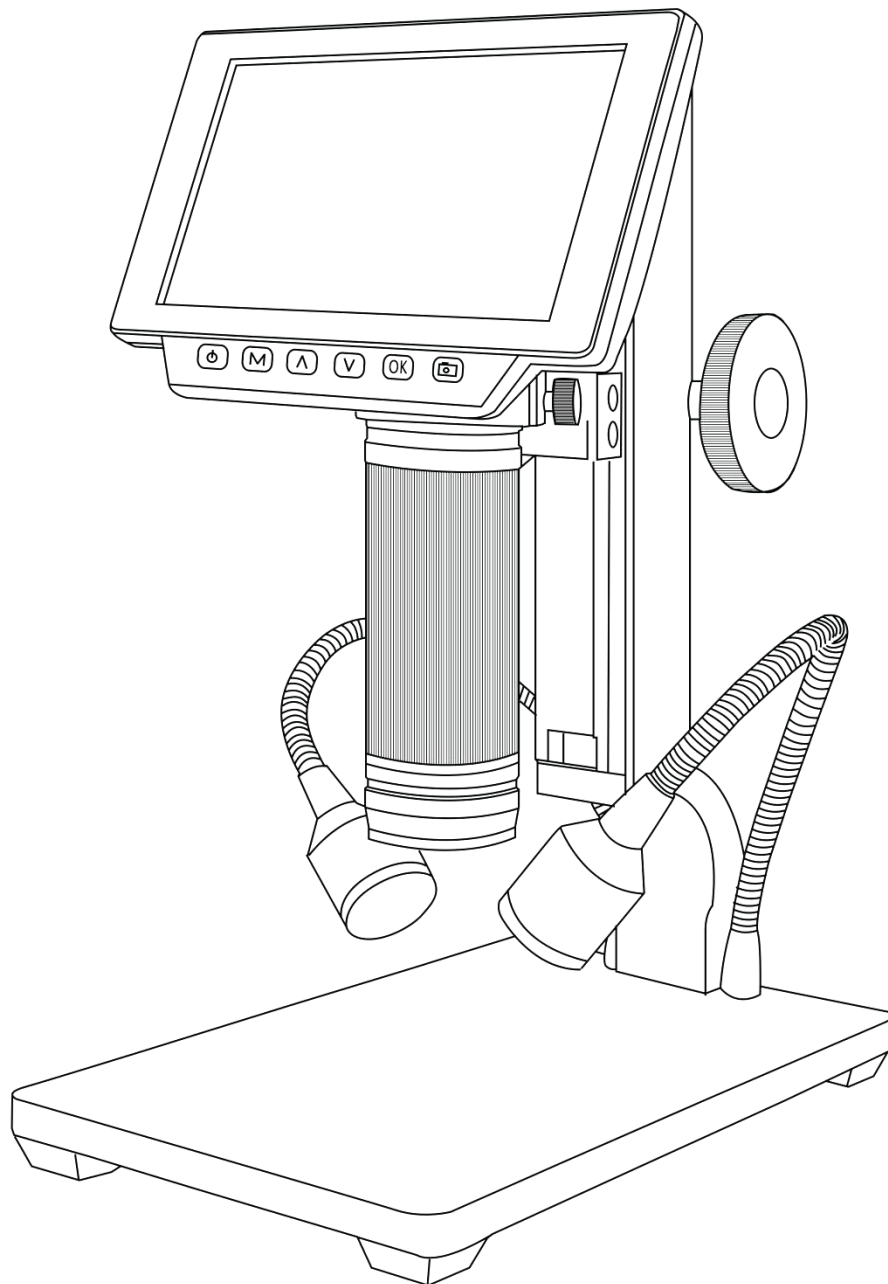


# Andonstar ADSM302 Digital Microscope

## ***USER MANUAL***





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## **General Rules**

ADSM302 is a multifunctional digital microscope individually designed, developed and manufactured by Shenzhen Andonstar Technology Co., Ltd. It realized Full HD, high object distance, multifunction, multi-output at the same time. With help of the Andonstar measuring software, it can easily meet many different requirements in many industries, such as industrial overhaul and teaching demonstration. And its appearance design combines more ergonomic consideration, provides users better experience. We sincerely wish this product can release your eyes and improve your work quality. Thanks for your support.

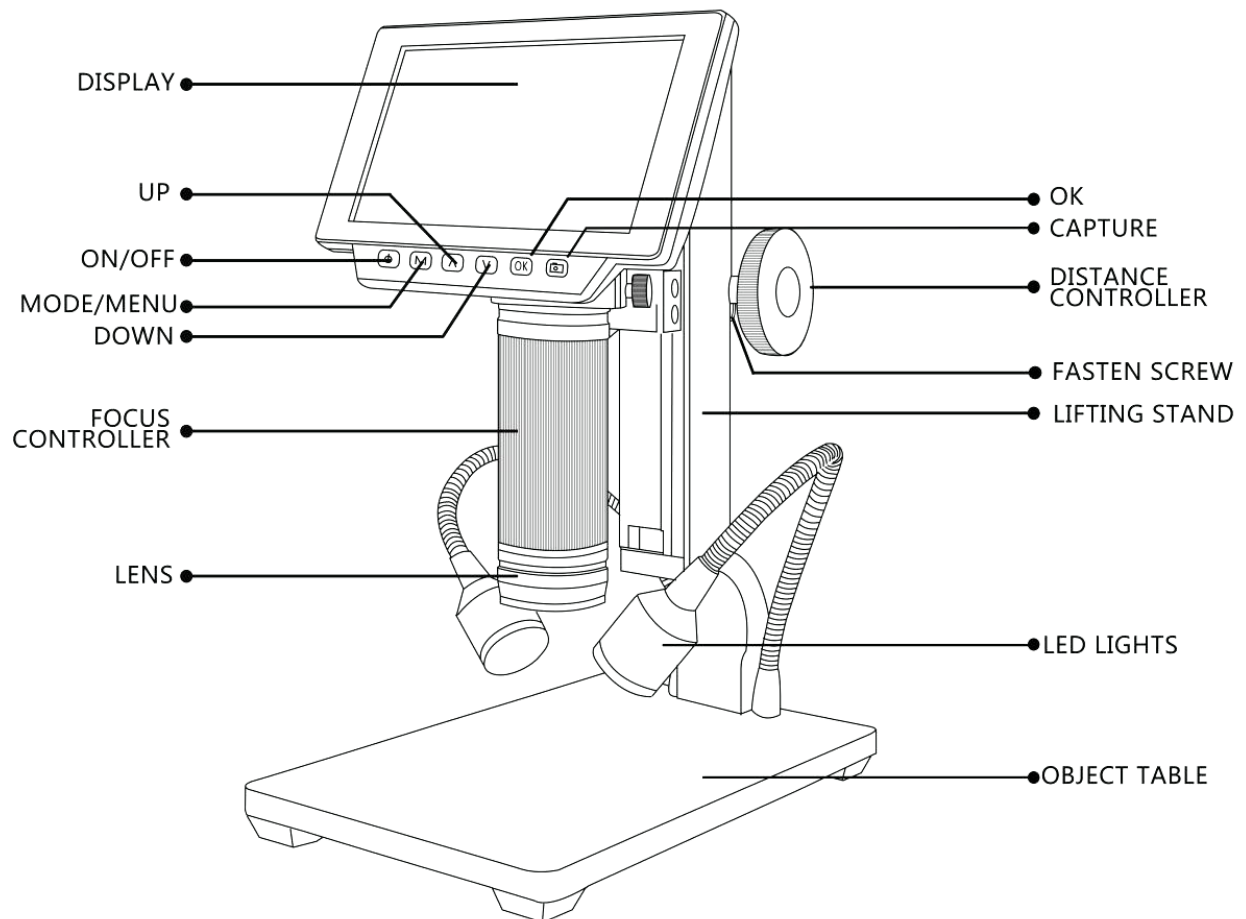
- ◆ This operation manual allows you to work safely with the digital Microscope. Please keep this manual for your information. Liability is void for any damage caused by not follow this manual.
- ◆ Failure to follow the warnings and instructions may cause electric shock, fire and/or serious injury.
- ◆ Not following this note can cause permanent damage to the device.
- ◆ Storage and transport: Improper transport can harm the device; Always transport this device in the provided box in order to prevent damage.
- ◆ Information on disposal: Electronic equipment does not belong to domestic waste, but must be disposed in accordance with the applicable statutory provisions.
- ◆ In order to bring customers a better experience, we may change the product a little bit during perfecting it. The description in this instruction is for reference ONLY. Thanks for understanding.
- ◆ Safety
  - 1.Keep the tool dry, clean, free from oil, water, gas or other materials capable of causing corrosion.
  - 2.This appliance is not intended for use by people with limited physical, sensory or mental capabilities.
  - 3.Keep bystanders, children away while operating the tool.
  - 4.Do not overreach, keep proper footing and balance at all time.

## Basic Parameters

Image sensor	3 Mega Pixels HD Sensor
Video output	1080P Full HD (via HDMI) ;720P (via PC)
Video format	MOV
Magnification ratio	Up to 560x(HDMI monitor 22 inch)
Photo resolution	12M
Photo format	JPEG
Focus range	5cm to 22cm
Frame rate	Max 30f/s under 600 Lus Brightness
Video-output interface	HDMI/AV
Storage	Micro-SD card, up to 32G (option)
PC support	Yes, for Windows XP/7/8/10, PC software with measurement (gift)
Power source	5V/2A
Stand size	20cm*12cm*26.5cm
Screen size	5 inch
Accessories	Stand*1, Power Adaptor*1, USB Cable*1, HDMI Cable*1, Manual*1, IR controller*1
Packing data	31*24.5*18cm/2.2kg

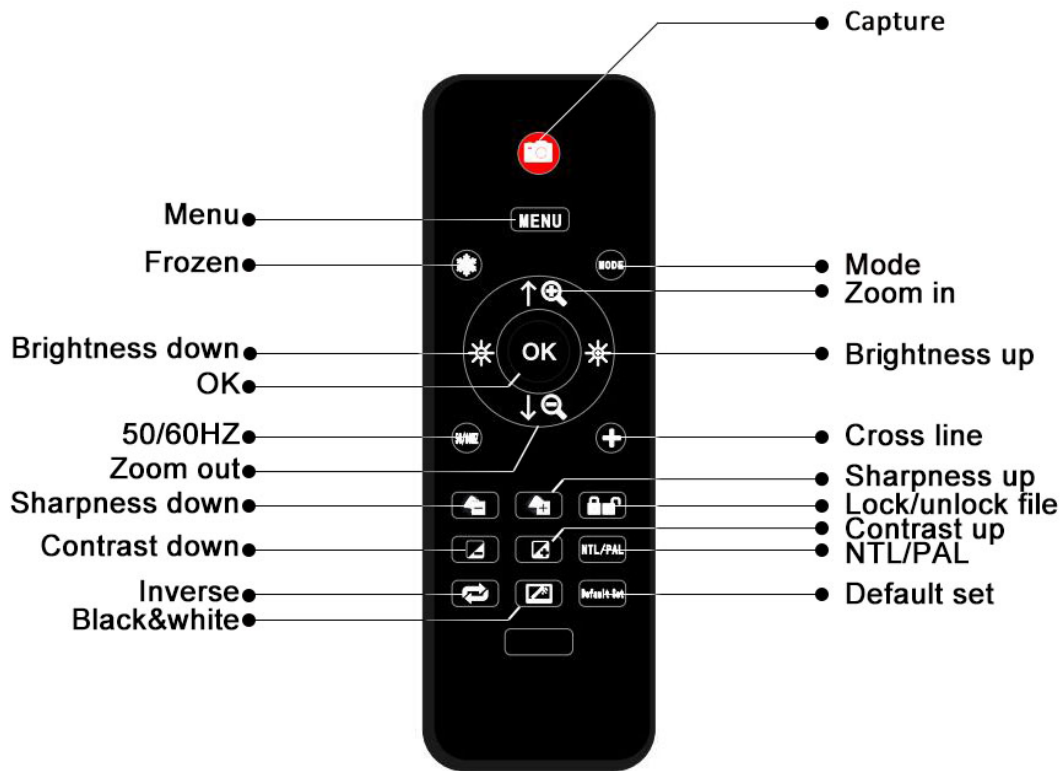
## Parts of ADSM302

### ◆ Main Device



\*Fasten screw: It aim to adjust the compactness between the Lifting stand and the Distance controllers, so users can fasten the distance from the lens to the object table.

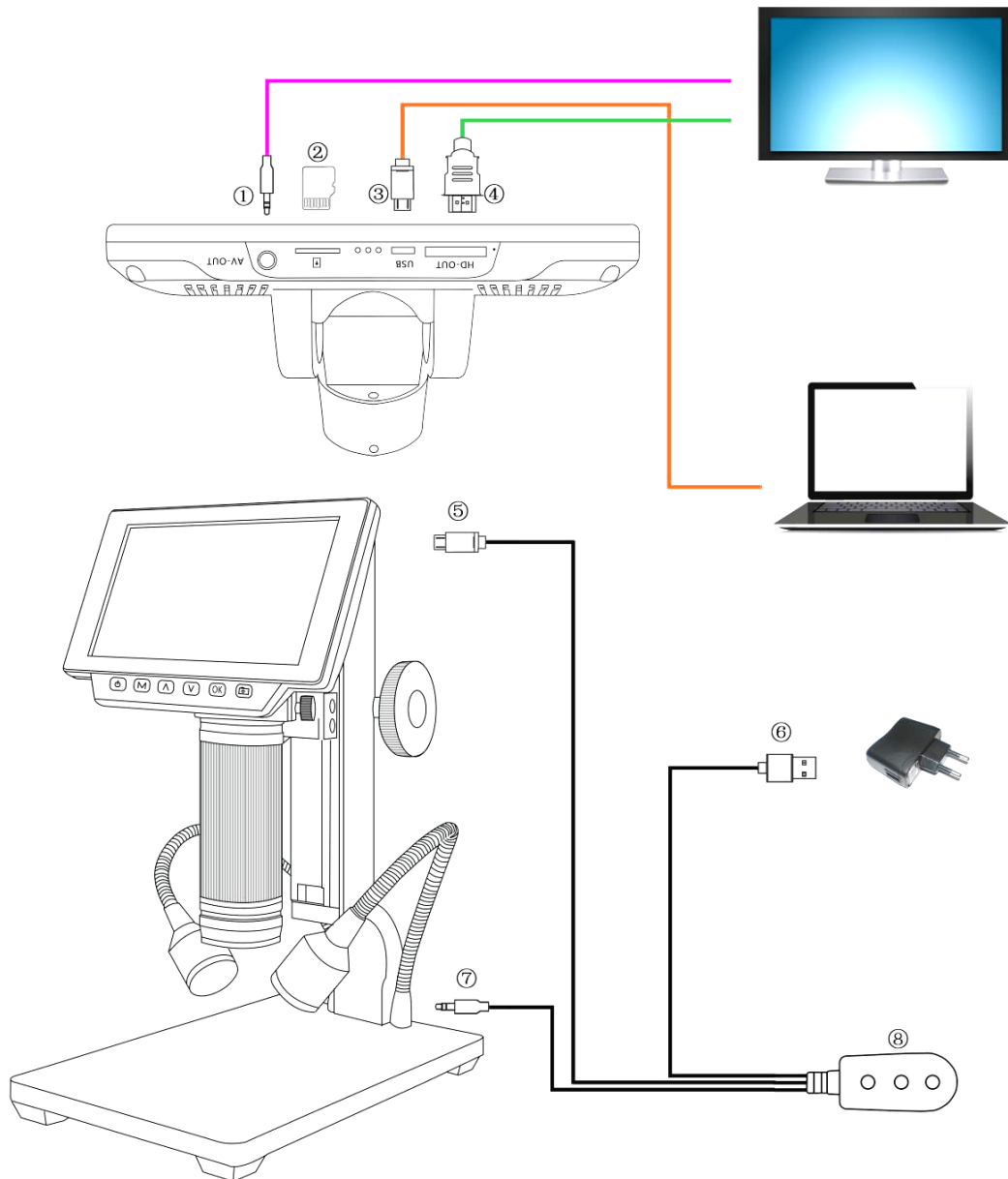
## ◆ Remote Controller



- **Frozen**: Stop the image on the screen. It works at standby, record and capture modes.
- **Zoom in/out**: digital zooming up to 4 times.
- **Brightness up/down**: exposure compensation from +2.0 to -2.0.
- **Lock/unlock**: to lock the file when it's recording. So the video file which has been locked won't be covered by new files when the memory card is full.
- **Sharpness up/down**: there are three levels of sharpness: Soft/Normal/Strong. Those two buttons are both used to switch the levels, but in different orders.
- **Contrast up/down**: same principle as Sharpness.
- **Inverse**: Invert colors.
- **Black&white**: Set colors to black and white.

## Connect & Outputs

The ADSM302 has 5 possible outputs: its own monitor, HDMI, AV/TV, USB and memory card.



- ①: AV output \*
- ②: Memory card
- ③: USB output \*
- ④: HDMI output \*

- ⑤: Connect the device to the switch.
- ⑥: Connect the switch to the power supply.
- ⑦: Connect the two goose lights to the switch.
- ⑧: 3-button switch (ON/OFF, goose light brightness up/down)

\*) Separate cables needed (not included).



## General Use

### ◆ Use Individually


1. According to the instructions given by last chapters, connect the camera to the power supply like ⑤⑥⑦.
2. Press the “ON/OFF” button on the monitor. (Sometimes the camera will switch on automatically when it is connected to the power supply)
3. Turn on the LED lights, adjust the object distance wheel and the focus controller to get the image that you want.
4. Use the “UP/DOWN” to zoom in/out.



### \* Select operating mode

1. Press “M” shortly. (Or press the “Mode” on the remote)

2. Icons definition in different modes:

: standby mode; : capture mode;  ●: record mode; : image playback mode

: video playback mode (If the files are videos, press “OK” to play the video file)

 ● : Lock the file which is being recording

### \* System settings

1. Press “M” for few seconds until on the screen shows the menu. Then press “M” again to get into the system setting menu. (Or press “MENU” on the remote twice)
2. Press “UP/DOWN” and use “OK” to choose what to set.
3. Press “M” again when you are done.

### \* Capture mode

There are three ways to capture pictures:

- Press “M” shortly to get into the Capture mode. Press “OK” to take pictures.
- Press “Capture” on the monitor only.
- Press “Capture” button on the IR remote to get pictures.

### \* Record mode

1. Press “M” shortly to get into the Record mode. Press “OK” to start recording.
2. Press “OK” to stop recording.

Tip: Press “Lock&unlock” on the remote to lock the file when it’s recording. So the video file won’t be covered by new files when the memory card is full.

## ◆ HDMI

Connect the microscope to the HDMI monitor, then connect the power supply. Turn on the microscope and adjust the distance. Then put the object on the table and adjust the focus controller.

**Please note:** The ADSM302 internal screen won't show an image when the device is connected via HDMI. You still can take pictures and save them if you have a memory card inside the microscope, but you can't record videos in this output mode.

### HDMI FAQ

•Why is there no image on the monitor ?

Please check all the cables connect properly and also make sure the device is switched on.

•Why the image is not clear ?

Please adjust the object distance and the focus controller, check the direction of the LED lights, and make sure the lens is clean enough.

•Remote doesn't work ?

There is no battery inside of the remote as standard configuration. Please check if there is battery in the remote.

## ◆ USB

### Software Installation

Download the software first. Then open the zip file and run the setup.

[http://www.andonstar.com/e\\_news/soft-2.html](http://www.andonstar.com/e_news/soft-2.html)

So far the measuring software “Andonstar” can only support Windows system. If you can't open the links or get problem with downloading these files, please ask customer service to send you separately. You can also go visit our website and download from there.

System Requirements:

- Windows XP SP3 / Vista / 7 / 8 / 10
- Microsoft.Net Framework 4.0
- Microsoft Visual C++ 2010 Runtime

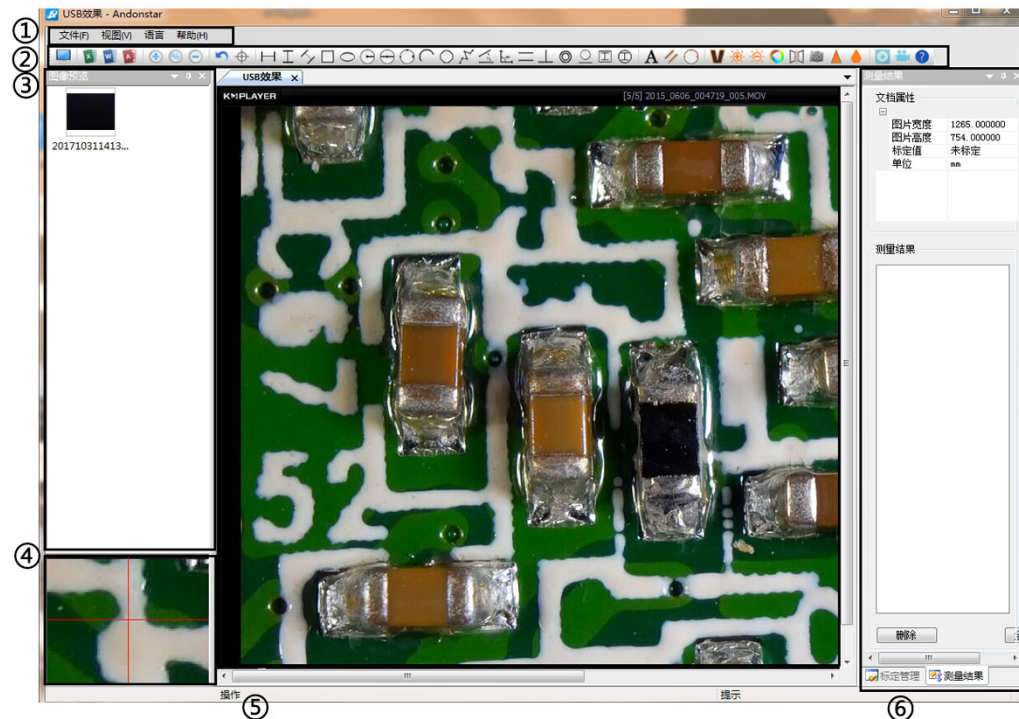
If there isn't either of the runtimes above mentioned, there would be mistake during installation.

## Software Overview

### \* Icon Definitions

	Zoom In		Measuring a 3points angle (degree)
	Normal		Distance of parallel lines(Length)
	Zoom out		Distance of a point and a line (Length)
	Undoes the last action		Distance of 2 circles (Radius, length)
	Cross hairs (crosier, 4 grid, 8 grid)		Distance of a line and a circle(Radius, length)
	Distance of 2 horizontal points		Add a square mark
	Distance of 2 vertical points		Add a circle mark
	Distance of any 2 points		Add text
	Measuring a rectangular (width,height, circumference&area)		Distance of 2 lines(Length)
	Measuring an ellipse(Long-axis radius, short-axis radius, circumference&area)		3 points circle (radius, circumference&area)
	Measuring a radius circle(radius, circumference&area)		Edge detection
	Measuring a diameter circle (diameter, circumference&area)		Brightness increase/decrease
	Measuring a 3 points circle(radius, circumference&area)		Flip horizontal
	Measuring a 3 points arc (radius,degree, circumference&area)		Sharpen
	Measuring a polygon (circumference&area)		Smooth
	Measuring fold-lines (length)		Take a picture
	Measuring a 4 points angle (degree)		Take a video

## \* Interface Definitions and Functions



### ① Main menu:

Here, users can open different devices or lead in pictures to observe or edit, do video setting or save setting, choose which windows to show or hide etc.

### ② Toolbar:

Here are the tools that would be useful for users to do measuring and image analysis. Definition and function of different tools would be given in chapter "Icons definitions". Users can choose to hide or show this toolbar in "View→Toolbars and Docking Windows→Standard".

### ③ Picture Browser:

Here is where users can review all pictures they've captured. Users can also edit the picture by right clicking the picture and open it in the main operating window. Choose "View→Toolbars and Docking Windows→Picture browser" to show or hide this window.

### ④ Secondary operating window:

The image showing in this window always follows your cursor, and with a bigger magnification. With help of this window, the result of measuring can be much more precisely.

It belongs to window "Picture Browser".

### ⑤ Main operating window:

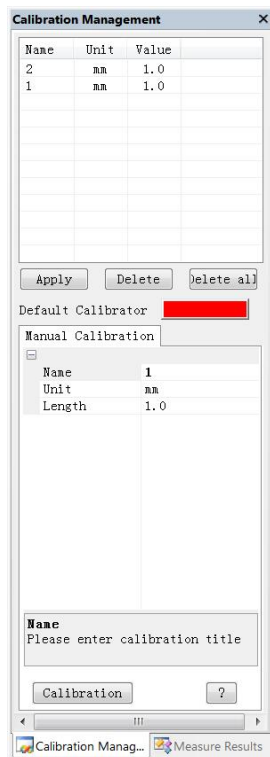
This windows shows the full view from the microscope. And it is also the place where users do measuring and image analysis.

## ⑥ Calibration Management and Measuring Results:

These two windows shows at the same place, users can switch at the bottom of this window.

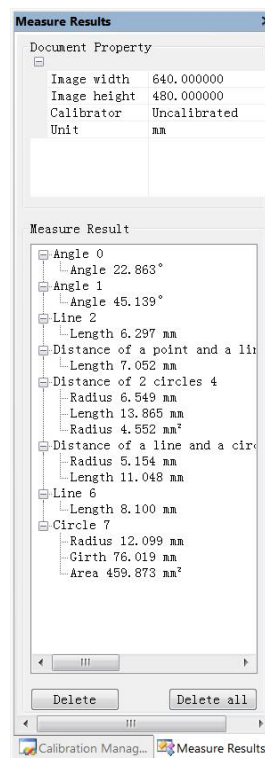


◆Calibration Management Shows the list of different calibrations. Users can apply or delete the items.



◆Measure Results

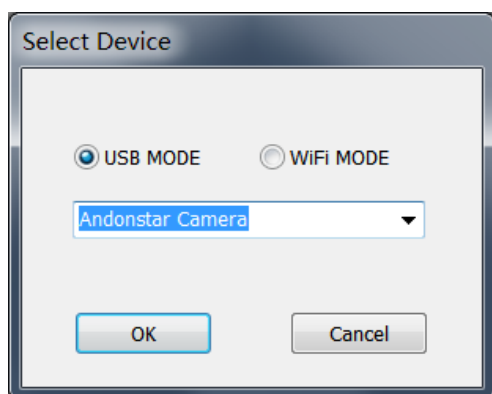
Shows the size of the whole view. Users can change it in “File Videosetting→Video capture pin→(S)”.




## Software Operation

### \* Start

1. Open the software “Andonstar”.
2. Click “File”→ “Open”→ “Open Device”→ “USB MODE” → “Andonstar Camera”.

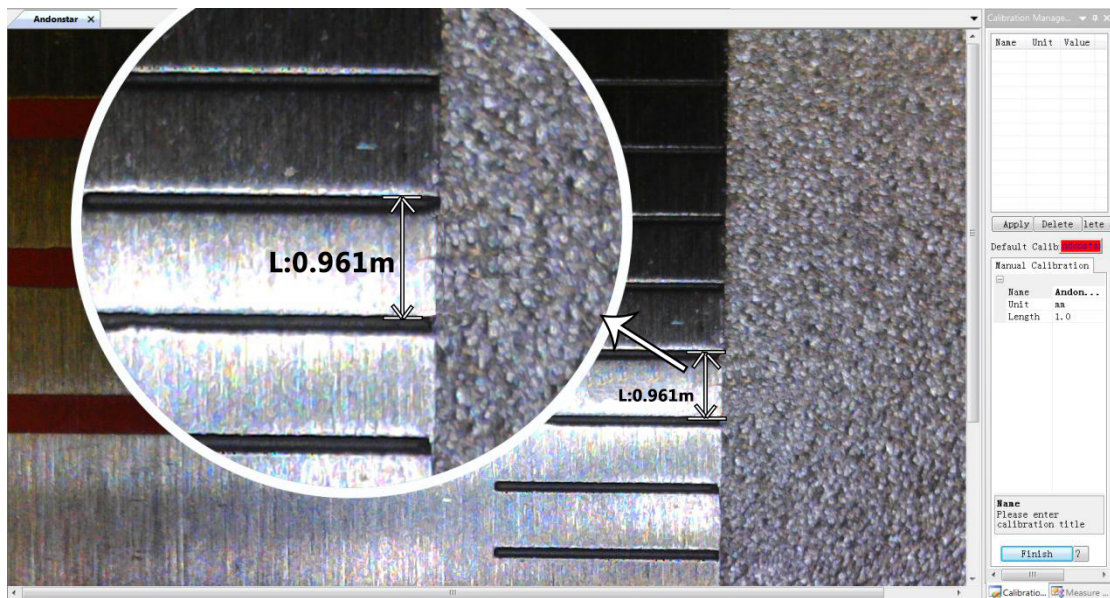


### \* Calibration

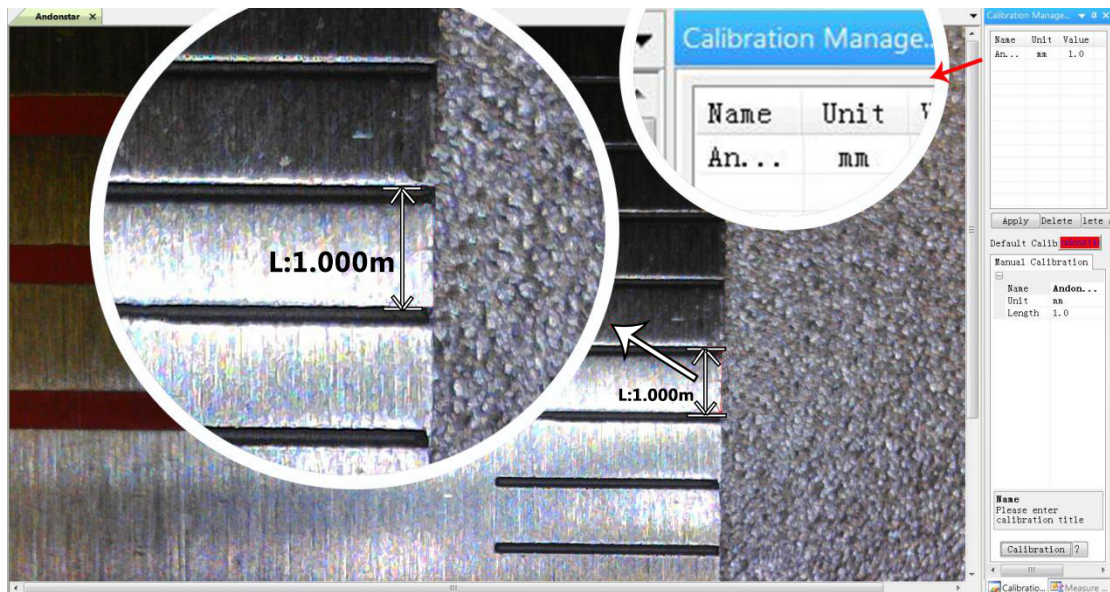
1. Put a ruler under the digital microscope, adjust the focus wheel and the height of the stand, to get the best clearance. (during the rest of the process, do not change the object distance any more).
2. In the “Calibration management” set the name and unit length of the new calibration(refer the picture on the right). Then, click “Calibration”, meanwhile, the “” in the toolbar should have been chosen automatically. If not, please choose it yourselves.
3. Move the cursor to the main operation window, draw a line (the length is the unit length which has been set in step 2) with help of the ruler. After these, click the “Finish” button in the bottom of the “Calibration Management” window.
4. Check. The length of the line you draw in step 3 should become as the unit length. The name of the new calibration should have showed in the list of calibrations.







3)



4)

### \* Measuring

1. Choose the tool you need to do measuring in the toolbar.
2. Click dots or draw lines that you need to measure in the main operating window.
3. Place the results of measuring in a proper place around the target.


### \* Image Effects

Edge detection, Inverse color, Flip horizontal, Relief, Sharpen, Smooth.


1. Choose the special effect you need in the toolbar.
2. In the main operating window, long press the Left to draw a rectangle which can covers the whole target area, loose the Left, get the special effect result.
3. Click Left again, end the special effect.

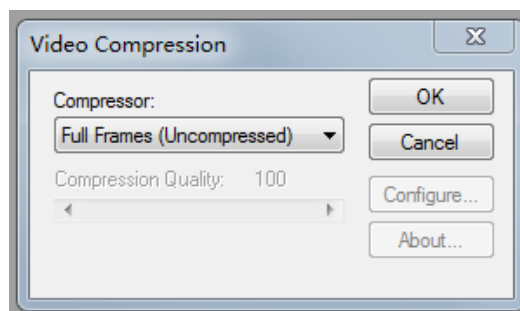
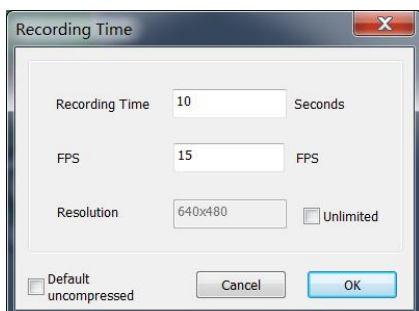
If you want to use “Flip horizontal”, draw a random rectangle in the view, and the whole view would be flipped. Click Left again, end the special effect.

### \* Capture Image

1. Click “” to capture.
2. The result of capture can be checked and deleted in the “Picture browser” window.
3. Check and change the save path: “File→Save Setting→Path”.

### \* Record Video

1. Choose the size of the view as 640\*480 in “File→Video Setting→Video Capture Pin→Output size(S)”
2. Click “”, set some other things and start to record.



3. On the top left corner there shows “recording” and a timer. It means it’s recording.
4. Check and change the save path: “File→Save Setting→Path”.



## **FAQ**

1. Why there says “missing files” during installation or initiator procedure?

Please confirm that Microsoft .NET Framework 4.0 and Microsoft Visual C++ 2010 Runtimes are installed

2. The software works fine, but the software can not recognize the microscope.

First, please make sure that you connect the camera and the PC properly and choose “PC camera” on the 5 inch monitor. Second, if there is still no image, please check the “Device Manager” of your PC, delete the “USB Camera” in the “Imaging devices” and rescan . Let the system identifies again. After all, in the “Imaging devices” there will show another name, which is “Andonstar Camera”. Then restart the software.

3. Why there is a measurement error?

First, if you want to get a more precise result, you need to use a more precise calibration. Second, during the whole process, make sure the magnification is always the same as the one when you set the calibration. Since the camera is continuously magnifying, you’d better keep the same object distance also.

## Thanks

Thank all of you for supporting our products. We hope you enjoy our products, and would be glad if they can even just slightly make your life better. If you have any question, or any advice and feedbacks, feel free to contact us: [support@andonstar.com](mailto:support@andonstar.com) We'd like to provide the best service to you. Our official website is [www.andonstar.com](http://www.andonstar.com). We reserve all the right for the final explanation.

Warranty Card		
User's name:	Address:	
Phone number:	Post code:	email:
Model name:	Purchase date:	
Fault feedback:		
Date:	Fault:	
Notice:		
Our warranty does not cover:		
1	If users can not provide the purchase proof or the Warranty.	
2	If users use it in an improper environment, such as incompatible power supply, high temperature environment etc.	
3	If the fault caused by accident, oversight, misoperation or natural disasters etc.	
4	If the fault caused by people who are not belong to authorized organizations of our company during repacking, repair, dismantle, Or if users repack, repair or dismantle the device not following our advice.	
5	Out of warranty period.	