

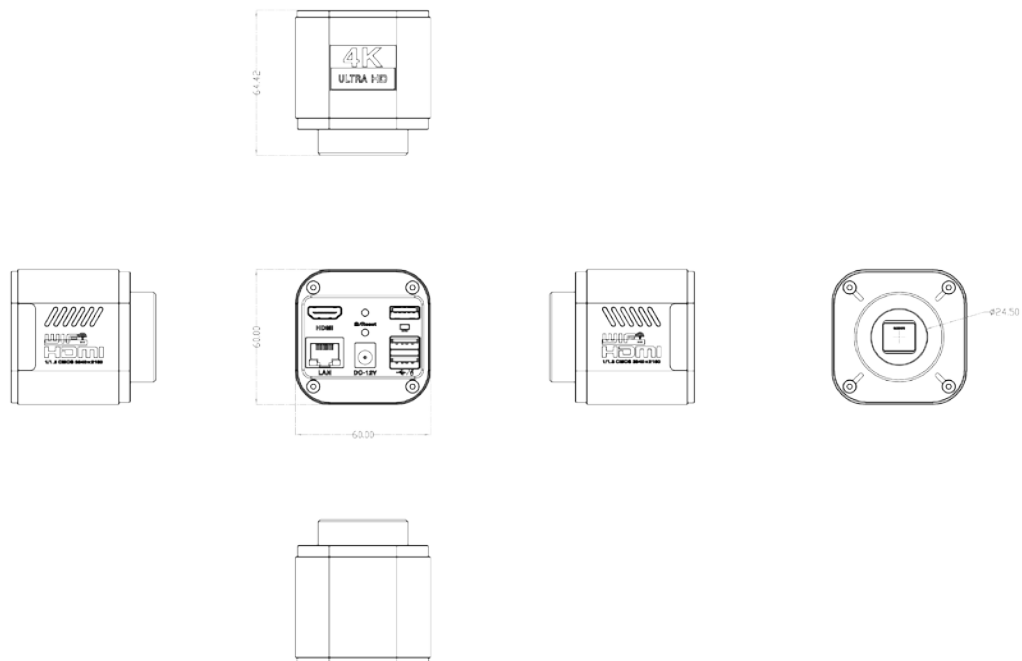
BHDC-5605 4K WIFI6



Feature

BHDC-5605 is a multi-function, multi-interface camera. It supports the functions of conventional HDMI interface camera (mouse operation to take pictures, videos, measurements, etc.), and also has 4K USB camera functions, as well as increasing the network port transmission and WIFI6 wireless video transmission functions, which can meet the different needs of multiple areas of use!

1.1 Camera Structure Diagram



1.2 Specification

BHDC-5605			
Chips	ARM dual core	Sensor size	1/1.8"
System	LINUX	Pixel size	2.0um*2.0um
kernel structure	Dual core ARM Cortex-A7	Resolution	3840*2160
Master speed	1.5GHz	Frame rate	30fps
Working Temperature	0-70 degree	Video output	HDMI、uvc、wifi6、网口
Size	60*60*64.42mm	Lens mount	C mount
Weight	0.2kg	Power input	DC 12V

Camera functions

2.1 Installation



2.1.1 Remove the dust cover and protective film underneath the camera and attach it to the corresponding connector.

2.1.2 Insert a mouse into the USB2.0 port. If you need to insert devices with multiple USB ports, you can insert a USB HUB device into the USB port, and then insert a mouse and other devices into the splitter.

2.1.3 Connect the camera's HDMI port and monitor with an HDMI cable

2.1.4 Insert the power cord into the DC-12V power socket. After connecting the DC-12V power

supply, the product will automatically power on, the LED will light up red first and then blue, the

camera will run and wait for the monitor to display the screen

2.1.5 USB3.0 port is UVC interface (connect to computer with USB cable, USB2.0 interface is invalid in this state)

2.1.6 LAN port can be connected to the computer through a network cable to transmit video.

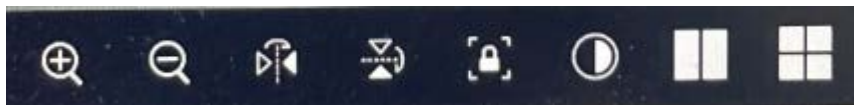
2.2 Homepage

The user moves the mouse directly to the bottom of the screen to pop up the main interface after the monitor is displayed (as shown in the figure)





2. 2. 1 From left to right: photo, video, preview, measurement; Click each button to realize their respective functions.



2. 2. 2 From left to right, they are: Zoom In, Zoom Out, Horizontal Mirror, Vertical Mirror, Freeze, Color Conversion, Two-screen Comparison, Four-screen Comparison; mouse, click each button to realize their respective functions.

Two-screen comparison: This function is to compare the picture from the external storage device with the real-time preview video.

Four-screen comparison: When you enter the 4-screen comparison, double-click any 1/4 preview box to realize the image freezing function, and double-click again to release the freezing function.



2. 2. 3 From left to right, they are: Crosshair, Grid, Line, Disc Scale, Dial Scale.

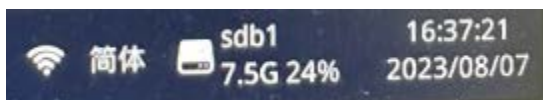
Crosshair: click left mouse button to open crosshair, then click left mouse button to close crosshair.

Grid Lines: Click left mouse button to open grid lines, and set the number of groups, quantity, line width, color and position of grid lines.

Line: Click the left mouse button to open the line, and you can set the group, number, line width, color and angle of the line.

Disc line: Click the left mouse button to open the circle, and you can set the group, number, line width, color and radius of the line.

Dial Line: Click left mouse button to open the dial, and you can set the group, number, line width, color and radius of the line.



2. 2. 4 From left to right, they are: WIFI setting, language switching, SD card selection, time setting.

WIFI: Click on this icon, and you can choose to connect the client or access point according to the actual situation (client is hotspot mode, access point is routing mode)

Language: Click to realize language switching, there are Simplified Chinese, Traditional Chinese, English, German, French, Japanese, Italian, Russian, a total of eight languages available.

Time: Time can be adjusted by moving the mouse to the corresponding position and scrolling the mouse wheel to set the corresponding time.

2. 3 Click  to enter parameter setting as follows:



Drag the corresponding progress bar under this menu to adjust the image parameters, if the auto exposure or auto white balance has deviation, you can manually adjust the target brightness and exposure time to adjust the image brightness. When the light source is stabilized, you can tap the one-button icon to realize an image white balance calibration action, after calibration, the camera will no longer do automatic white balance. When the light source is stabilized, you can tap the one-button icon to realize an image white balance calibration action. After calibration, the camera will no longer do auto white balance.

2. 3. 1 Click  to enter image adjustment menu as follows:



In this menu, you can drag the progress bar to adjust the parameters of the related

2. 3. 2 click  to enter the measurement properties settings, you can set the line color, line width, text color and text size.

2. 3. 3 Click  to check the storage and software version.

2. 3. 4 Click  to restart and close the device.

2.4 Measurement

Click  to enter measurement as follows:



: Drawing points: After clicking the button, click OK at any point in the interface to draw a point.

: Straight line: click the button, click on any point in the interface to determine the starting point, the second click to determine the distance between the starting point and the end point, measure the length of the straight line

: Crosshairs: click this button to draw crosshairs in the interface

: Parallel lines: click the button, click on any point in the interface to determine the starting point, the second click to determine the straight line, the third click to determine the position of the parallel straight line, measure the distance between the two parallel lines



: Folding line: After clicking this button, click on any point in the interface to confirm the starting point, and then click several times to confirm the length of the folding line



: Curve: click the button, click on any point in the interface to determine the starting point, where the mouse passes through the path is the length, the second click to determine the end point, measuring the length of the drawing line



: Vertical line: After clicking the button, click any point in the interface to determine the starting point, the second click to determine the straight line, the third click to determine the perpendicular distance from the straight line, and measure the length of the vertical straight line



: Rectangle: click the button, click any point in the interface to determine the position of the right angle, the second click to determine the perimeter of the rectangle, measure the length, width, perimeter and area of the rectangle



: Polygon: click the button, click any point in the interface to determine a corner, each click that is to increase a corner, the last click to coincide with the first click on the point, the measurement of polygon area



: Angle Measurement: After clicking the button, click any point in the interface to determine the starting point, the second click to determine the straight line, the third click to determine the straight line between the second point and measure the angle angle between the two straight lines.



: Arc: click the button, click any point in the interface to determine the starting point, the second click to determine the straight line, the third point to determine the straight line with the second point, after the three points of the arc size, measurement of the length of the arc, the radius and diameter of the arc



: Drawing a circle with radius: click the button, click any point in the interface to determine the center of the circle, the second click to determine the distance from the center of the circle, the measurements are displayed as the radius, diameter, area and circumference of the circle



: Drawing a circle with two points: after clicking the button, click any point in the interface to determine the point on the circumference of the circle, click again to determine the circle, the measurements are displayed as the radius, diameter, circumference and area of the circle



: Drawing a circle with three points: after clicking the button, click any three points in the interface to determine the radius, diameter, circumference and area of the circle



: Line-circle distance: click the button, click any point in the interface to determine the center of the circle, the second click to determine the circle, the third click to determine the distance between the line and the center of the circle, the measurement is displayed as the

distance from the center of the circle as well as the circle's radius, diameter, circumference and area



: Concentric circles: click the button, click any point in the interface to determine the center of the circle, the second click to determine the first circle, the third click to determine the second circle, the measurement is displayed as the radius, diameter, circumference and area of the two circles



: The distance between two circles: after clicking the button, click any point in the interface to determine the center of the circle, the second click to determine the first circle, the third click to confirm the center of the second circle, the fourth click to confirm the second circle, the measurement is displayed as the distance between the centers of the two circles. Measure the distance between the centers of the two circles



: Text annotation: click the button to bring up the selection box for character annotation



: Selected for deletion: After clicking this button, drag the mouse to select the area to be deleted and click the mouse again to delete it.



: Delete All: When clicking this button, all items on the screen will be deleted.



: Screenshot: Click this button to take a screenshot of the interface and save it to the storage space



: Export Form: Click this button to save the file to the storage space

2.5 Calibration

Before measuring, the image needs to be calibrated for the current microscope magnification and image preview resolution so that the measurement tool can measure accurately.

Note: Each magnification needs to be calibrated separately before measurement.

Press the micrometer into place on the carrier stage and adjust the image. It is recommended to use a micrometer with 10 μm per cell, 100 cells in total, and a full length of 1000 μm .

Note: The micrometer is not standard accessory and need to be purchased separately.

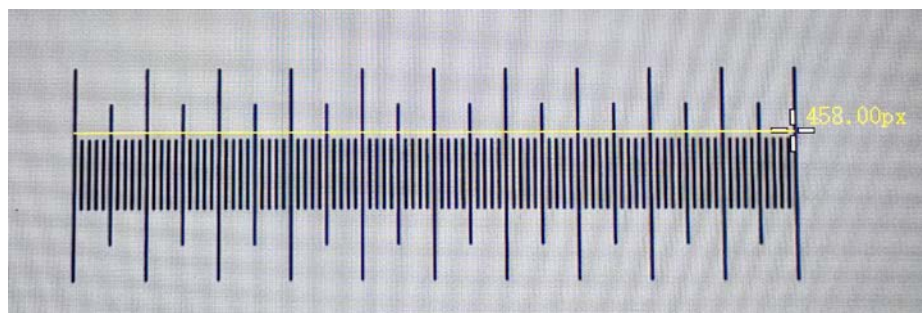
2. 5. 1 Click  to enter calibration edit menu as follows:



2.5.2 Click  to select the circle or line calibration icon, after selection, enter the preview window to draw a line or circle corresponding to the scale. According to the actual size of the scale, fill in the calibration name, length, unit, etc., and then finalize the calibration.



The following is the 4X objective lens observation of the selected calibration line. Click a point to confirm the starting point, move to the specified position and click again to confirm the end, according to the actual length of the corresponding position to fill in the scale of the actual size (note that the scale unit should be consistent)



2. 5. 3 Click  to delete calibration.

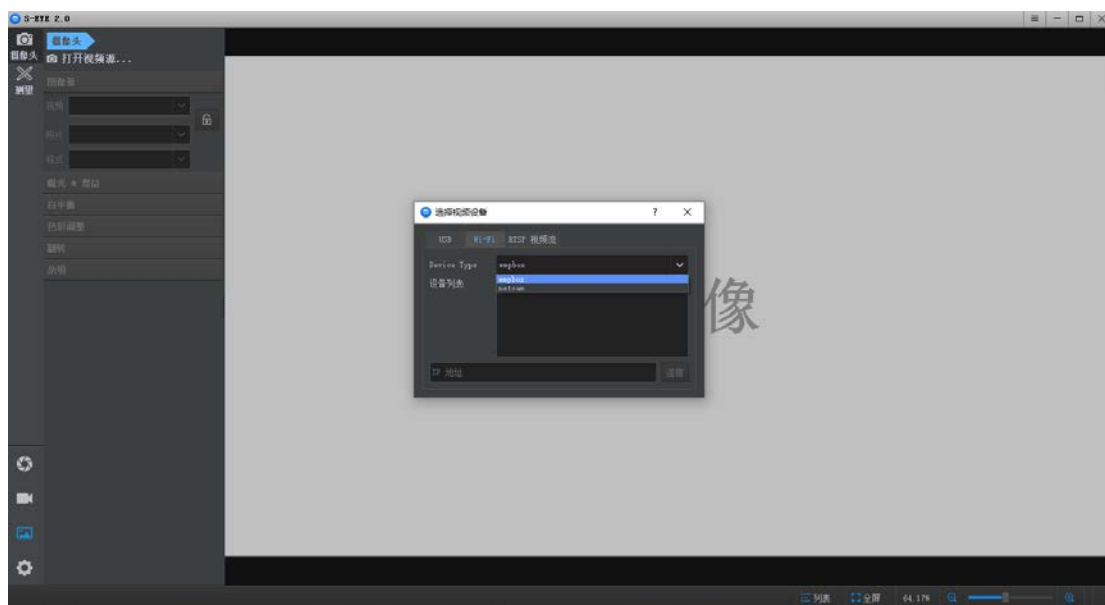
2.6 WIFI setting

2.6.1 Camera connects to WIFI (client, route mode)

2.6.1.1 Click the client in WIFI, search for the WIFI signal, connect to the WIFI signal (connected to the same router as the computer does). After connecting OK, a check mark will be displayed in front of the WIFI name as shown in the following figure:



2.6.1.2 Open the S-EYE2.0 software (view the software) as below:



2.6.1.3 Click "Open Video Source", then click the WIFI bar, select "netcam", and the IP address bar will display the IP address of the camera as below:



2.6.1.4 Select the camera's IP address and click the Connect button, then the S-EYE 2.0 software will display the image

2.6.2 Computer connects to camera WIFI (access point, hotspot mode)

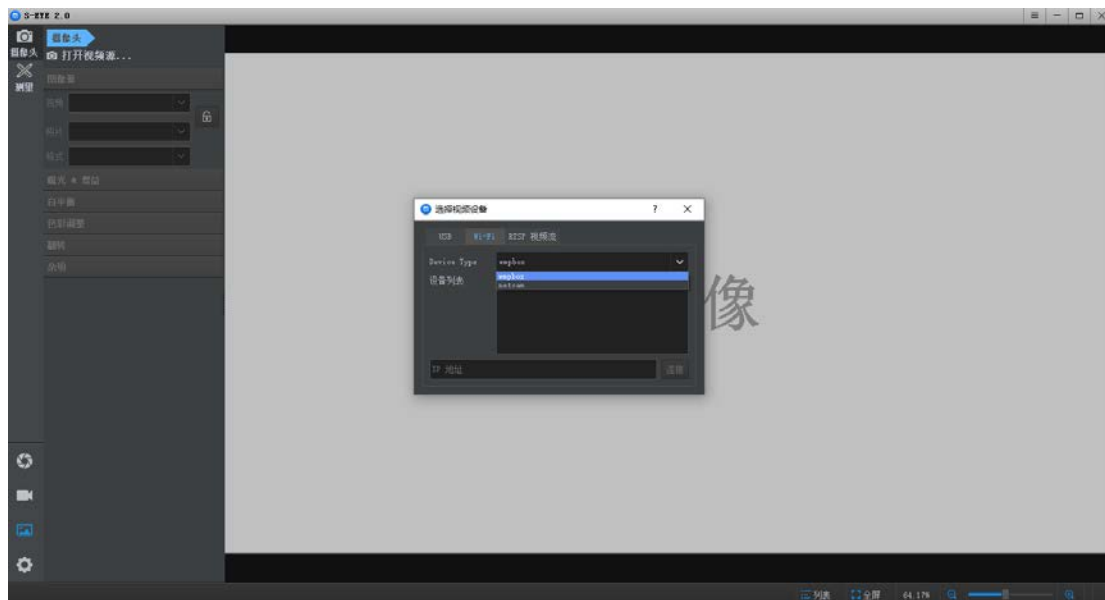
2.6.2.1 Click the access point in WIFI.

2.6.2.2 PC search for the camera's WIFI signal, the default WIFI name is: camera, password: 12345678

You can change the WIFI name and password by yourself

2.6.2.3 Connect the camera's WIFI.

2.6.2.4 Open the S-EYE 2.0 software on your computer, as follows



2.6.2.5 Click "Open Video Source", then click the WIFI bar, select "netcam", and the IP address bar will display the IP address of the camera as follows:



2.6.2.6 Click Connect button, and the S-EYE 2.0 software will display the image

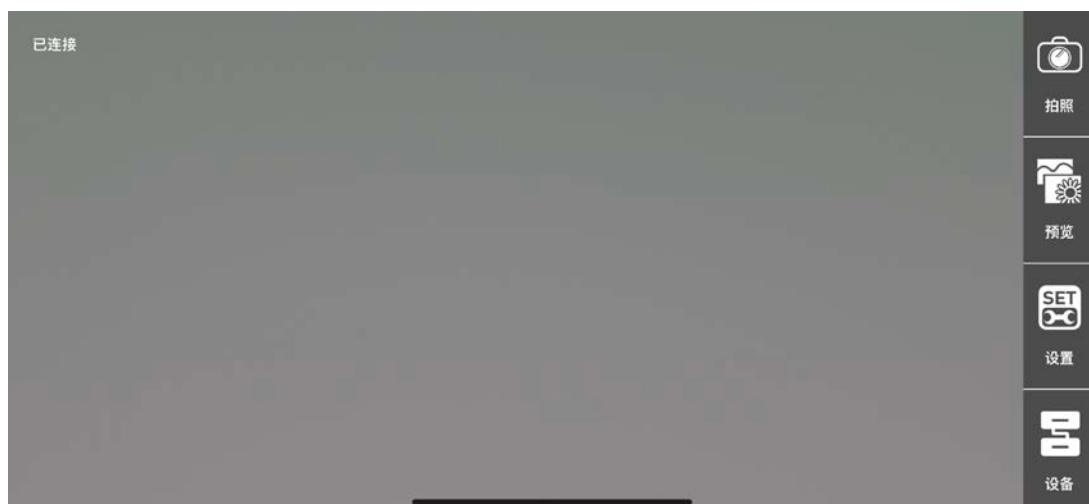
2.7 Connecting the Camera to a Mobile Device

2.7.1 The mobile device searches for the camera's WIFI signal, the default WIFI name is: camera, the password is: 12345678.

You can change the WIFI name and password by yourself

2.7.2 Connect the mobile device to the camera's WIFI

2.7.3 Open the S-EYE2.0 APP on your cell phone, and the image will be displayed on your cell phone as follows:



2.7.3.1 Short press the Photo button to grab the current resolution, long press the Photo to realize grabbing 4K photos and save them to the mobile device

2.7.3.2 Press the preview button to view the captured photos in the mobile device

2.7.3.3 Press the Setting button to display the following screen



2.7.3.4 Click brightness, contrast, saturation, exposure, color temperature to drag the scroll bar to realize the adjustment of the camera parameters.

2.7.3.5 Press the device button to bring up the screen (as below). In hotspot mode, you can directly select the local icon to preview the image by default, if there are multiple cameras in route mode, you can scan the QR code labeled on the camera to directly preview the corresponding camera by QR code mode.

