

Vividia® HM-250 HDMI/LCD/USB/TV Portable Digital Measurement Microscope

User's
Manual



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Welcome

Thank you for purchasing the Vividia® HM-250 HDMI/LCD/USB/TV Portable Digital Microscope. This digital microscope integrating LCD/HDMI/TV/USB functions is highly useful for students, teachers, collectors, hobbyists, and testers etc to explore the microscopic world.

Please take a moment to read through this manual. Its contents will help you get the best use of the innovative microscope.

1. Precaution

Before using the LCD HDMI Digital Microscope, please ensure that you read and understand the safety precautions described below. Always ensure that the Digital Microscope is operated correctly.

- The Microscope is not waterproof, so keep it dry.
- Do not use it in a humid place like bathrooms. A dry environment will maintain its life to maximum.
- Use the Microscope only at -5°C - 50°C .

- Sudden temperature change may form dew inside the Microscope like entering a warm room in cold winter. Put it inside a handbag or plastic bag to slow down temperature changes.
- Do not point Microscope lens to the sun or strong light for a long time. Powerful light may hurt the light-sensitive electronics.
- Avoid touching the lens.
- The white LEDs which illuminate the Microscope target field are very bright. Do not stare directly into these LEDs as it may damage your eyes.
- The clear plastic distance shell sometimes picks up dirt or toxic material from a microscopically observed surface. Be careful that this doesn't get in contact with the human skin. Always wash carefully or disinfect as needed.

2. Preparation

■ Package Contents



Microscope



Stand



AC adaptor



Capture remote



HDMI cable



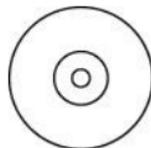
USB cable



TV cable



Micro-SD card



CD



Manual

■ Parts Names & Functions



1	Up	11	Focus wheel
2	Down	12	HDMI-out
3	Setup/Delete	13	1/4-inch screw
4	OK (Confirm)	14	TV-out
5	Power on/off	15	DC: charge battery USB: output to PC
6	LED Dimmer	16	Photo/Video switch
7	Capture remote input	17	Capture
8	Charging indicator	18	Playback
9	Micro-SD slot	19	Zoom in
10	2.4-inch LCD	20	Zoom out

3. Specifications

Display: 2.4-inch LCD

Magnification Ratio: 10x to 220x

Image sensor: 3 Mega Pixels

Photo size: 3M, 5M, 8M, 12M

Video size: 1080P, 720P, VGA

Video output: HDMI/TV/USB

Focus Range: Manual focus from 10mm to 50mm

Storage: Micro-SD card, up to 32G

Measurement: Yes, when working as a USB microscope

Light source: LED (adjustable by dimmer)

Power source: Built-in Li-ion Battery or 5V DC-in

Battery working time: 1.5hrs

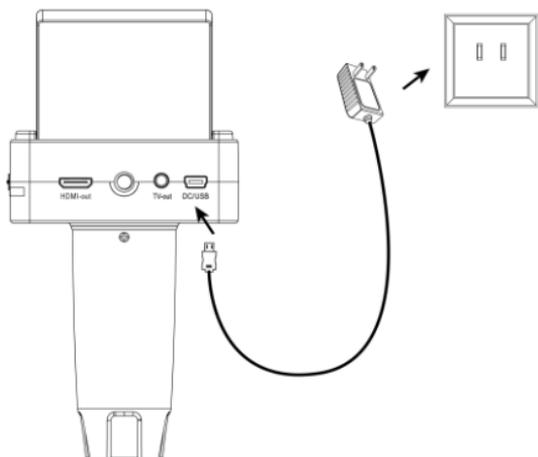
Battery charging time: 2hrs

Size: 110mm (H) x 80mm (L) x 55mm (W)

4. Use the Microscope

4.1 Charge the Built-in Battery

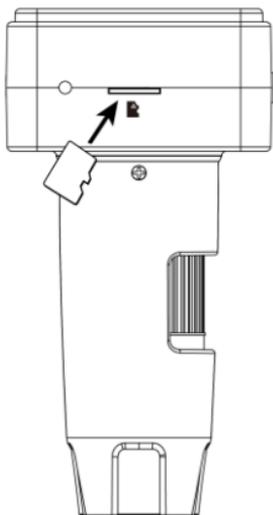
Before using the microscope, you are suggested to charge the built-in battery by using the supplied power adaptor.



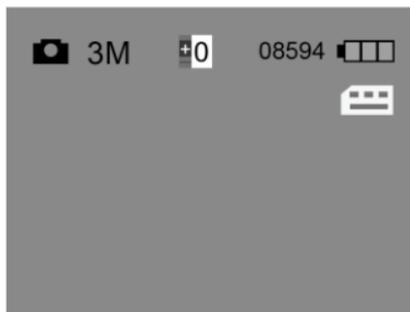
4.2 Insert a Micro-SD Card

- 1) Turn off the microscope
- 2) Insert the Micro-SD card into the Micro-SD card slot; gently press in until card is latched.

Note: Do not force the card into the slot; forcing may damage microscope and the Micro-SD memory card. Align Micro-SD card position (as marked) and try again. The Micro-SD memory card must be formatted before capture.



4.3 Display Icons & Meanings



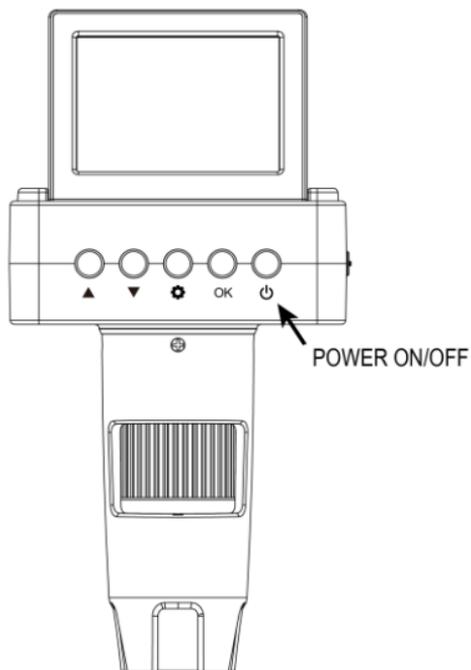
Icon	Meaning
	Still image capture
	Video capture
	Exposure
	Total qty that could be captured (based on the current resolution)
	Micro-SD card inserted
	Current resolution
	Battery electricity indicator

Note: The icon displays will be off when there is no key pressed for 5s.

4.4 Turn On/Off the Microscope

Press the On/Off button to power on the microscope.

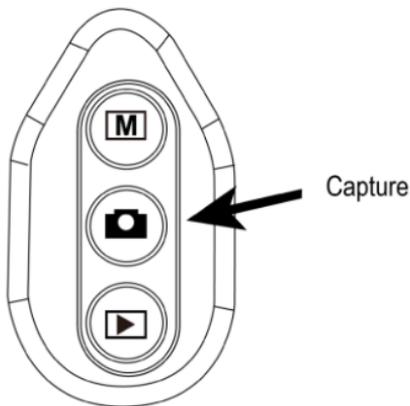
Press again to turn it off.



4.6 Capture

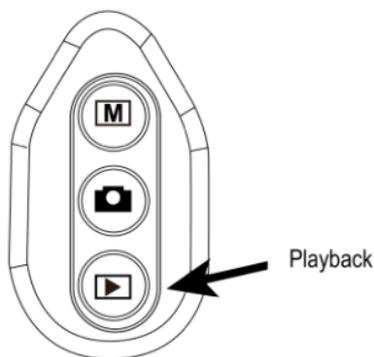
Turn on the microscope, point its nozzle to the target object to be observed, rotate its focus wheel slightly until get a clear point, press  button on the capture remote one time and a photo will be captured and saved on Micro-SD card.

By pressing  button on the capture remote, you can switch to video mode. Then you can press  button to start video recording.



4.7 Playback

Press  button on the capture remote, you can switch to playback mode, and then you can press  and  to scroll the captured photos and videos.



4.8 Delete

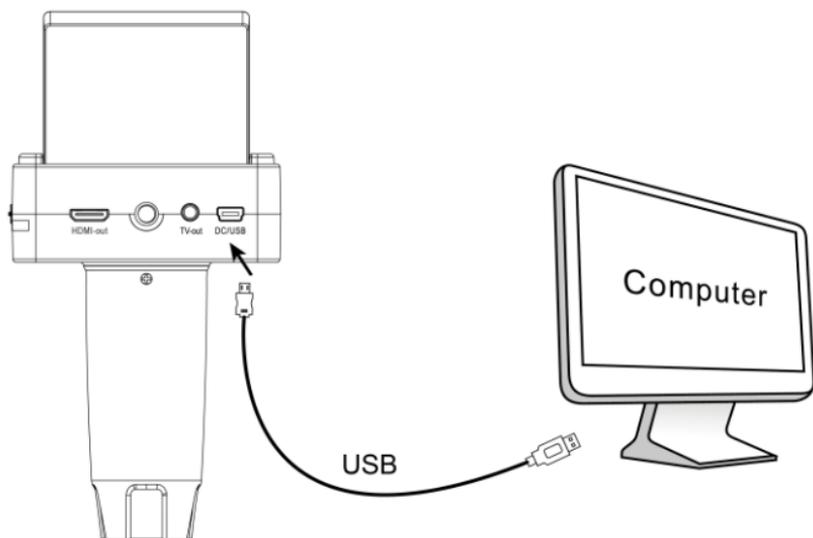
At playback status, press , you can choose to delete the current file or all files.

4.9 Zoom in/out

At previewing status, you can push #19 or #20 on the capture remote to zoom in or out digitally.

4.10 Download Files to Computer

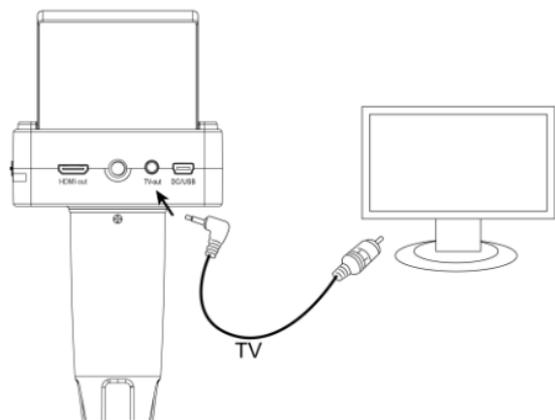
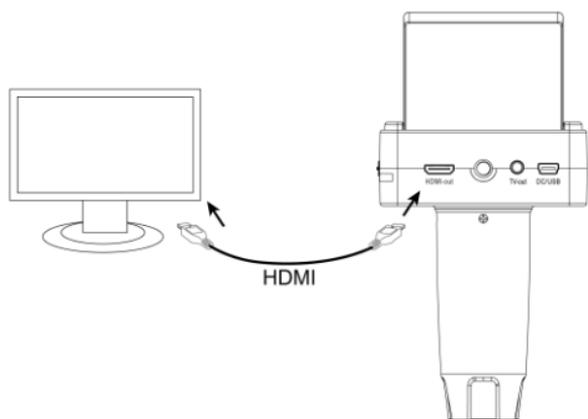
- 1) Connect the microscope to computer by USB cable.
- 2) Choose Mass Storage and then you can view stored photos & videos.



4.11 Output Live Video to Computer

- 1) Take out Micro-SD card.
- 2) Connect the microscope to computer by USB cable.
- 3) Choose PC Camera mode
- 4) Start PortableCaptureHD software. Please refer to Part II on how to use the PortableCapturHD software.

4.12 Output to Monitor by HDMI or TV



5. Screen Menu Introductions

You can press  to enter camera setup, with options as follows.

5.1 Photo Resolution

You can select a resolution for photo taken among 12M/8M/5M/3M.



5.2 Video Resolution

You can select a resolution for video recording among 1080P/720P/VGA.



5.3 Exposure

You can adjust the white balance as follows.



5.4 Date/Time

Setup system date and time.



5.5 Date Stamp

Choose whether put date and time mark on capture photos and videos.



5.6 TV Out

Select between NTSC and PAL for the TV output of the microscope, to make it compatible with that of your TV.



5.7 Loop Recording

Select length of each video clip. Off means not to turn on loop recording.



5.8 Auto Power Off

Select a time for the microscope to power off automatically without key operation.



5.9 Language

Select OSD language.



5.10 Format SD

Format the inserted Micro-SD card.



5.11 Default Setting

Reset the microscope configuration to default setting.



6. Troubleshooting

Problems	Solution
The unit does not turn on.	Charge the battery.
The screen is blank.	Ensure that the power is on. Charge the battery. Verify that the item you want to magnify is Positioned correctly under the lens.
There are smudges or blemishes on the screen	Clean the screen and lens carefully with soft fabric
Microscope is connected to a television, but no image appears on the television screen.	Ensure that the television is on. Switch to the appropriate video input channel on your television. Ensure that the video cable is securely connected to the Microscope Video-out port and plugged into the correct video input on your television.
The battery indicator LED is not in red, even though the power adaptor is connected and plugged into a wall socket. -or- The battery is not charging.	Plugged into the Microscope's DC-in port. Ensure that the outlet has power and is not malfunctioning. If the outlet is connected to a wall switch, make sure that the switch is on.

■ PC Software Introduction

1. Install the Software on PC (Win/Mac)

Insert the driver CD into CD-ROM Drive and then open the CD.

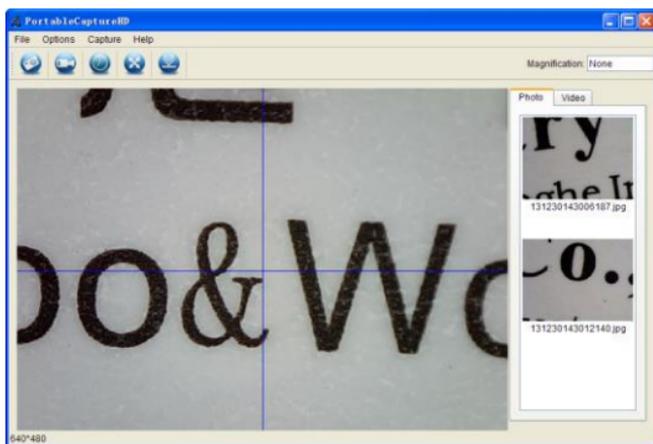
Double click to install **PortableCaptureHD** and the installation wizard will guide you through the whole process.

2. Start Microscope

Connect your Microscope to your PC USB port, start the



software by clicking the icon generated on the desktop after installation and you will see the following screen pop up.



When the Microscope is disconnected from your PC USB port, the following message will pop up.

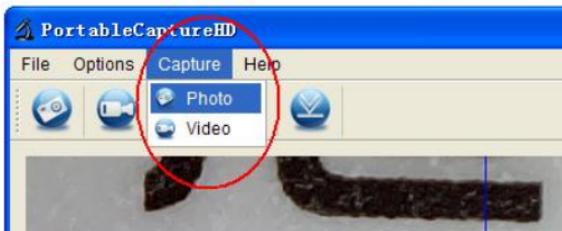
**No Device detected, please
connect your Microscope
directly to your PC USB port.**

3. Software Functions

■ Capture Photo

a. Click 'Photo' shortcut icon  in the main menu bar.

b. Click 'Capture > Photo'.



■ Capture Video

a. Click 'Video' shortcut icon  in the main menu bar.

b. Click 'Capture > Video'.



■ Timer (Photo / Video)



Click 'Timer' shortcut icon in the main menu bar.

The screenshot shows a dialog box titled "Timer" with a blue header bar containing a bell icon and a close button. The dialog is divided into two sections: "Photo" (selected with a radio button) and "Video". Under "Photo", there are four input fields: "StartTime" (a dropdown menu showing "2012/04/18 13:39:07"), "Interval(sec):" (a spinner box with "10"), "Video time(sec):" (a spinner box with "10"), and "Total Number:" (a spinner box with "10"). Below these fields is a "Captured Number:" label next to a large empty rectangular area with a small camera icon. At the bottom are two buttons: "Start" and "Stop".

* Under Timer photo, you can set the start time, interval time and total picture number.

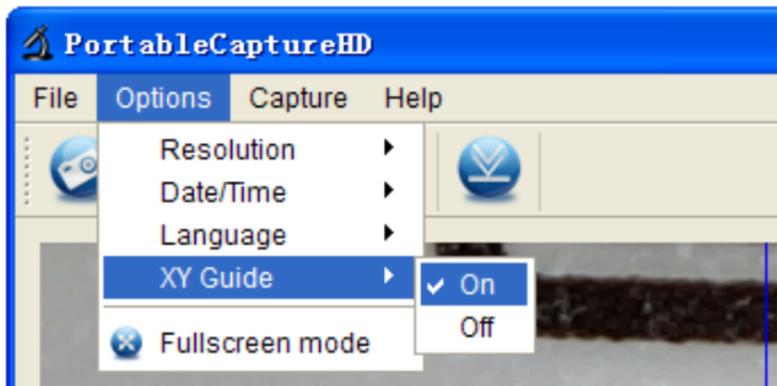
* Under Timer video, you can set the start time, interval time and total video number.

■ Calibration and Measurement

Please make calibration before measurement.

Calibration

Display Crossing from 'Options>Crossing'.



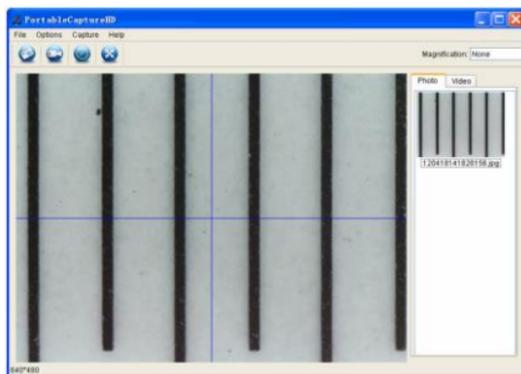
Microscope default at crossing “on”

It's used to check the dial on the calibration ruler.

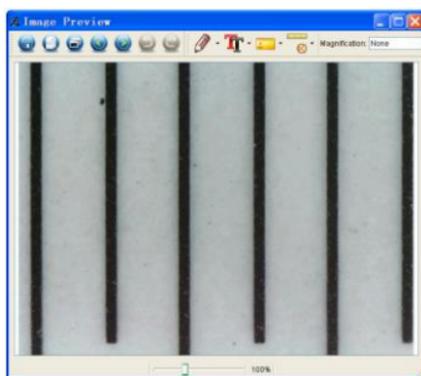
1. Focus microscope on the attached calibration ruler



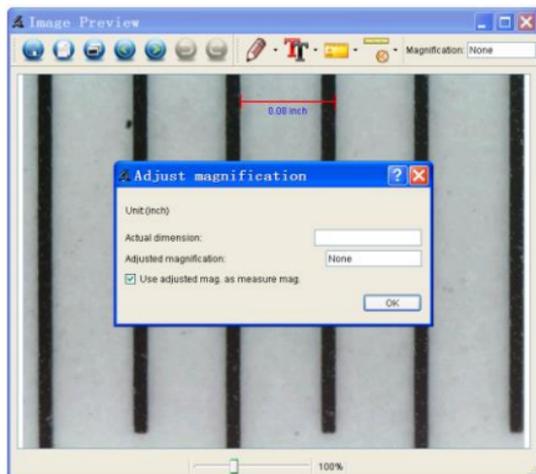
and then adjust the magnification till the picture is clear. Take a picture for the selected area when the dial is parallel to the crossing as below.



2. Double-click on the picture to enter into measurement interface as below.



3. Click Calibration icon , and then move mouse to the picture. Click on the beginning and ending points across a known value. Now a dialog will popup as below and you need to enter the exact value of the measurement sample into 'Actual dimension'. Then the software will automatically calibrate the magnification rate. Click 'OK' and the adjusted magnification rate will show in the upper right corner.

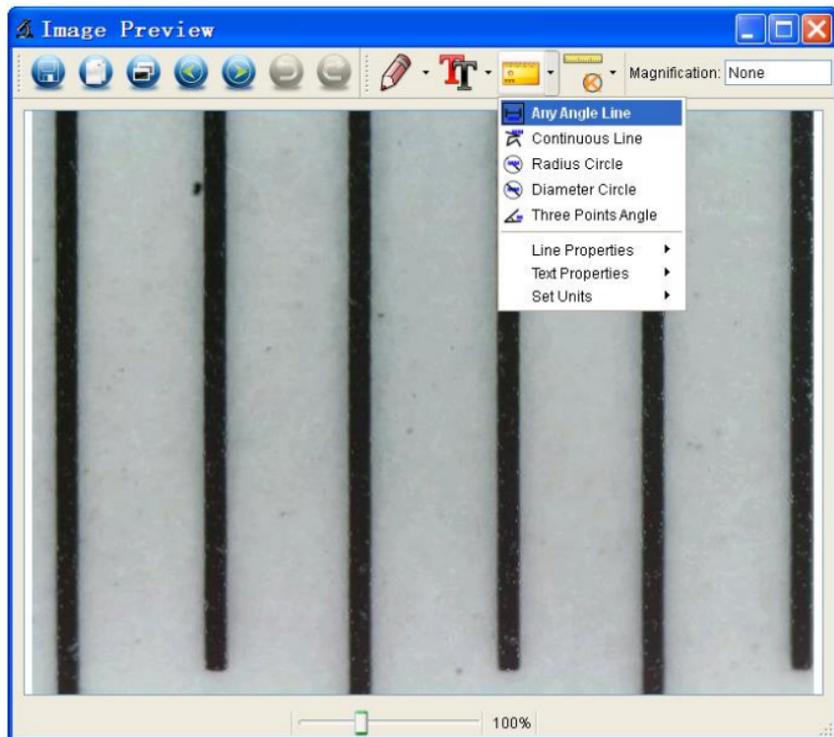


* Remark: The measured line should be paralleled.

4. Now you can use 'Any angle Line' under Measurement



icon to measure the value again. If the value you measure by software is nearly the same as the exact value of the dial means the calibration finish.



Measurement

Double-click on the picture to enter into measurement interface. Under the 'Measurement' icon  , you can choose any desired options to measure.

1. Any Angle Line Measurement

Simply click from one point and drag to the next point, and then release the click.

2. Continuous Line Measurement

The Continuous Line measurement allows you to measure any continuous desired length.

Simply click and drag from one point to other desired points, and then release the click.

3. Radius Circle Measurement

Simply click and extend out to the desired radius, the radius, circumference and area of the circle will show up accordingly.

4. Diameter Circle Measurement

Simply click and extend out to the desired diameter, the diameter, circumference and area of the circle will show up accordingly.

5. Three Points Angle Measurement

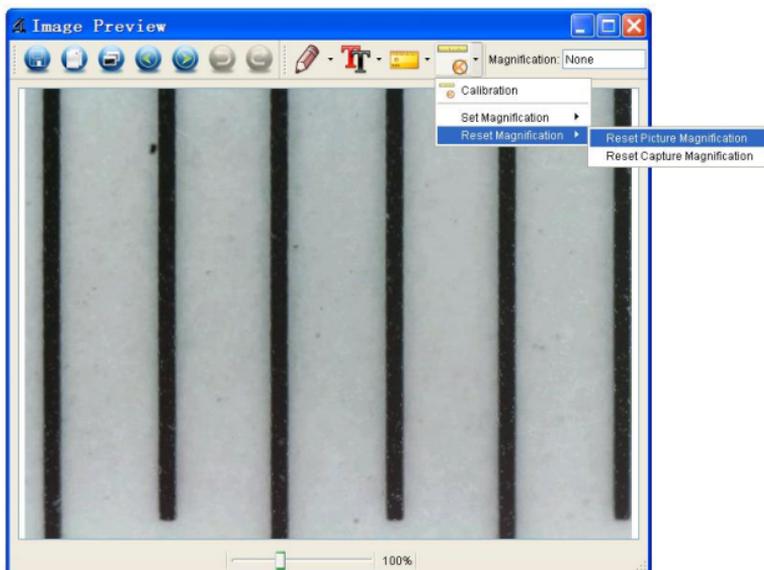
Simply define any three points angle and click, the angle value will then display.

Change Calibration

If you need to change the magnification rate and adjust focus to capture picture, please calibrate the magnification rate again.



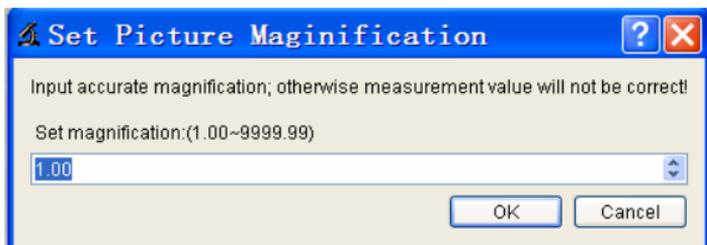
1. Double click to open the picture, Click ' > Reset magnification > Reset picture magnification' as below. And then start calibration again (Calibration details please refer to page18).



2. Change the magnification rate and capture several pictures, click on the picture to enter into measurement

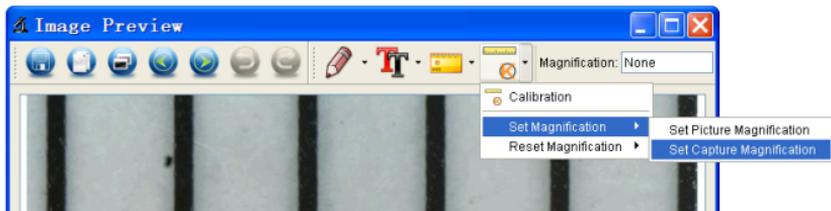


interface. And click 'Set magnification > Set picture magnification', now a dialog will show up as below; enter the magnification rate into the dialog and click 'OK'.



3. If you want to use the same magnification rate to

capture pictures, just click '  > Set magnification >Set capture magnification'. Now all pictures will use the same magnification rate and you can start measurement directly.

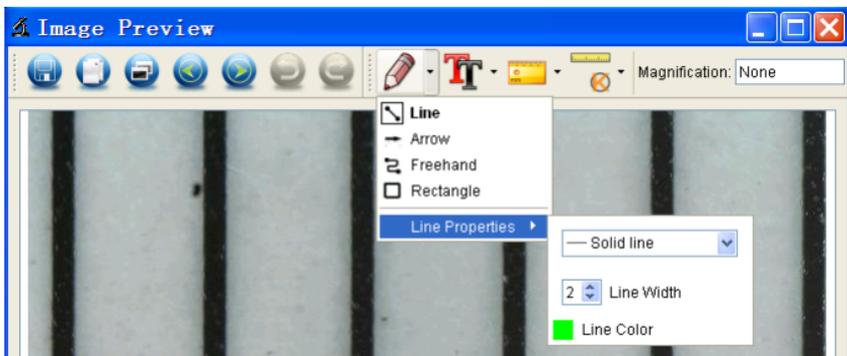


Draw and Text

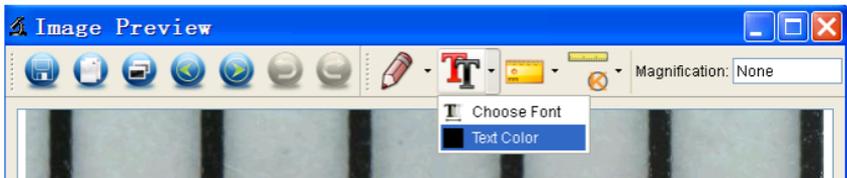
You can draw or add a text on the picture and save for later analysis.



1. Click icon to choose any kinds of drawing under the pull-down manual as below.



2. Click icon and set the font for the text in the popup dialogue as below.



Software Interface Instructions

Main Interface Icons



Capture photo – It's used to capture photo one by one.



Start / Stop record video.



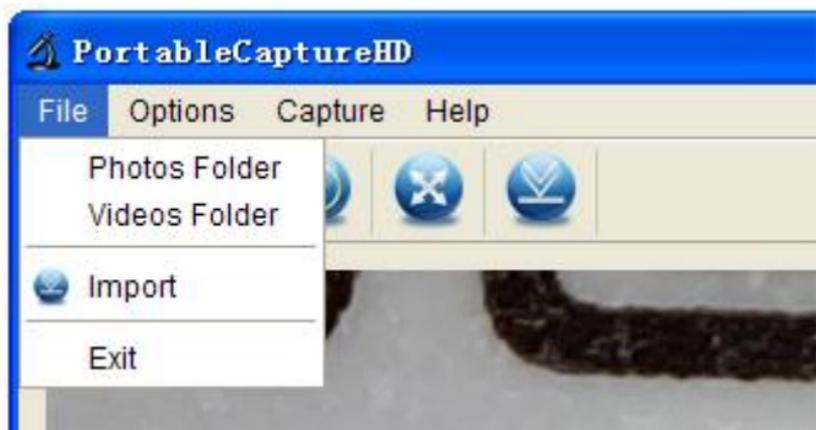
Timer for photo / video – Set the start time, interval time and total photo/video number.



Full screen mode,
Press ESC or double-click to exit.

Main Menu

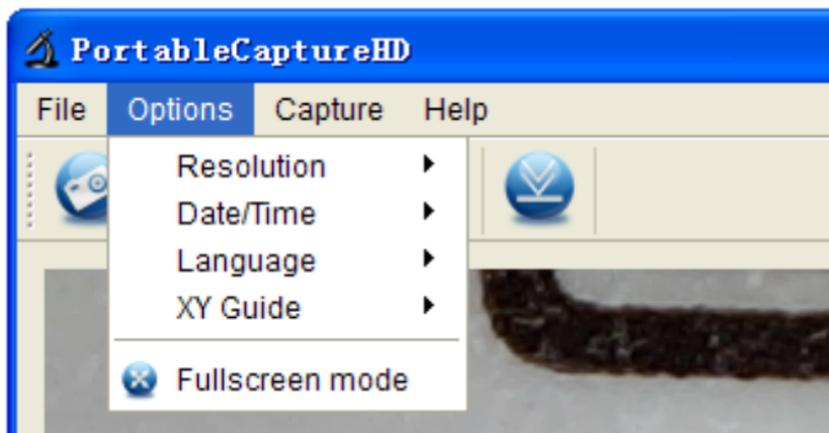
File



Photos Directory: set the directory to store photos taken;

Videos Directory: set the directory to store video taken;

Options



Resolution: change preview size

Date/Time: set to display system date/time on preview window

Language: choose different OSD language

Crossing: display cross on preview window

Full-screen mode: enter into full screen. Click ESC or double click to exit

Capture

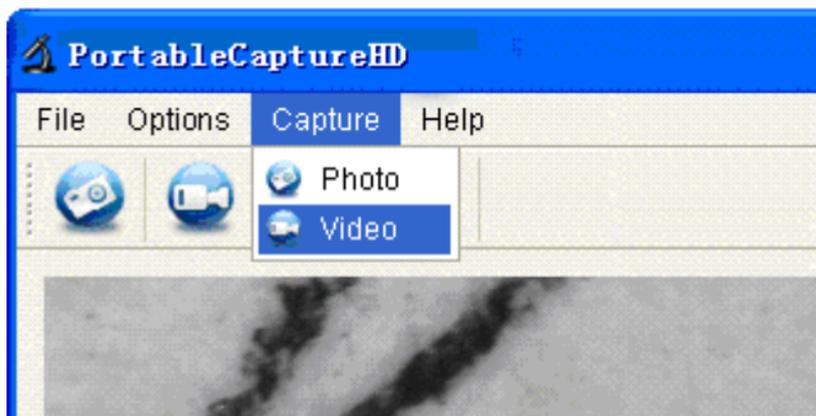


Photo: take a photo

Video: record a video clip

Measurement Interface Instructions



Save as



Redo



Copy to
clipboard



Draw



Copy file



Text note



Previous



Measurement



Next



Calibration



Undo

This symbol on the product or in the instructions means that your electrical and electronic equipment should be disposed at the end of its life separately from your household waste. There are separate collection systems for recycling in the EU.

For more information, please contact the local authority or your retailer where you purchased the product.



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