to ensure the stability of the connection with the USB2.0 interfaces, please insert the plug into those interfaces in the back panel the mainframe.

![USB2.0 connection]

6. Please use the same USB2.0 port every time. Using on a different USB2.0 port may need to reinstall the driver again to make the camera work. Refer to the next chapter to reinstall the driver.

7. This camera supports operation system: Windows 2000/XP/Vista 32bit and 64bit.

8. Please unplug the USB cable from the computer immediately after using. It will shorten the lifetime of the camera, sometimes may cause repair service if the camera is plugged in the computer all the time and you do not shut down the computer for a long time.
5.2 Cannot preview successfully

Attention: Please use the same USB2.0 port every time. Using on a different USB2.0 port may cause the camera can not work, and comes out a hint dialog as follows when you try to open the ScopeImage 9.0 software, especially in Windows XP and 2000 system.

When there’s a hint dialog as the picture shows above, the most problem is the driver is not right, you’d better reinstall the driver again, after installation please remember to use the same USB2.0 port every time.

Please do as follows”

(1) Run the driver in the CD, and select the second choice ‘Repair’, then click next button.

(2) Hardware Installation warning dialog, please click ‘Continue Anyway’ button.
(3) Click finish to finish the installation.