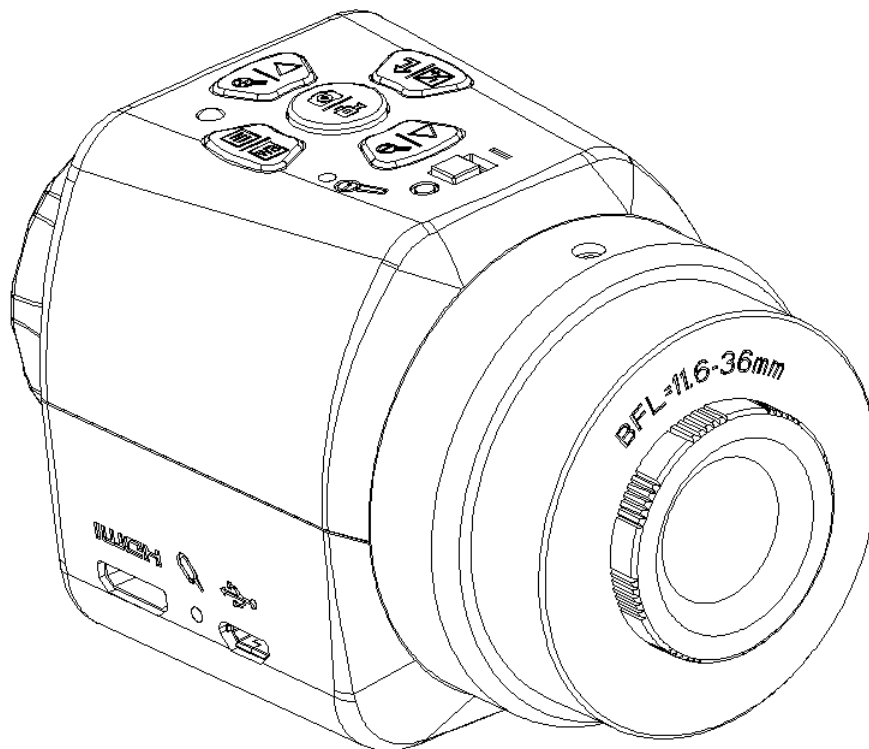

Camera Eyepiece User's Manual



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Chapter 1 Notes and Safety Requirements

1.1 Cautions and Notes

- (1) To avoid danger or damage incurred to the lens, do not touch the lens or sensor directly with your fingers.
- (2) To avoid failure or electric shock hazard and so on, do not disassemble or modify the internal structure of the device.
- (3) Do not plug in or unplug the USB port when hands are wet.
- (4) Do not use alcohol and other organic solvents to clean.
- (5) If the lens or sensor is dirty or damp, you should better use dry and non-linen fabric or professional lens tissue to wipe them. To avoid scratches on the surface, do not touch the lens with your fingers. Wipe the lens or sensor lightly.
- (6) The products are not specifically designed for an outdoor use. Do not expose it to outdoor environment without any protection. Excessive temperature and humidity will damage the lens. Please avoid using the product under the following environment: high temperature or high humidity environment, places with direct sunlight, dirt or vibration and places near heat source.
- (7) Please use and store in the following environment:
Operating temperature : 0°C~ 40°C
Storage temperature: -20°C~ 60°C
Operating Humidity: 30~80%RH
Storage Humidity: 10~60%RH
- (8) If any foreign matter, water or liquid enter into the device by accident, disconnect the USB cable immediately. Please send it to the maintenance center and do not use the hair dryer to dry it by yourself.
- (9) To prevent microscope from being tripped over or dropped, please put away the device's USB cables in use or standby.
- (10) To avoid electric shock by accident, please power off microscope before you move your computer or laptop.
- (11) The cleanliness of the device lens will directly affect clarity degree of contents from the computer screen during preview. Problems like various circles or spots on the screen may mostly be incurred by dirt on the lens. When cleaning, please use professional lens tissue or other professional detergent to clear the dirt on the lens.

Chapter 2 Software System Requirements

2.1 System Requirements for HDMI Work Mode

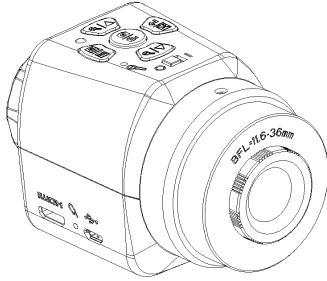
- Displayer: for best observation effects, 1080P or higher resolution with HDMIA interface, screen of 19 or higher inches with size proportion 16:9 should be used.

2.2 System Requirements under USB Work Mode

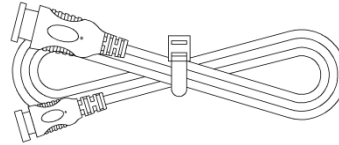
- Windows XP SP3、Windows 7(32 or 64 bits)、 Windows 8(32 or 64 bits)、 Windows 8.1 (32 or 64 bits) 、 Windows10 (32 or 64 bits) 。
- Dual core **1.6** GHz or higher CPU
- USB **2.0** high-speed interface or USB2.0 compatible interface
- DVD-ROM driver (only needed when installing software)
- 2G or more memory
- At least 4 GB available hard-disk space

Chapter 3 Packing List

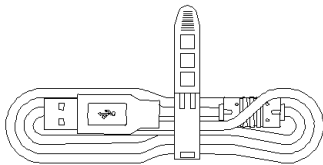
1、 Main body



2、 HDMI Line



3、 USB Line



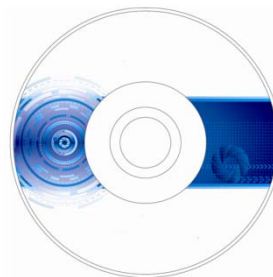
4、 Adapter



5、 Reset pin

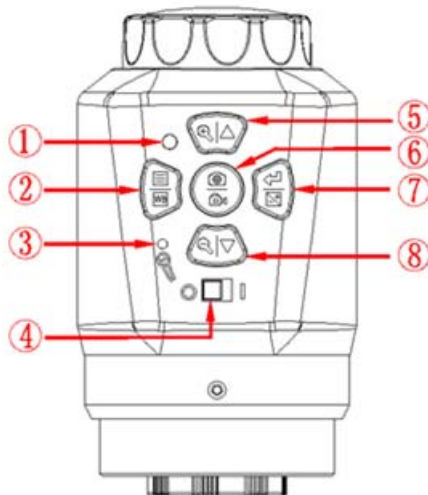


6、 Installation disk

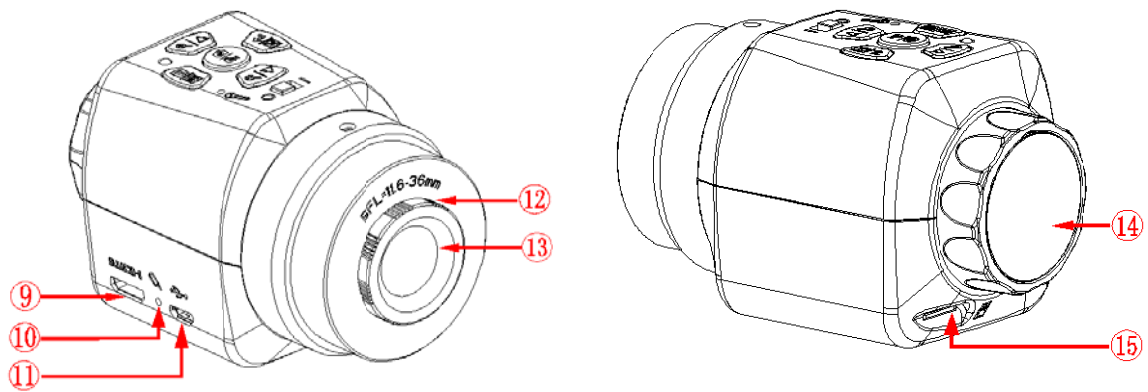


Chapter 4 Function Introduction of Each Part

4.1 Name and Function for Each Part of the Camera Eyepiece Body



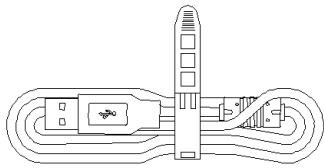
- ① Work Indicator : (1) Red and green light on when the device is power on but not been started up.
(2) Green light is on when the machine is started up.
(3) Green light flashes when recording is processed.
(4) Red and green light flashes when the card (including no card insertion, maximum card storage capacity and card recognition error) is wrong.
- ② Menu/WB button : Menu/automatic white balancing function.
- ③ Microphone : Record sound when video is recording.
- ④ Toggle switch for machine on/off : Machine on, machine off.
- ⑤ Zoom in/upward button : Zoom in/ upward/ freeze/ video fast backward.
- ⑥ Photograph/Record button : Record/ photograph/ backward play.
- ⑦ Mode/Yes/AE button : Mode/ yes/ automatic exposure function. Mode includes photograph, backward play and record.
- ⑧ Zoom out/downward button : Zoom out/ downward/ fast forward.



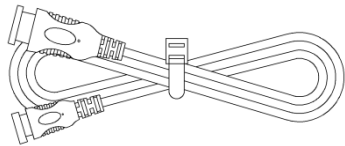
- ⑨ Micro USB port : The connection port of the USB line Micro.
- ⑩ Reset pole : Re-start the machine.
- ⑪ Mini HDMI port : The connection port of the HDMI line Mini port.
- ⑫ Port C thread : Port C thread can be directly connected with port C, CS port microscope and telescope. Connected with eyepiece (accessories), the port C thread can realize the connection with microscope with different ports. (thread specifications: 1 “X1/32”)
- ⑬ Dust cover : Dust cover is for covering dust and protecting chips.
- ⑭ Eye-height adjustment ring : It is for the adjustment of the eye height. The adjustment range of the back focal length is BFL=11.6-36mm.
- ⑮ TF card slot : TF card slot supports the maximum capacity of 64G. TF card doesn't support hot swap. If the recording files or photos are required to be stored, TF card needs to be inserted before recording or photography.

Before photography and recording, if the TF card isn't been detected, the machine will remind users to insert TF card. If the TF card reaches its maximum storage capacity, the recording will automatically stop and process saving, and also reminds users to replace new TF card at the same time. When the machine is connected to computer by USB, users can access the file of the TF card by simultaneously press buttons “menu”and “mode”, and again press the two buttons to exit accessing the TF card.

4.2 Accessory Introduction

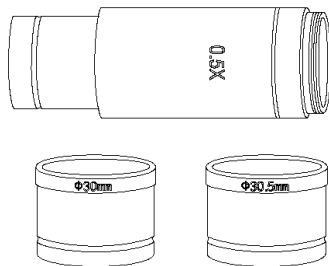


- USB Line : Two functions:
- 1、 Under the state of HDMI: USB can be used as the power line.
 - 2、 When connected with PC port: USB can be used as the connection line between Camera Eyepiece and computer data.



- HDMI line : Data connection line between machine body and displayer.

4.3 Introduction of Optional Accessories



- Adaption ring and eyepiece (Optional Accessories) : Through adaption ring and eyepiece, Camera Eyepiece can be adapted to microscope with different calibers. The Camera Eyepiece itself can be adapted to port C or CS. Under different magnification ratio, the caliber of eyepiece 0.5X is 23.2mm, adaption ring 23.2/30mm and 23.2/30.5mm. According to different assembly ways, the adaption ring and eyepiece can realize the connection between the device and eyepiece with different port size.

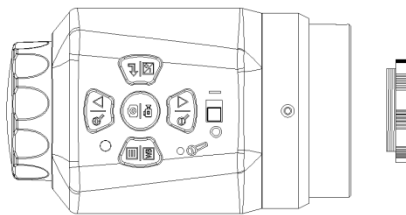
Chapter 5 Product Assembly Guide

5.1 Camera Eyepiece Assembly

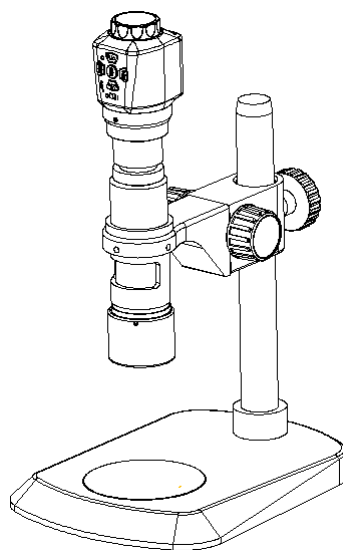
5.1.1 Camera Eyepiece and Other Microscope Assembly

1. Connect to Microscope with standard port C

- (1) Twist off the dust cover plastic cap under the Camera Eyepiece.
(See picture 1)
- (2) Twist the Camera Eyepiece onto other microscope (standard port C)
(See picture 2)
- (3) Connect the Micro USB port of USB line with Camera Eyepiece. Under HDMI mode, connect the other port to power adapter. Under USB mode, connect the other port with USB output port of the computer.
- (4) Connect the Mini HDMI port of the HDMI to Camera Eyepiece, and the other port to displayer with HDMI port.(This step can be skipped under USB work mode.)



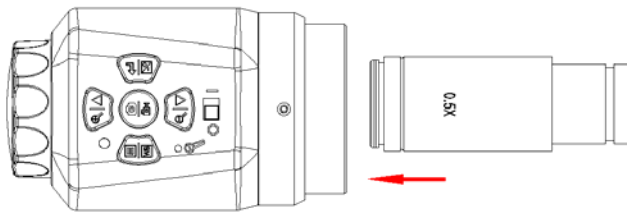
Picture 1



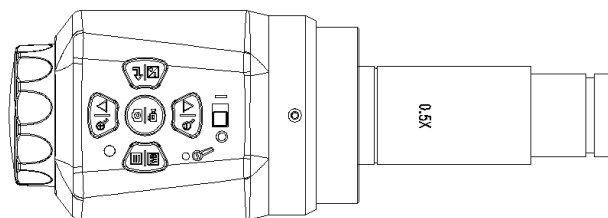
Picture 2

2. Connect the stereoscopic microscope

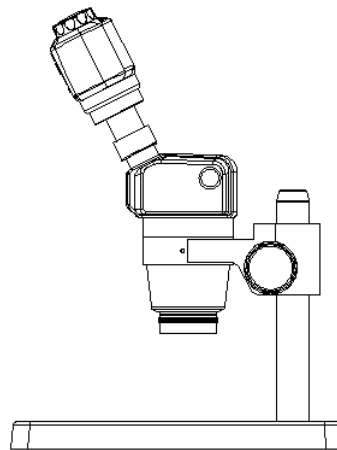
- (1) Twist off the dust cover cap of the Camera Eyepiece.
- (2) Connect the Camera Eyepiece with appending eyepiece (see picture 3 and 4).
- (3) Embed the minifier (or hollow cylinder) into adapter ring 23.2/30mm (or 23.2/30.5mm).
- (4) Embed the adapter ring with Camera Eyepiece to stereoscopic microscope (See picture 5).
- (5) Connect the Micro USB port of USB line with Camera Eyepiece. Under HDMI mode, connect the other port to power adapter. Under USB mode, connect the other port with USB output port of the computer.
- (6) Connect the Mini HDMI port of the HDMI to Camera Eyepiece, and the other port to displayer with HDMI port.(This step can be skipped under USB work mode.)



Picture 3



Picture 4



Picture 5

5.1.2 Camera Eyepiece Detachment

1. Detach with eyepiece of standard C port

- (1) The machine is under shutdown condition.
- (2) Pull out USB cable and HDMI cable.
- (3) Twist off the Camera Eyepiece from the microscope.
- (4) Screw on the dust cover plastic cap.
- (5) Place the Camera Eyepiece to avoid being dropped.

2. Detach with Stereoscopic Microscope

- (1) The machine is under shutdown condition.
- (2) Pull out USB cable and HDMI cable.
- (3) Take out the product with the adapter ring from the stereoscopic microscope.
- (4) Detach the adapter ring and eyepiece from the product.
- (5) Screw on the dust cover plastic cap.
- (6) Place the Camera Eyepiece to avoid being dropped.

Chapter 6 Instructions

Use under different modes:

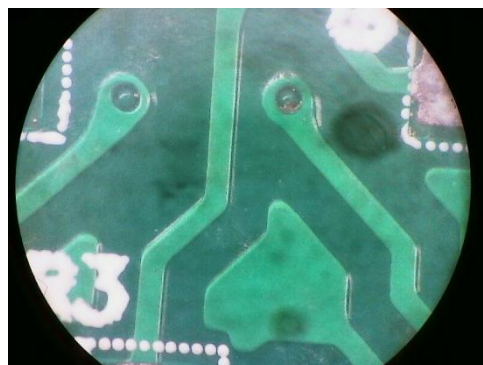
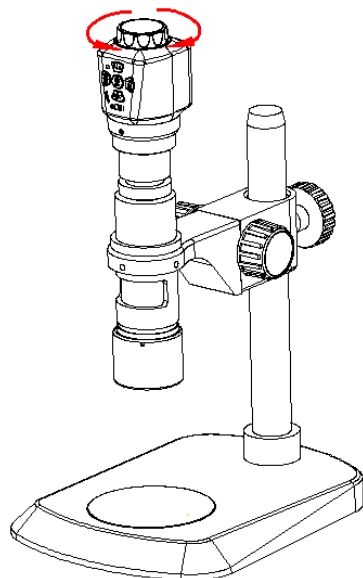
1. HDMI Mode
2. USB Mode

Note: when connection with computer and HDMI is simultaneously detected, USB port output of the PC will be first processed.

6.1 HDMI Mode

6.1.1 Use of the back focal length eye height of the Camera Eyepiece

1. Connect the relevant accessories such as Camera Eyepiece, microscope and displayer, etc. (For detailed operation, please refer to Chapter 5)
2. Switch the toggle key to status of power on.
3. Rotate the eye height adapter ring clockwise or anti-clockwise to adjust the eye height until the image is clearly displayed.
 - (1) Clockwise: BFL gets smaller.
 - (2) Anti-clockwise: BFL gets larger.





Note: For the magnification ratio and optical parameter of each eyepiece are different, chances are that the image might not been adjusted clearly through eye height adapter. In that case, coordinating adjustment operation distance can be tried to achieve clearer image effects.




6.1.2 Introduction of Various Functions

- a) 5 buttons are set on the machine body.
- b) Short press refers to press time 0.2s~1s. Long press refers to press time more than 2s or above. (Without special reference, press below all means short press).
- c) For 10 seconds without operation, the system will automatically hide the icon on the screen desk for users to watch the video more conveniently. Users can press arbitrary button to awake the desk icon.
- d) The maximum magnification ratio of the zoom in function button: x4. Zoom out function button can only be available when being zoomed in first.
- e) 2304x1536, the highest resolution pixel of photography is 2304x1536.
- f) Record: when the HDMI displays, the highest resolution pixel of recording is 1280x720. For recording without HDMI display, the highest resolution pixel is 1920x1080.




1) Photography






The top right corner icon “” displays for photography mode. Please ensure the TF card insertion, press button “” for picture shooting. Pictures will be automatically saved into the Photo file under TF card file Microscope.

2) Record




The icon “” on the top right corner of the screen displays for recording mode to record sound and video files. Please ensure the TF card insertion, press button “” for recording and press “” again to exit recording. Records will be automatically saved into the Video file under TF card file Microscope.

3) Playback




Flip over for observation by pressing button “” or “”. Pressing button “” can enter the file attributes interface, which includes three operation functions such as delete, protect and slide show.



- The icon “” on the top right corner means the picture is an photo.
- The icon “” on the top right corner means the picture is a video. Press “” to play/pause recording. Press “” or “” can fast forward or fast backward during palying.

4) Freeze

Under photography or recording mode, long press “” to freeze the picture and press “” to unfreeze it. When the picture is frozen, press “” to save the frozen screen to picture.





5) Menu Setup










Pressing “” to enter the menu bar interface. Through button “” and “” to move the cursor up and down for selecting the required function.

Press “” to enter into setup. After setup, press button “” to exit menu bar.





Note: common functions are set up on the menu bar, namely exposure compensation, white balancing, resolution, continuous capture, image quality, sharpness, shooting ways, color, ISO, anti hand shake, quick preview, button press sound and language.
















6) Exposure Setup

Long press “” to enter the exposure setup interface. The icon displayed on the screen is . When the icon flashes, the moving cursor is in current position. Press “” to choose option from right to left. Press “” to exit the exposure setup interface.

- (1) With the cursor pointed to , through button “” or “” to start up or close the real-time automatic exposure function. Red icon AE stands for starting real-time automatic exposure and black AE for closing real-time automatic exposure.
- (2) With the cursor pointed to , through button “” or “” to process single automatic exposure. Red icon TE stands for ongoing real-time automatic exposure and black TE for none automatic exposure or completed automatic exposure.
- (3) With the cursor pointed to , through button “” or “” to change the current value. The valuable adjustment range is -6~+6 with default value 0.

7) White Balance Adjustment

Long press “” to enter AWB mode interface. The screen displays icon . When the icon flashes, the cursor is in current position. Press “” to choose option from right to left. Press “” to exit AWB mode.

- (1) With the cursor pointed to , through button “” or “” to start up or close the real-time white balance. Red icon AWB stands for starting real-time white balance and black AWB for closing real-time white balance.
- (2) With the cursor pointed to , through button “” or “” to process TWB. Red icon TWB stands for processing single white balance and black AWB for none single white balance or completed single white balance. Note: since the time of processing automatic white balance is very short, the icon TWB will not display red sign.
- (3) With the cursor pointed to , through button “” or “” to change current value. The effective adjustment range is 0~255 with default value 128.
- (4) With the cursor pointed to , through button “” or “” to change current value. The effective adjustment range is 0~255 with default value 128.
- (5) With the cursor pointed to , through button “” or “” to change current value. The effective adjustment range is 0~255 with default value 128.

6.2 USB Mode

6.2.1 Install Oasis Scientific Software

Put the accessory disk into the DVD of the computer, click the file Oasis Scientific Install and complete the installation of the application software according to the software prompts. For detailed installation methods, please refer to User Manual of Oasis Scientific English.


6.2.2 Connect the Device

- (1) Connect the Camera Eyepiece to the microscope or telescope.
- (2) Connect the USB port of the Camera Eyepiece to the USB port of the computer.
- (3) For detailed operation methods, please refer to Chapter 5.

6.2.3 Open the Software

- (1) Place the eyepiece and focus the camera on the observed object.
- (2) Pull the toggle keys on.
- (3) Execute the software Oasis Scientific in computer. Through adjusting the eye height or operation distance to observe the object.

6.2.4 Read TF card

After connected the Camera Eyepiece to the USB port of the PC, press “” to switch the USB mode to TF card mode. Meanwhile a disk icon will be created on the computer and the file in TF card of the Camera Eyepiece can be read through computer.