

# HAYEAR

## User Manual

HY-5299L Industrial Camera V1.5 ( English Version )



## Features

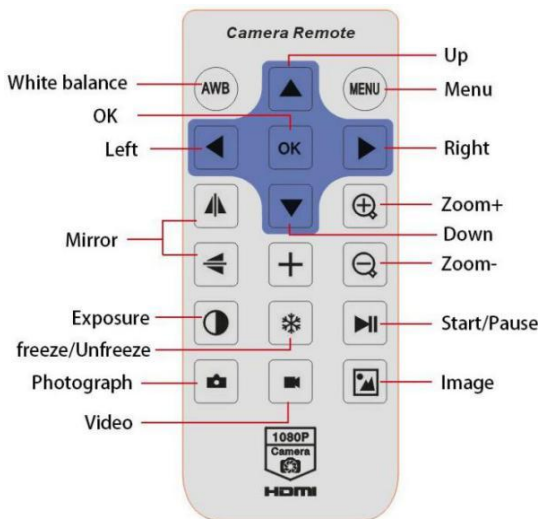
Effective Pixels	SONY CMOS 1/2.33 IMX 4K SENSOR
Resolution	4K/2K/1080P 1080P (USB)
Sensor Size	1/2.33inch
Pixel Size	1.55 × 1.55μm
Image Resolution	4032 × 3024 (12MP)
Frame rate	30@FPS (4K)
Image Format	JPEG
WaveLength[nm]	400nm~700nm
Frame Fate	3840×2160@30FPS(4K); 1080P 120@FPS; 720P 240@FPS
Lens Fype	C / CS
Timing Photo/Record	Support Timing Photo/Record
Storage	TF Card, Max 256G
PC Support	<b>Windows / Mac / Linux</b> System PC Software with Measuring Function
Image Measurement	Support HAYEAR Measurement
Language	EN /FR /ES /Portugues /Deutsch /Italiano /CN/Pyccknn/ JP
Output Interface	HDMI/USB Standard usb2.0 interface (Type B)
Image Scaling	7-Fold zoom
Transverse and vertical line	Support multi-color, 5 pcs of transverse lines/vertical lines, movable Different color,5 horizontal line , 5 vertical line,any positions
Encode	H.264 /H.265 (High Profile)
Video format	MP4
Input Voltage	DC 12V 1A
Exposure	Auto/Manual, value adjustable
Size	75×60×39mm(LxWxH)

## Interface Introduction



- ① Power interface
- ② OSD Menu
- ③ Development Only
- ④ Power LED
- ⑤ USB Output
- ⑥ TF card
- ⑦ HDMI Output
- ⑧ M3 Screw thread

## Remote Control and Key Operation Instruction



## Preparatory work

- 1: Twist the cover and install the lens.
- 2: Inset the HDMI cable and DC power, when the LED light turn on yellow the camera is on.
- 3: When connect the camera with the computer, just plug the USB line is OK ( no need to use the power supply)

## Menu operation instructions

### 1: Line setting

Cross hair: click on the freeze/capture button to open or close the hair line.

Line: cycle from 1-10-OFF, click on the freeze/capture button to switch the numeric value

Direction: click on the freeze/capture button to switch horizontal/vertical/off

Position: click on the freeze/capture button to adjust, long press can rapidly increase/decrease, the numeric value smaller, the horizontal line more upper(if you choose vertical line then it will be more left), the numeric value larger then the horizontal line more lower(if you choose the vertical line then it will be more right)

Color: click on the freeze/capture button to switch and select the line color, there are transparency, black, white, red, green, blue and orange to be chosen.

Weight: click on the freeze/capture button to adjust the line weight.



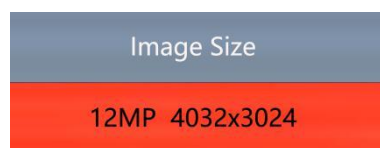
### 2: Video resolution

Click on the ↑ or ↓ button to switch selection, click on OK to save your option.



### 3: Image size

click on the ↑ or ↓ button to switch selection, click on OK to save your option, 4K Camera only 12MP



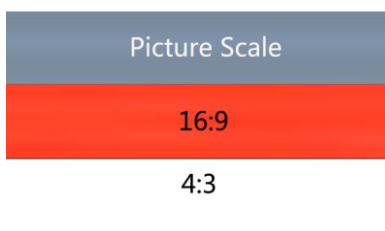
#### 4: Timing Photo

Click on the ↑ or ↓ button to select timing photo , click on Off or On to save your option.



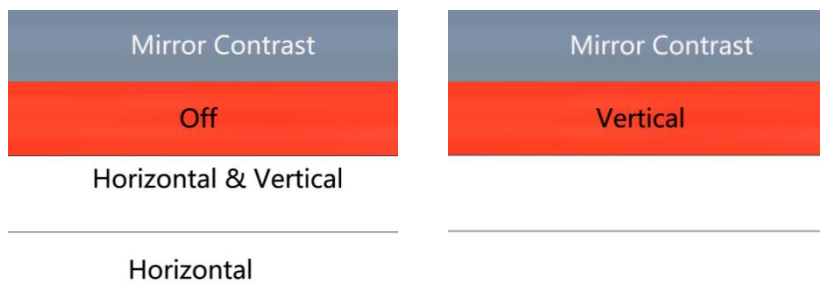
#### 5: Picture scale

Click on the ↑ or ↓ button to select 16:9 or 4:3, click on OK to save your option.



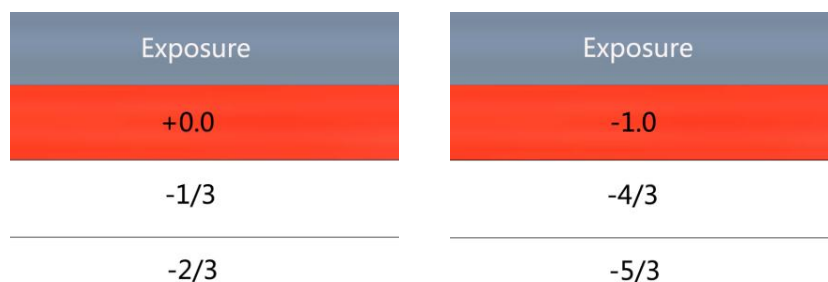
#### 6: Mirror contrast

Click on the ↑ or ↓ button to switch selection, click on OK to save your option.



#### 7: Exposure

Click on the ↑ or ↓ button to switch selection, click on OK to save your option, the exposure value can be only adjusted under auto exposure.



#### 8: White balance

Click on the ↑ or ↓ button to switch selection, click on OK to save your option.

White Balance	White Balance	Manual White Balance
Auto	Tungsten	Manual <input checked="" type="checkbox"/> On
Daylight	Fluorescent	RED 256
Cloudy	Manual	GREEN 160
		BLUE 256

### 9: Color

Click on the ↑ or ↓ button to switch selection, click on OK to save your option.

Color	Color
Multicolor	Inverse Color
Black & White	
Sepia	

### 10: Language

Click on the ↑ or ↓ button to switch selection, click on OK to save your option.

Language	Language
English	Portugues
Francais	Deutsch
Espanol	Italiano

Language	Language
简体中文	日本語
繁體中文	
Русский	

### 11: Frequency

Click on the ↑ or ↓ button to select 50Hz or 60Hz, click on OK to save your option.

Frequency
50Hz
60Hz

## 12: Date/time

After finishing setting click on OK button to save and jumps to next setting, after finishing all setting click on OK button to save, then click on the MENU button to return back to main menu.

Date/Time
2020 / 01 / 01
00 : 00 : 00
YY / MM / DD

## 13: Format

Choose cancel and click OK it will return to main menu, choose confirm and click OK it will be format.

All data will be deleted after format, make sure there is a copy when use this option.

Format
Cancel
OK

## 14: Default setting

Choose cancel and click on OK button it will return to main menu, choose OK and click on OK it will restore factory setting

Default Setting
Cancel
OK

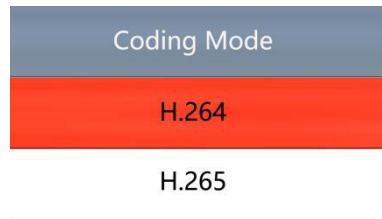
## 15: Version

Model: HY-5299

Version	
Model:	HY-5299
Version:	V1.06_L
Date:	2020/01/01
Copyright:	HAYEAR

## 16: Coding mode

Click on the ↑ or ↓ button to select H.264 or H.265, click on OK to save your option.



### **17: Electronic amplification and reduction**

Press the "freeze" button the image will electronic amplification, the multiple will be showed on the left of the image, the maximum multiple up to 5 times and image will be vague when magnification.

After electronic amplification, press on the "capture" button the image will reduction, the multiple will be shown on the left of the image and it can reduce to the original size

### **18: Switch photo and video mode**

The system default is photo mode, press the "OK" button to take photo.

Press the "MODEL" button to switch video mode, press the "OK" button to start capture and press "OK" button again to stop recording.

## **HDMI output**

First, make sure the connected monitor is UHD 4K monitor, otherwise the resolution can not reach 4K 3480x2160P.

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.



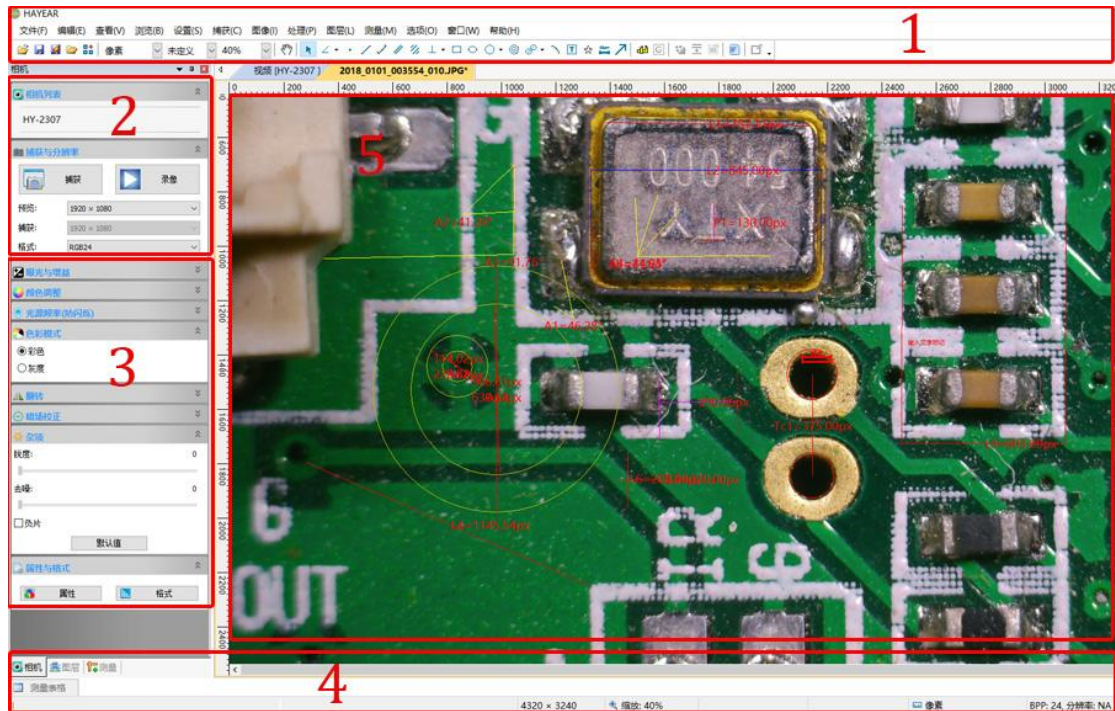
5: Why isn't the photograph clear?

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.

# USB output S-EYE User Manual



## Overview

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

## 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:

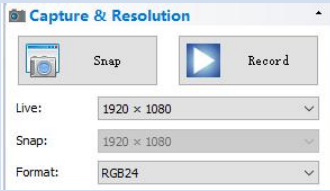

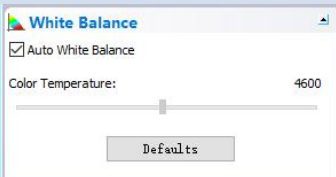
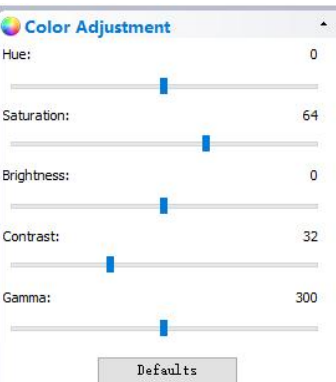
1. Take a picture: Click "Snap" button to take a picture. Click the right arrow beside the

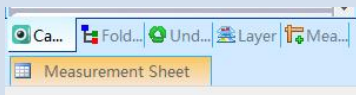
“Snap” button to set picture file format and resolution.

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.


















	<p>Device Control:</p> <ul style="list-style-type: none"> <li>● Support different cameras, preview resolution and output format.</li> <li>● The highest resolution is 1920x1080.</li> </ul>
	<p>Exposure and Gain: 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: 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: 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>

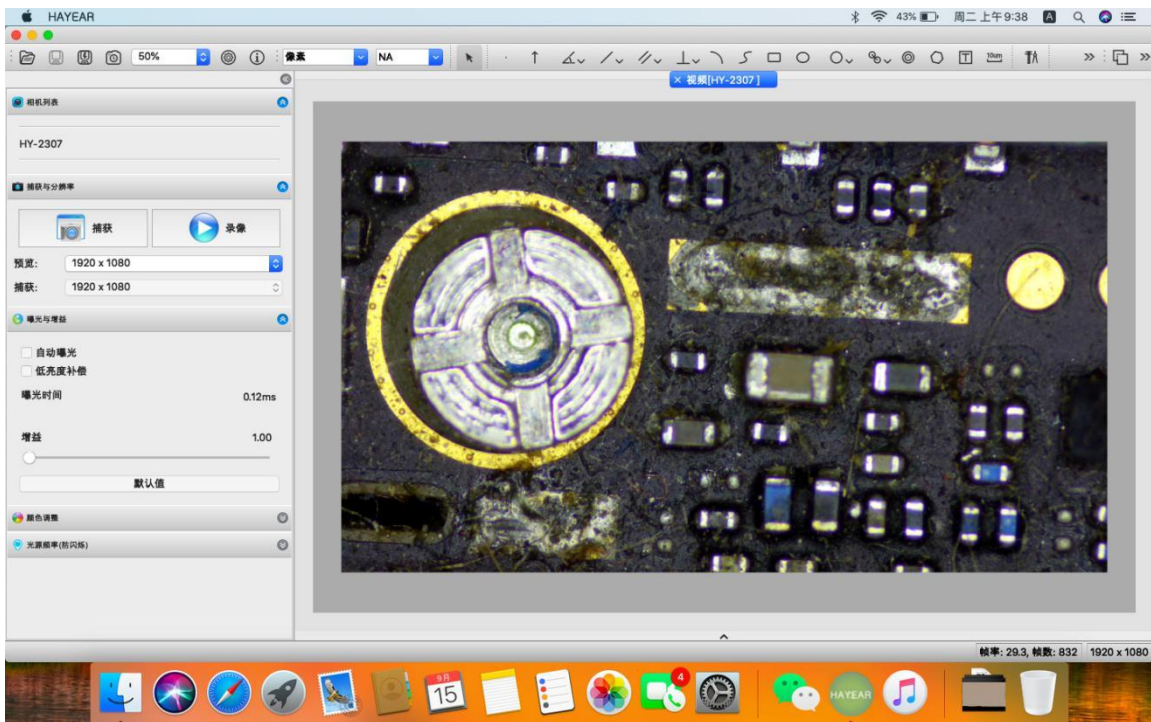
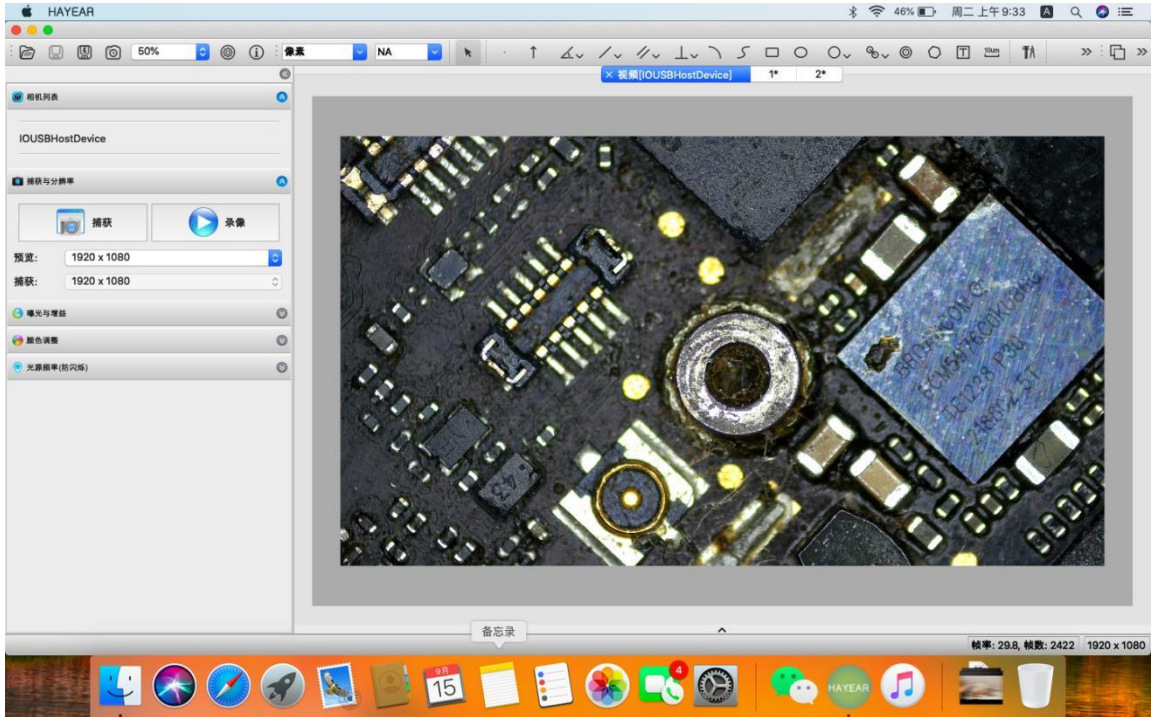


- Reset camera parameters.
- Open camera property dialog, generally supported by the DirectShow cameras

### Camera Control 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	

# MAC System



# Installation Guide



Mount the pillar



Tighten the screw after mounting the pillar



Install the fixed ring



Install the adjustment mechanism



Install the adjustment mechanism



Install the objective lens



Install the universal rod fixed cube  
(Tighten the fixed ring to prevent it from sliding down)



Tighten the screw of universal rod fixed cube



Install the universal rod



Install the focus holder (up)



Install the focus holder (down)



Install the objective lens



Mount the HDMI Industrial camera



Install light source



Assembled effect

## 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, please feel free to contact us: [info@hayear.com](mailto: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.