FHD Digital Eyepiece
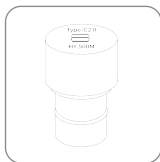
User Manual

Type-C2.0
HY-500M
φ30.5mm
φ30mm

Please read the manual carefully before using the
product to ensure that the product functions
are used correctly and keep the manual for future reference

▪ Product parameter

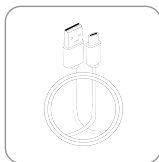| Model	HY-500M		
Name	Type-C USB 5MP Digital Microscope Camera for eyepiece		
Image sensor	1/2.5" Color CMOS Sensor		
Pixel size	2.20μm(H)×2.20μm(V)		
Dynamic range	74 dB (Linear) 85 dB (HDR)		
Filter	Standard 650nm IR cut-off filter		
Spectral response	400nm～1000nm	**Shutter Type**	Rolling shutter
Exposure time range (ms)	0.02~155.5 ms	**Exposure control**	Auto/Manual
Sensitivity	18.8 ke-/Lux*sec	**SNR**	39dB
Operation system	WIN XP, WIN 7/8/10/11, 32/64 bit system		
Support UVC protocol	USB Video Class (UVC)		
Other function	Gamma adjustment, Saturation adjustment, White balance correction, Noise reduction, Frame rate, Brightness, Contrast, Color tone, Clarity, Gain (adjustable range 100), Backlight contrast, Exposure adjustment, Low brightness compensation, Monochrome adjustable		
Video recording	MJPEG		YUY
	2592x1944 @ 30fps; 2084x1536 @ 30fps 1920x1080 @ 30fps; 1600x1200 @ 30fps 1280x720 @ 30fps; 800x600 @ 30fps 640x480 @ 30fps; 320x240 @ 30fps		2592x1944 @ 2fps; 2084x1536 @ 2fps 1920x1080 @ 5fps; 1600x1200 @ 5fps 1280x720 @ 10fps; 800x600 @ 20fps 640x480 @ 30fps; 320x240 @ 30fps
Lens interface	20/23.2mm interface (C-mount adapter optional), 30mm,30.5mm adapters are included		

■ Packing list

HY-500M
Digital Eyepiece
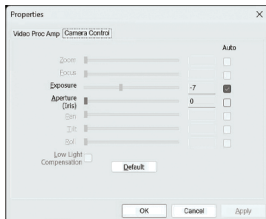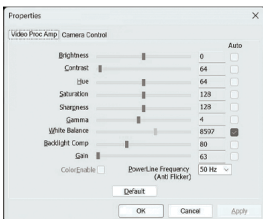
Adapter Ring
φ30/30.5mm

USB2.0 Cable

User Manual

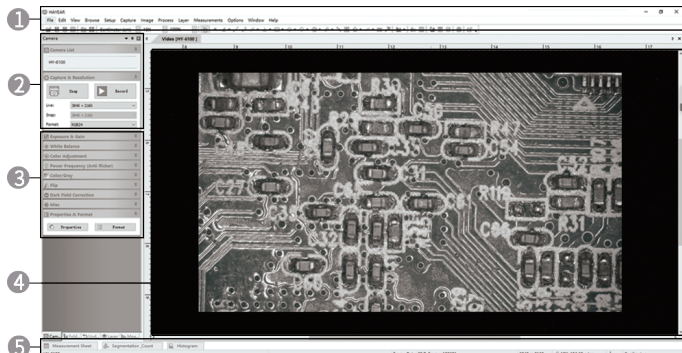# ■ HAYEAR Measurement Software

Measurement software download link: http://www.hayear.com

HAYEAR measurement software is a dynamic image processing software developed for camera imaging with the following features:

1.Support multiple cameras, can be switched to use at any time.

2.The image preview is rendered by GPU and supports high-resolution and high frame rate dynamic image display.

3.Supports dynamic image measurement function.

4.The software is easy and convenient to operate.

Camera focus function and other function parameters on the software setting.

▪ Software Interface

1.Main menu: for interface setting, language setting, crosshairs setting, measurement function setting, software information, etc.

2.Toolbar: provide common operations such as taking photo, recording video, switching resolution, video format.

3.Sidebar switching tabs: control panel, provides functions such as camera attribute settings, color settings, and exposure settings.

4.Camera preview window and measurement preview.

5.Status Bar: Used to display status information and control related to software display, such as full-screen display, zoom in out out, etc.

▪ Image capture

Currently the software offers photo, video, and measurement functions:

1.Snap: Click Snap to capture a photo. Double-click on a captured photo to select the photo format.

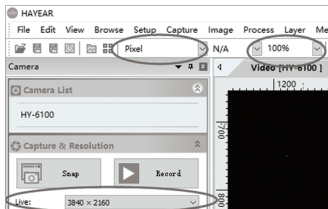**2.Record:** Click the Record button to start recording.

Click again to stop recording. Video files are H.264 files with MP4 extension.

3.Browser: Click the Browse button to open the location where the image file is stored.
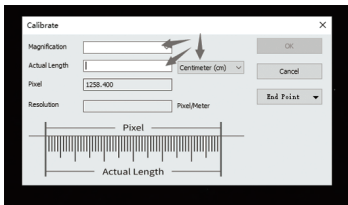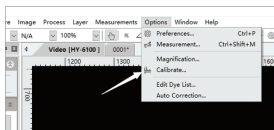
▪ Calibration Tutorial

1. Please choose: **Pixel, 100%, Maximum resolution**. Manual focus mode is the only way to calibrate, calibration is not accurate in autofocus mode.
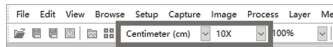

2. Find **"Calibration"** in **"Option"**.

3. P.S.: **(Need to find known size products to calibrate)** Magnification can be freely filled in the name (can be filled in according to the lens magnification) need to measure the length of the object to select the corresponding unit, drag the line to the corresponding length.。

After the calibration, you have to select the measurement unit as the picture below.

Unit-The measurement unit you need.
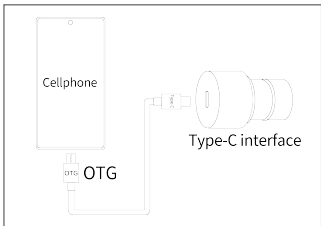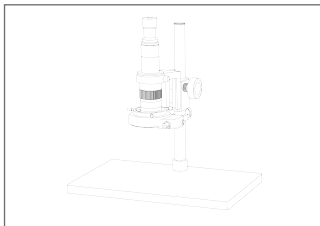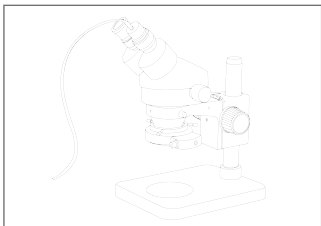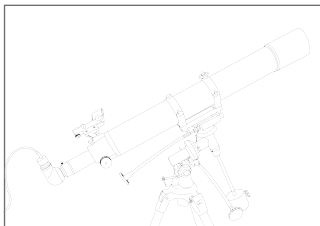Magnification-The name given at previous calibration.
The measurement function is ready to go.

* For calibration set up video, please refer to this link:http://www.hayear.com/?video/356

▪ Troubleshooting guide

If the preview image is blank or the device name is not displayed, it may be because the graphics card driver is not installed, please go to the official website of the corresponding graphics card to download and install the latest graphics card driver. Laptops need to disable the built-in camera to get the preview images. If you plug into the front USB port of the desktop computer does not work, please try to plug into the back USB port.

■ Range of Application

Cellphone

Type-C interface

OTG

*This set up will need an optional adapter: 31.7mm adapter.

* OTG cable is excluding.