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**5325-VM100
MOTORIZED ZOOM MICROSCOPE
OPERATING INSTRUCTIONS**



1 Camera Matching Device

Rear-end matching: can support 1080P@60Hz or 1080P@50Hz HDMI displays.

2 Camera Mounting Instructions

1. Complete the connection between monitor and camera with HDMI cable.
2. Connecting the mouse.
3. Please use our DC12V power supply to power the camera.
4. A numeric keypad can be connected to the camera

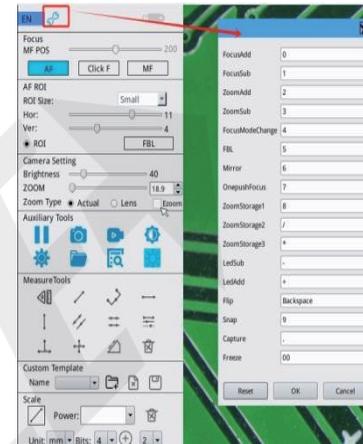
to control the camera operation.

3 Language Settings



The device supports three language modes: Simplified Chinese, English and Traditional Chinese. Users can choose their own language according to different usage scenarios.

4 External Key Setting



Users can connect an external keyboard to trigger the use of the camera functions, strike setting menu screen pops up, The user modifies the corresponding key value of the function according to his/her needs.

Note: When using the multiplier record 1-3 function - at the multiplier to be recorded, long press the button to be set for 1-2s to complete the saving.

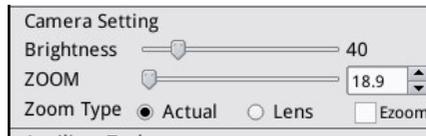
5 USB stick recognition

When the USB flash drive is connected here the icon of the USB flash drive turns from grey to green. Please make sure that the file format of the USB stick is fate32.



Users can set the fate32 file format by formatting a USB stick.

6 Camera setting



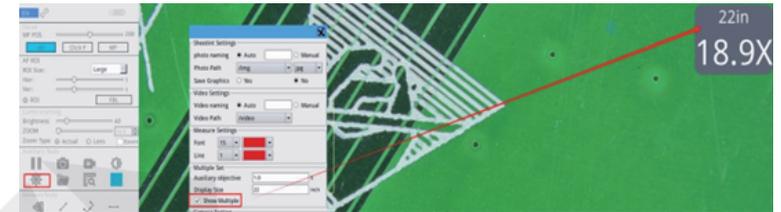
Brightness: In auto exposure mode, you can adjust the brightness of the picture (0-255)

ZOOM:

1. Mouse drag the slider to adjust the magnification - optical magnification range 0.7-4.8, electronic magnification 4.9-9.8 [you need to check the Ezoom option to enable the electronic magnification] (when the electronic magnification value unchecks the Ezoom, the magnification will be switched to the optical maximum magnification of 4.8 times);
2. There are + - buttons in the lower right corner of the screen for quick adjustment, 0.7-4.8 for optical zoom, 1.0-6.0 for electronic zoom.



ZOOM Type: Actual object magnification, which can be displayed in the settings. (Related to monitor size)



7 Auxiliary Tools

7.1 Freeze

Strike  freeze buttons and , The screen is at rest. None of the camera parameter settings take effect in the current state, and the user can use the measurement tool to perform measurement operations (video recording function is disabled).



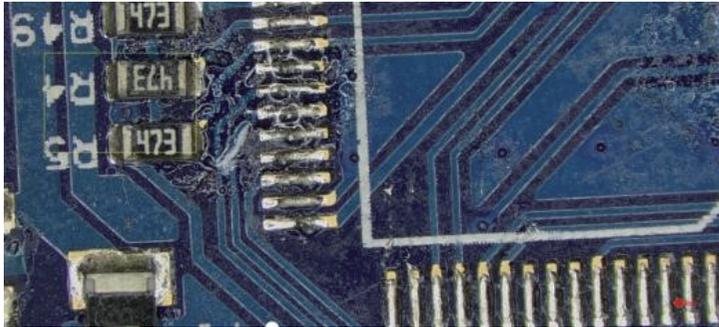
7.2 Snap

The user can take a picture of the current screen after clicking the Take Picture button. The picture taking

settings are made in the .

7.3 Video

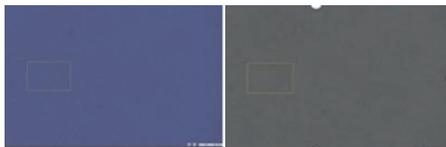
When the user clicks the Record button, the current screen can be recorded. The video recording setting is in progress. When recording is on, a red dot flashes at the bottom right of the screen to indicate this. Click again to stop recording.



7.4 AWB (once)

Commonly used image processing functions, due to different scenes under different colour temperatures, illuminance is not the same, the user should be the first time to do a white balance on the camera after powering on the camera, to reduce the colour deviation of the image effect caused by external factors.

White balance operation: Place A4 white paper or pure white target on the carrier table and click on it. The left side of the picture below is the original state, and the right side is the state after white balance.



7.5 Setting

7.5.1 Shootint Settings

Photo naming: Automatic naming (prefixes can be added) and manual naming.

Photo path: Default:/img, Users can add a new folder under this path and then customise the path to save it.

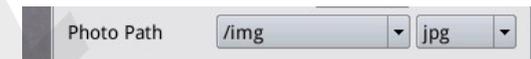


Photo format: Provide four formats of jpg\bmp/png\tiff for customers to choose from. **Save**

Graphics: Users can save or not save the drawn metadata on demand.

7.5.2 Video Settings

Video naming: Automatic naming (prefixes can be added) and manual naming

Video path: Default:/video, Users can add a new folder under this path and then customise the path to save it;

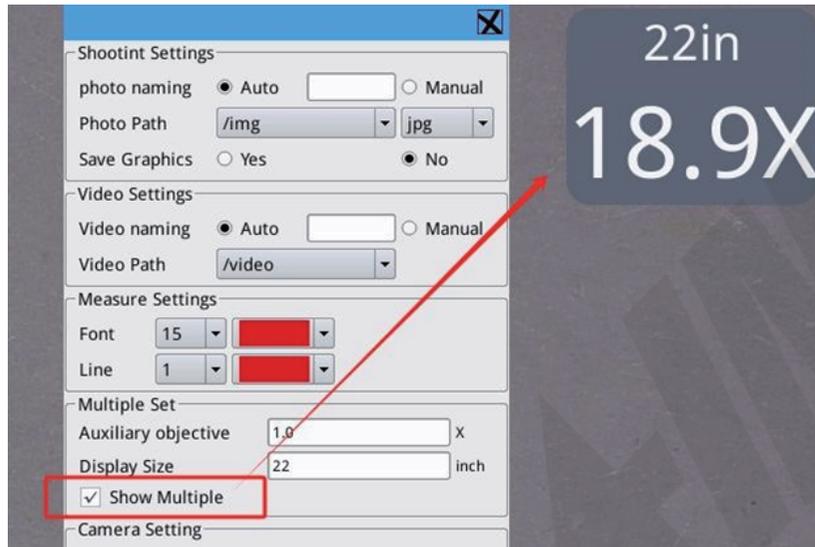


7.5.3 Measure settings

User-definable font size and colour, line thickness and colour for measurement element data.



7.5.4 Multiple Setting



7.5.5 Camera setting

exposure : 0-16.5 ms (MF enable)

gain: 0-30 (MF enable)

R: 1-4095 **G:** 1-4095 **B:** 1-4095

saturation: 0-255

contrast : 0-100

sharpness: 0-15

gamma : 1-170 **HDR:** 0-255

AWB: once/manually

AE: Auto/manually

Mirror: open/close

Flip: open/close

B/W: open/close

CAC: open/close

50/60Hz: open/close

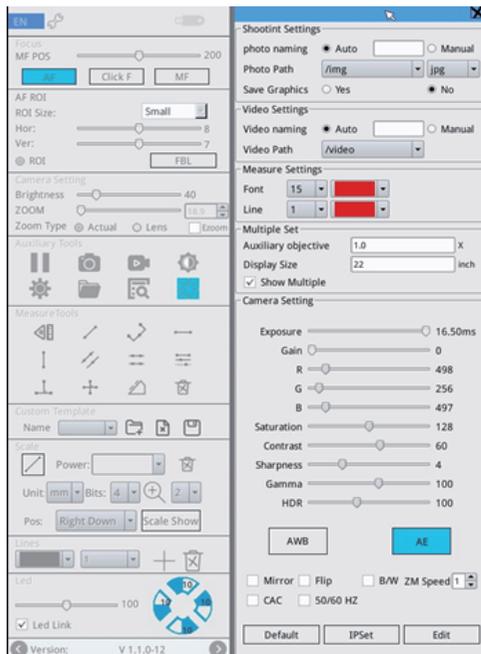
ZM Speed: 0-2



7.5.6 Default

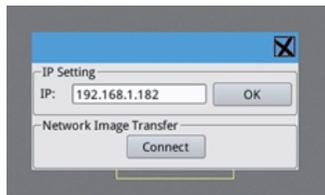
Restore the factory settings of the camera's relevant function parameters:

1. **Focus**——Auto
2. **ROI Size**——SMALL
3. **ROI**——enable, Position in the centre of the screen
4. **AE**——enable, value 40
5. **ZOOM**——0.7, Ezoom close
6. **Camera settings** value figure below:



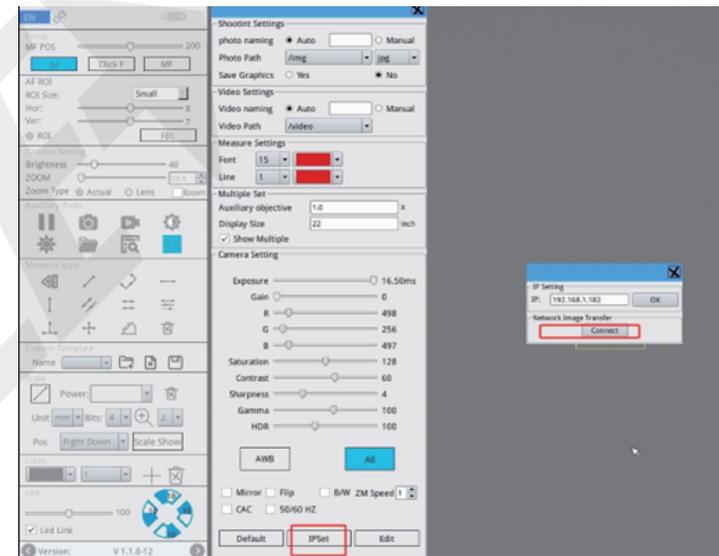
7.5.7 IP SET

- Users can modify the camera IP according to different network environments., Default IP: 192.168.1.182

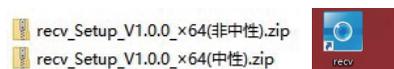


2. NetworkImage Transfer configer :

- Ensure that the camera IP network segment and PC computer to maintain the same, the camera's default ip address is 192.168.1.182 or through the HDMI side of the settings to view the following figure:



- PC segment settings, figure below:
- PC with corresponding mapping software installed



D. Open the map transfer software and modify the save path first. Click Start, as shown below:

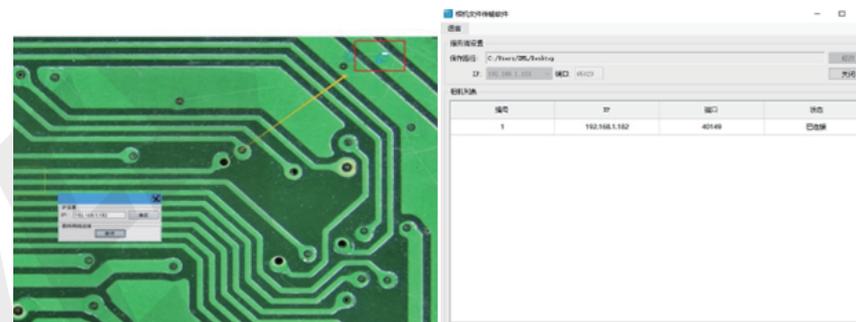


E. After clicking the connect button on the camera side, refresh the list, find your PC IP address, click connect;

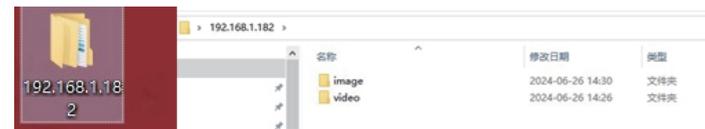


F. Interaction icon appears in the upper right corner of the camera screen

The connection is successful, figure below:



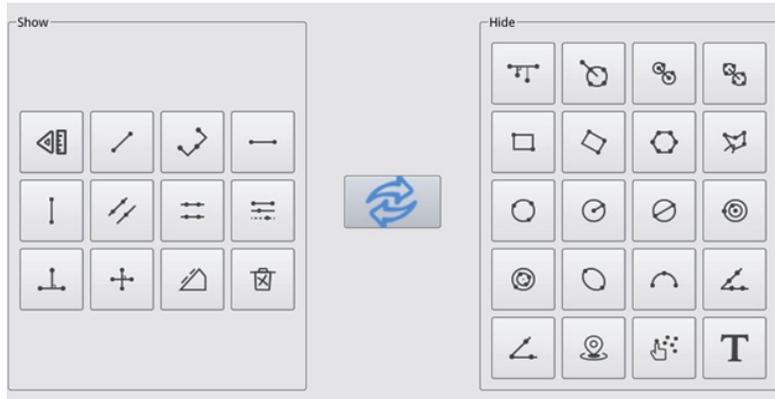
G. The first time you take a photo/video, a folder named after the camera's IP address will be created in the setup path, and users can open the folder to view the pictures;



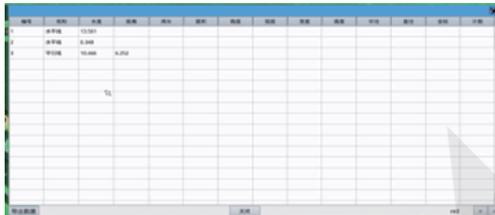
7.5.8 Editor

1. Users can replace the corresponding tool icon according to the actual test tool use preference. Select the

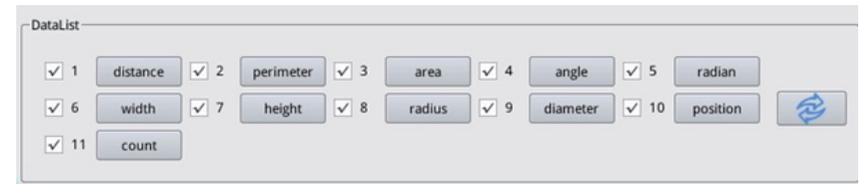
two icons to be replaced and click to complete the replacement 



2. When there are items in the data list that the user does not need, uncheck the box and click to hide them. (Note: The corresponding items in the exported data table will not be hidden.)

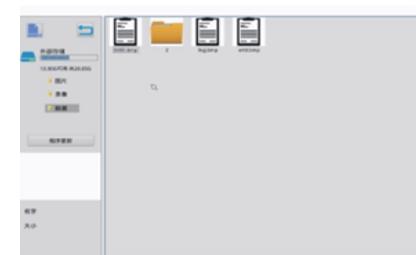


3. Users can hide the modules that don't need to be displayed according to their needs, and click after cancelling the corresponding module checkboxes to make the screen more concise and easy to operate; (Note: the logo module is not displayed by default)



7.6 Open file

Open the folder where the camera shoots and saves the USB stick: pictures, videos, data



7.6.1 photograph

1. Users can operate on a single image file, in the lower left corner you can see the image thumbnail, name, size information;
2. After selecting the picture, the right mouse button menu bar allows you to operate on a single picture: delete, compare, copy, cut, paste, rename.;
3. Right mouse button on the blank space, you can create a new folder. Users can change the save path in the photo/video settings as needed;

7.6.2 Video

1. The right mouse button menu bar after selecting a video allows you to operate on a single video: delete, copy, cut, paste, rename.;
2. After selecting the video, you can see the name and size of the video in the lower left corner.;

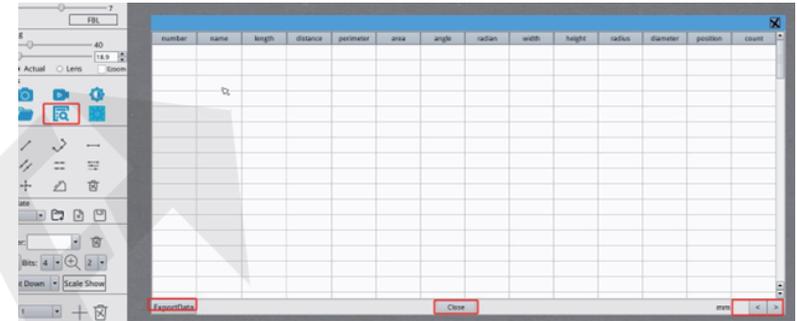
7.6.3 Date

Users can view the name and size of the exported data list file (you need to open the USB stick on the PC to view the data in the document).

7.6.4 Update

Put the update file into the root directory of the USB flash drive, plug in the camera, click the program update button, click the OK button to start the update process after the warning pops up. When the update is complete, you will be prompted to reboot the camera. After clicking the OK button, you can press the ON/OFF button on the back of the camera twice to reboot the camera.

7.7 Date List

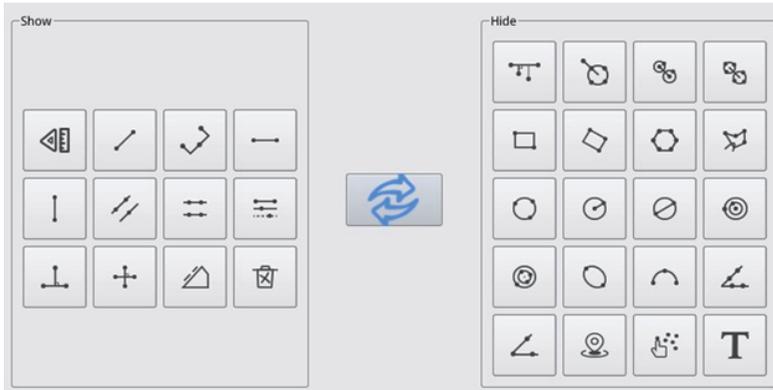


1. User can edit the 11.5.7 interface to customise the data items to be displayed.
2. The numerical units are consistent with the default units selected for calibration.

7.8 exposure (Auto/manually)

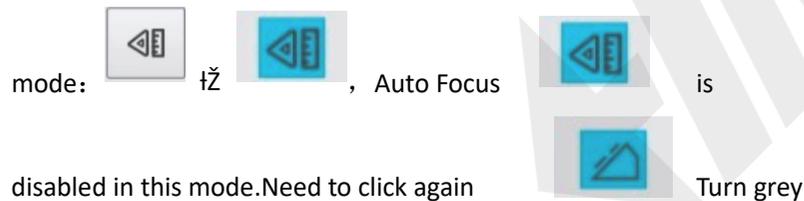
Camera default AE mode is  on, you can click the icon to switch to manual exposure mode 

8 Measure Tools



1. The camera software supports a total of 28 kinds of measurement tools, the PC side to maintain the same. After hovering the icon for 1s, there will be a description of the corresponding tool name on display, users can choose to use!;

2. When any measuring tool is used, the camera enters the measuring



to exit measurement mode;

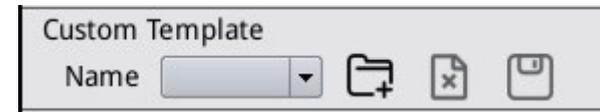
3. automatic edge detection after clicking , The software algorithm automatically identifies

the nearest edges in the image for positioning during measurement in this mode.;

4. Clear Screen Button, After clicking, a pop-up window will remind the user whether to clear all metadata or not; individual metadata requires the user to double-click on the target to bring up an ask button;

9 Customised templates

1. The custom module will have an automatically generated default template name "default". This default template does not support deletion and modification.
2. After drawing the elements in the image area, click on the "New" icon.



, Interface pop-up "whether to convert the elements into a template" window, click "OK" to create a new template. Then a new interface will appear, "Name" column to the template name; and "Save As", "Save Elements", "Cancel" several icon options. "Several icon options."

3. Click on the "Delete" icon. , This template can be deleted; Click

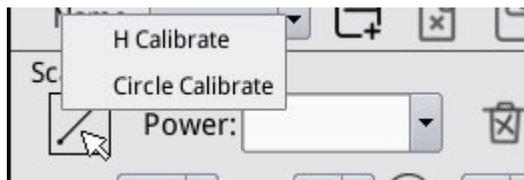
on the "Modify" icon. , Modifications can be made to this template.

4. Click "Save"  或 “save as ”  , Then save the modified template. Click on "Back"  , then the modified template is not saved.

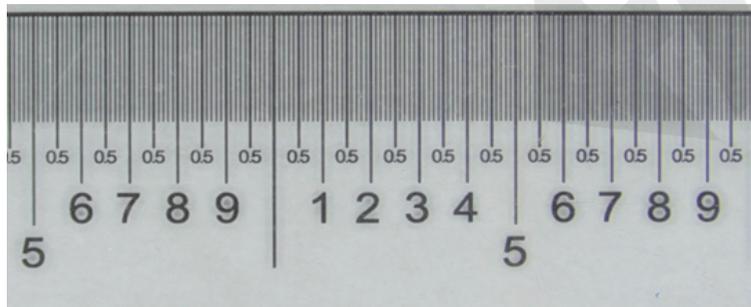
10 Scale

10.1 Calibration method

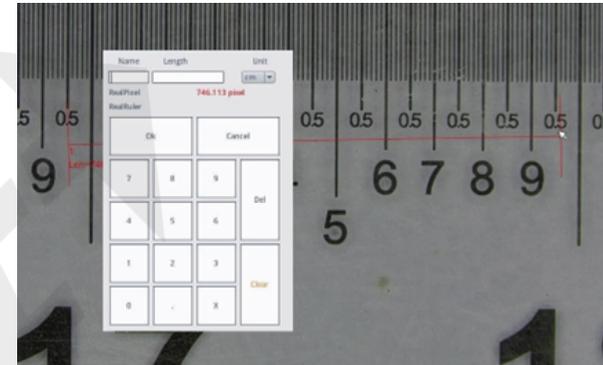
1. Click  first to have H and round calibration



2. Place a calibrating tool (e.g., scale) on the carrier and adjust the screen until it is clear.;



3. Take calibration of 10mm as an example, find the 10mm length in the preview screen to determine the starting point and end point, pop-up menu window;



4. User inputs the relevant value, length and unit according to the actual magnification and then clicks confirmation to save.

10.2 Delete Calibration

View the new calibration name in the calibration list and delete the calibration default password 123456;

