

HDMI Industrial Camera

User Manual

HY-5099 Industrial Camera V1.1 (English Version)



Basic Data

- 1.Effective Pixels: SONY IMX CMOS 1/2.3 4K SENSOR
- 2.Resolution: 4K/2K/1080P 1080P (USB)
- 3.Sensor Size: 1/2.3inch
- 4.Pixel Size: 1.55 × 1.55μm
- 5.Image Resolution: 4608 × 3456 (16MP)
- 6.Image Format: JPEG
- 7.Lens Fype: C / CS
- 8.Frame Fate: 3840×2160@30FPS(4K); 1080P 120@FPS; 720P 240@FPS
- 9.Output: HDMI/USB
- 10.Storage: TF Card, Max 128G
- 11.PC Support: Windows XP/7/8/10 , PC Software withMeasuring Function
- 12.Image Scaling: 7-Fold zoom
- 13.Image Measurement: Support HAYEAR Measurement
- 14.Language: EN /FR /ES /Portugues /Deutsch /Italiano /CN/Pyckknn/ JP
- 15.Size: 63×62×58 mm

Security Instruction

1. When installing the equipment, please read the user manual carefully and follow the installation instruction, please kindly keep the manual for your reference.
2. The camera power voltage is AC100V—240V@50-60Hz, please kindly make sure the parameters of your power supply is in this range.
3. The standard setting of the power supply comes with the camera is 12V 1A, we recommend that you use the power adapter which comes together with the camera.
4. The camera should be stored under the temperature of 0℃ to 50℃, using with the humidity under 90%, prevent foreign object from entering the machine, do not spill liquid on the machine to prevent danger.
5. Prevent knock against and violent vibration, to prevent from water in the process of transportation, storage and installation.
6. Do not attempt to disassemble the camera, there are no user serviceable parts inside.
7. When clearing the camera's shell, please use dry soft cloth, if there is too much dirt, please use a neutral detergent to wipe gently.
8. If there is a gray shadow on the image, use the dust blower to blow off the dust on the optical filter, do not use the detergent.

Package Include

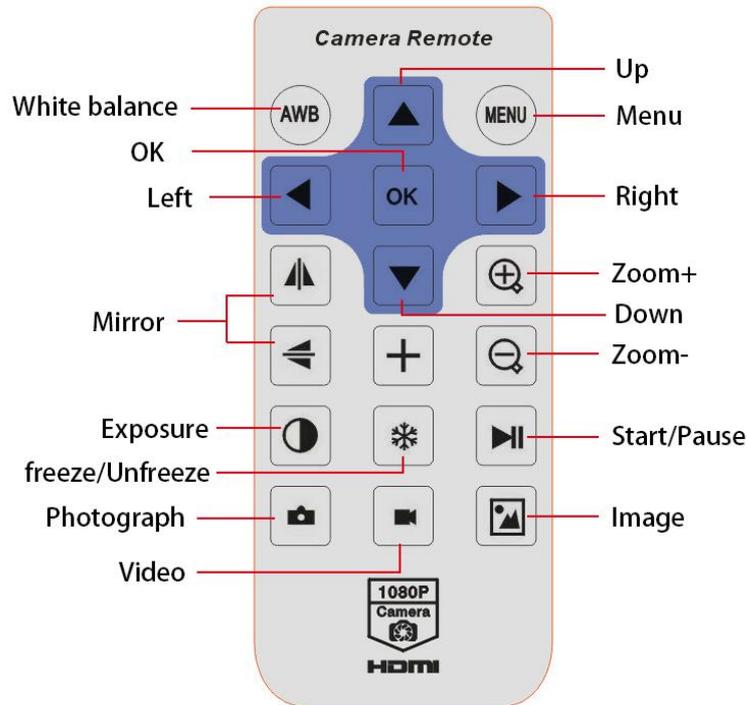
HY-5099 camera x 1	power supply x 1	Remote x 1
User manual x 1	Camera dust cover x 1	USB line x 1

Button Instruction



1. ON/OFF : ON / OFF
2. MENM : Menu
3. UP : Up / Zoom+
4. DOWN : Down / Zoom-
5. OK : OK(confirm)
6. AE/  : AE(switch mode)/Snap Shot / Video

Remote Control and Key Operation Instruction



Operation Instruction

Preparatory work

1: Twist the cover off and install the lens.

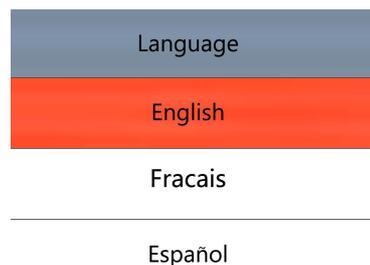
△ Noting: tear off the dust protection in front of the sensitive film before installing the lens, otherwise the image will be vague!!!

2: Inset the HDMI cable and DC power, when the LED light turns to blue the camera is on.

3: When connecting the camera with the computer, just plug the USB line is OK (no need to use the power supply since USB line can power as well)

Language select (take English as an example)

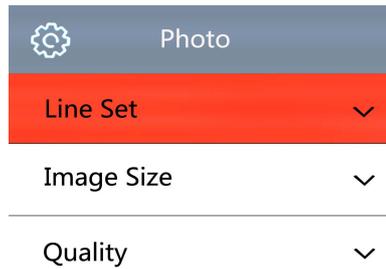
- Press on the MENU button to enter the main menu, press on the ↓ button to enter the language setting , again press on the ↓ button, when the English option highlight then press on the OK button to confirm.



Line setting

- Under the capture mode, press on the MENU button to enter the main menu, select the line setting and

press on the OK button to enter the line setting.

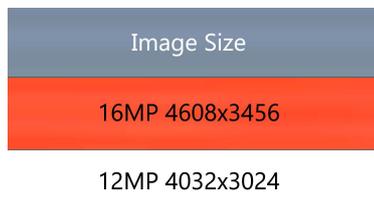


- Press on the OK button to select the option you need to set.
- When the option you need to set is highlight, press on the ↑ or the ↓ button to set it.



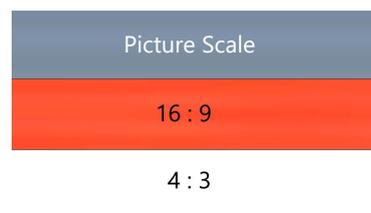
Image size setting

● Under the capture mode, press on the MENU button to enter the main menu, press on the ↓ button to select the image size setting and click OK button to enter, and then press on the ↑ or the ↓ button to set the image size you need.



Picture Scale setting

● Under the capture mode, press on the MENU button to enter the main menu, press on the ↓ button to select the Picture Scale setting and click OK button to enter, and then press on the ↑ or the ↓ button to set the Picture Scale you need.



Mirror Contrast setting

● Under the capture mode, press on the MENU button to enter the main menu, press on the ↓ button till the Mirror Contrast setting highlight then press on the OK button, and then press on the ↑ or the ↓ button to set what you need.



Horizontal

Vertical



Quality setting

● Under the capture mode, press on the MENU button to enter the main menu, press on the ↓ button till the quality setting highlight then press on the OK button, and then press on the ↑ or the ↓ button to set what you need.



Fine

Economy

Sharpness setting

● Under the capture mode, press on the MENU button to enter the main menu, press on the ↓ button till the sharpness setting highlight then press on the OK button to enter, and then press on the ↑ or the ↓ button to set what you need.



Strong

Soft

White balance setting

● Press on the MENU button to enter the main menu, press on the ↓ button till white balance setting highlight then press on the OK button to enter, and then press on the ↑ or the ↓ button to set.



Daylight

Cloudy

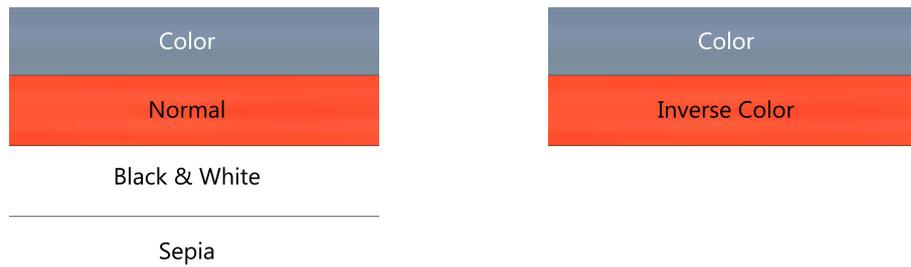


Fluorescent

Manual

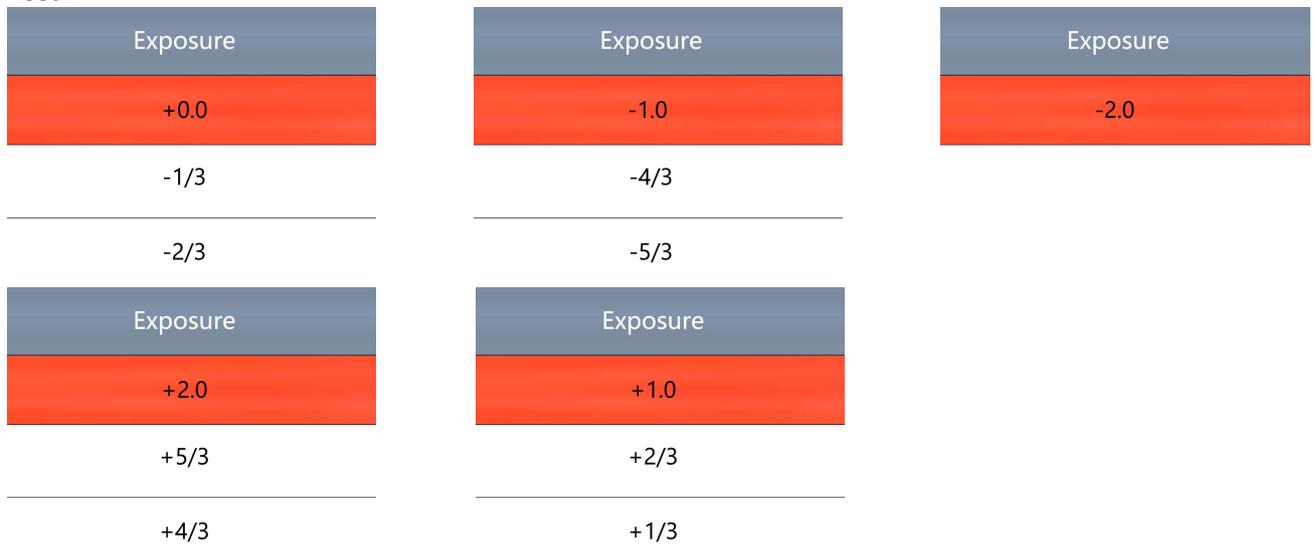
Colour setting

● Press on the MENU button to enter the main menu, press the ↓ button till the colour setting option highlight then press on the OK button to enter, and then press on the ↑ or the ↓ button to set the colour you need.



Exposure setting

- Press on the MENU button to enter the main menu, press on the ↓ button till the Exposure setting option highlight then press on the OK button to enter, and then press on the ↑ or the ↓ button to set the Exposure you need.

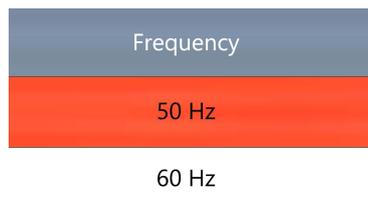


Date/Time

- Press on the MENU button to enter the main menu, press on the ↓ button till the date/time option highlight then press on the OK button to enter, when the option is blue you can press on the ↑ or the ↓ button to set, after finishing an option press on the OK button to save and then set the other option, after finishing all setting, press on the MENU button to save setting and return the to main menu.

Frequency setting

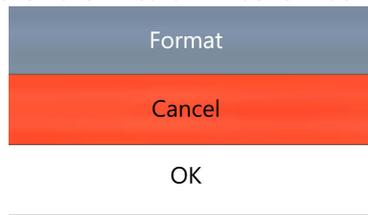
- Press on the MENU button to enter the main menu, press on the ↓ button till the frequency setting option highlight then press on the OK button to enter, and then press on the ↑ or the ↓ button to select 50Hz or 60Hz.



TF card format setting

- Press on the MENU button to enter the main menu, press on the ↓ button till the TF card format setting option highlight then press on the OK button to enter, and then press on the ↑ or the ↓ button to select

“cancel” or “OK” option, when select “cancel” and press on the OK button then it will return to main menu, when select “OK” and press on the OK button then the TF card will be format.



Noting: all data will be deleted when use format, please make sure there is a copy when use this function

System setting

- Press on the MENU button to enter the main menu, press on the ↓ button till the default setting option highlight then press on the OK button to enter, and then press on the ↑ or the ↓ button to select “cancel” or “OK” option, when select “cancel” and press on the OK button then it will return to main menu, when select “OK” and press on the OK button then it will restore to factory settings.



HDMI output

First, make sure the connected monitor is hd monitor, otherwise the resolution can not reach 1080P.

Second, power on the microscope and connect it to the hd monitor, make sure there is power on when using since there is no built-in battery.

Third, turn on the microscope, put the observation on the platform and adjust the working distance to get a clear image.

Under the HDMI output, the microscope can take picture, but can not record video.

FAQ

1: Why these is no image on the monitor?

Check if all the lines connected properly and power switch is turn on.

2: Why the image vague?

Please adjust the focal distance, lighting angle, check if there is dirt on the lens.

3: Why the remote control can not work?

There is no battery in the package, check if you has installed it.

4: Why there is no image on monitor when playback?

Maybe the video is not kept intact, or the video file is too large, and the system needs run time.

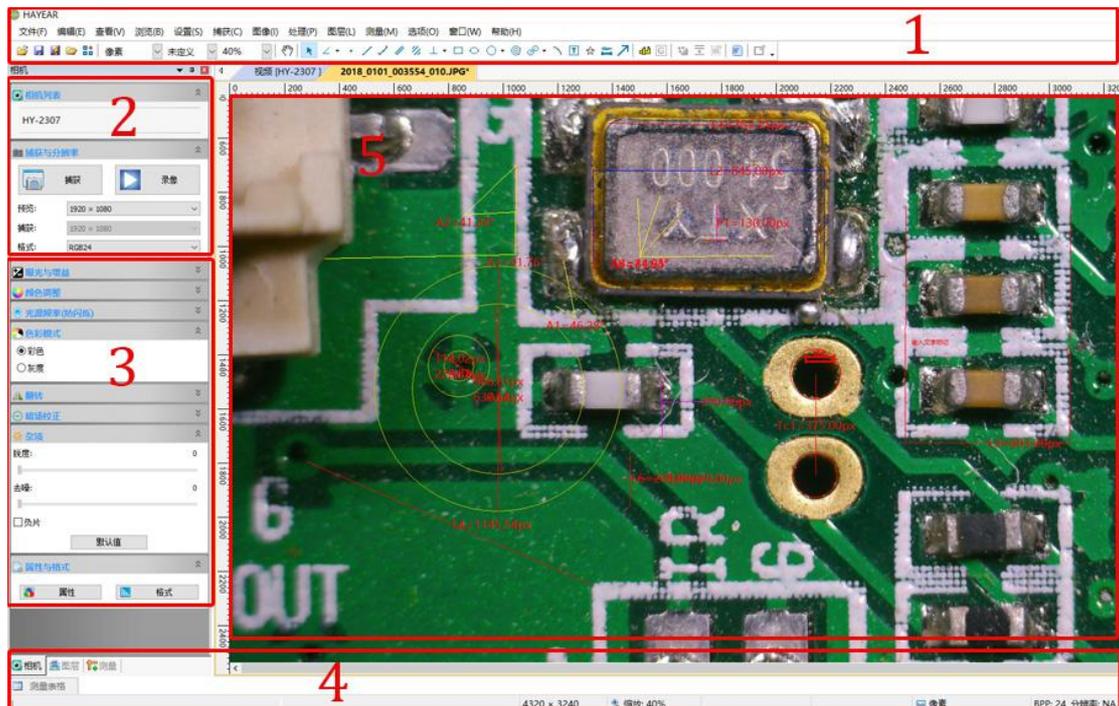
5: Why isn't the photograph clear?

Please check whether the photo setting is the highest pixel.

6: Why it shows the TF card error?

First make sure it is a certified memory card, then format it and try again.

HDMI output HAYEAR User Manual



Overview

Hayear is an application for imaging a dynamic image processing , it has the following characteristics:

1. Support a variety of cameras, can switch at any time to use.
2. using GPU rendering for image previewing, support for live image display of high-resolution and high frame rates.
3. Support dynamic image measurement function.
4. The software interface is easy to operate.

User Interface

1. Toolbar: Take pictures/Recording video/Browse files.
2. Sidebar tab: Switching the rightmost control panels, currently provides camera control and measurement functions.
3. Control panel: Specific camera control and measurement operations.
4. Status bar: Display camera information, Change user interface view, Toggle measure result panel.
5. Main menu: Open setting dialog, show software information, etc.

Capture Images

You can capture pictures and videos:

1. Take a picture: Click “Snap” button to take a picture. Click the right arrow beside the “Snap” button to set picture file format and resolution.
2. Recording: Click “Record” button to start video recording, Click again to stop recording. When recording ,there will be an animation indicator over the image.
3. Browse: Click “Browse” button to open the folder where pictures and video stored.



Camera Control

	<p>Device Control:</p> <ul style="list-style-type: none"> ● Support different cameras, preview resolution and output format. ● The highest resolution is 1920x1080.
	<p>Exposure and Gain:</p> <p>If the connected camera can not support some functions such as brightness target value, then the corresponding parameter can not be set up</p>
	<p>White balance:</p> <p>If the connected camera can not support some functions such as brightness target value, then the corresponding parameter can not be set up</p> <p>Red, Green and Blue gain:</p> <p>If the connected camera can not support some functions such as brightness target value, then the corresponding parameter can not be set up</p>
	<p>Normal camera parameter adjustment.</p>
	<ul style="list-style-type: none"> ● Reset camera parameters. ● Open camera property dialog, generally supported by the DirectShow cameras

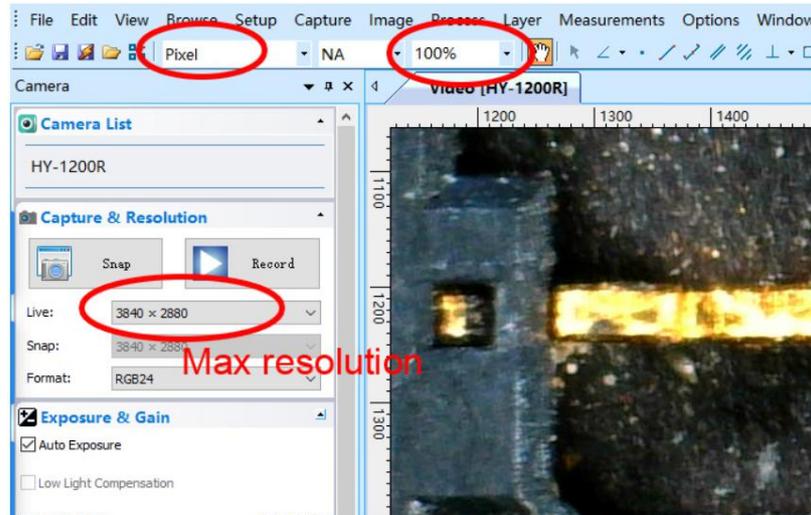
Measurement

Icon	Function	Description
	Move	Move or adjust the measurement tool.
	Point	Setup > Video Overlay > Marker
	Line	Measure length of a line.
	Vertical	
	Rectangle	Measure perimeter and acreage of a rectangle.
	Polygon	Measure perimeter and acreage of a polygon.
	Circle	Measure a circle, the circle is determined by center point and radius.
	Two Points Circle	Measure a circle, the circle is determined by two points.
	Three Points Circle	Measure a circle, the circle is determined by three points.
	Arc	Measure length of arc.
	Angle	Measure angle.
	Calibrate	
	Scale Bar	
	Text	Delete all measurement tools.
	Stitch	

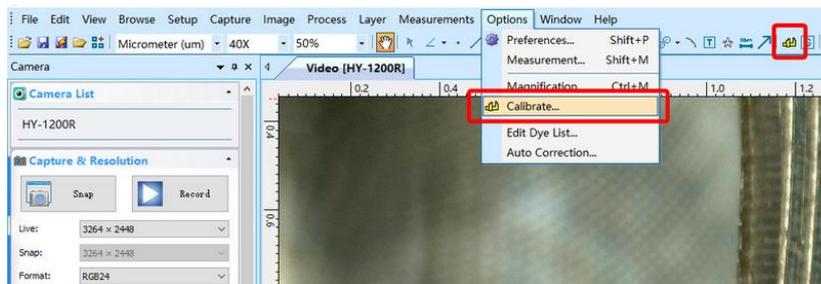
How to calibration?

The way to calibration

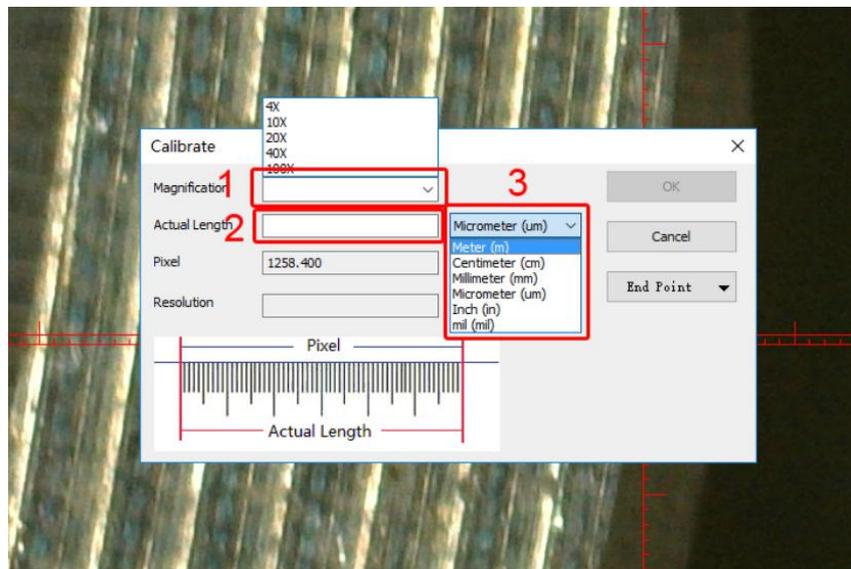
1. Calibration: select pixel, 100%, max resolution



2. Click on the “option” to select “calibration”



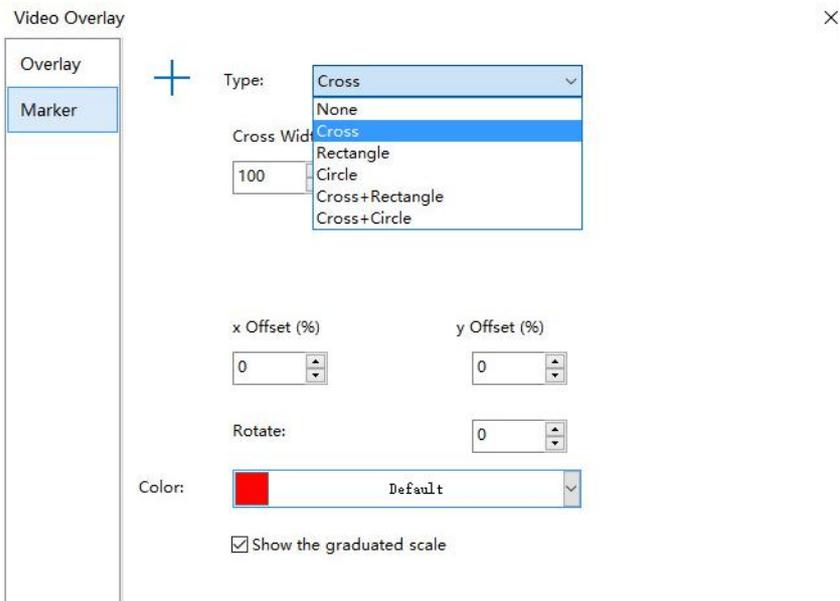
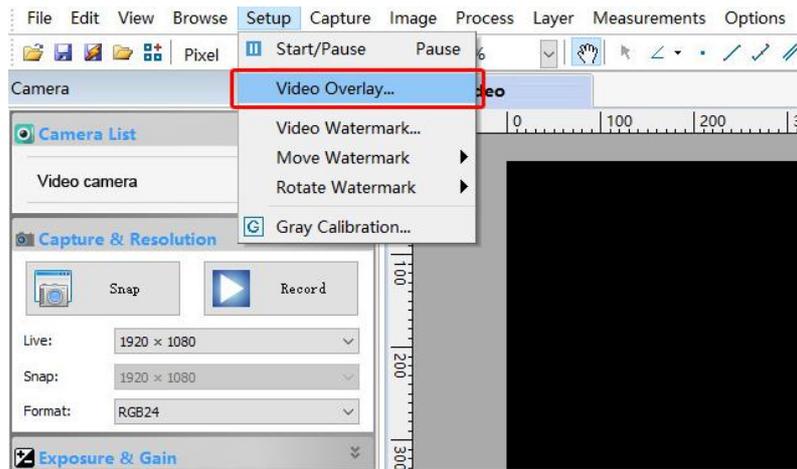
3. Calibration: Magnification, Actual Length, Meter



4. After select “ calibration”, choose the unit and multiplying power you need, then you can calibrate.

How to set cross hair on measure software?

1. First step: select setup
2. Second step: select video overlay
3. Third step: select the Cross in Type



Software Installation

Download the software:
<http://www.hayear.com>

The “HAYEAR” can support only the Windows system, the users can also download by the link on the official website.

The operating systems:

Windows 7、Windows8、Windows10、Linux

The operating environment:

Microsoft.Net Framework 4.0 , Microsoft Visual C++ 2010

If there is no the two complete runtime library, there will be an error when installing the software.

If you are unable to enter the link or download the files, please contact with the customer service.

After downloading successfully, open the zipped files and install the software.

Thanks

Thanks 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: info@hayear.com . We'd like to provide the best service to you. Our official website is <http://www.hayear.com/>. We reserve all the right for the final explanation.

Warranty		
User's name :	Address :	
Phone number :	Post code :	email :
Model name :	Purchase date :	
Fault feedback :		
Date :	Fault :	
Notice :		
Our warranty doesn't 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.	

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