

### **HW Series**





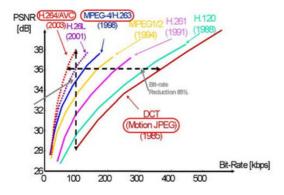
# SMART MICROSCOPE CAMERA 12MP / 20MP

HW series smart microscope cameras are equipped with high-quality Sony CMOS image sensors, specially designed to match top brand trinocular microscopes. Standard C-mount design allows to install on all types of trinocular microscope, and dovetail mount design are perfectly to match Olympus, Nikon, Leica, Zeiss microscopes. The camera comes with built-in operating system as well as MS office software and pre-installed image measurement software, so a dedicated computer for the camera is not necessary.

The ability to work with the microscope independently without relying on a computer and to transmit images smoothly via 5G WiFi makes this camera a "convenient choice". It is widely used in various seminars, laboratories, workshops, training, and field inspections where real-time images need to be displayed. Just scan the QR code on the camera to allow up to 13 smart devices to get live images from the camera.

## ADVANCED IMAGING & STREAMING TECHNOLOGY

Advanced video streaming imaging technology based on H.264 and unique color balance algorithm ensure that the camera presents excellent image quality and smooth video at high resolutions.

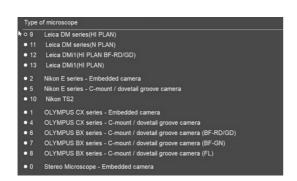


Item	H264	MPEG4	MJPEG
Image quality	Excellent	Average	Poor
Technical complexity	High	Average	Low
Network transimission speed	Fast	Average	Slow
Cost	High	Average	Low

<sup>\*</sup>Source: http://www.yaba.com.tw/cctv/h264mp4/h264mp4.htm

#### ONE CAMERA. MULTIPLE FIRMWARE

Multiple sets of image firmware have been built into the camera, allowing engineer to call the best matching firmware from the software according to user's microscope brand, type (biological, industrial, polarizing microscopes, etc.) and specimen with one key ,the best image quality can be obtained without manual operation by the user.



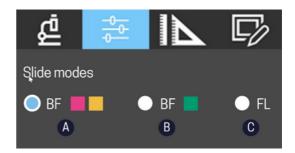


## SLIDE MODES OPTIONS BASED ON COLOR CALIBRATION

Perseverance in pursuit of better image quality.

Working modes:

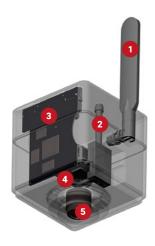
- A Used in bright field for slides mainly in pink or gold.
- B Used in bright field for slides mainly in cyan.
- C Used in fluorescence mainly.



#### NO WORRY ABOUT THE SENSOR SIZE

\*Although the sensor used in HW series cameras is not that large, the built-in 0.43X reduction lens perfectly matches its format and guarantees a large field of view, without field curvature and distortion. Save your money on the C mount adapter.





- 1.5G WiFi Output
- 2. Easy focus with Allen Key
- 3. Built-in Operating System with MS Office Software
- 4. High performance CMOS sensor
- 5.0.43X relay lens



- 1.USB 3.0 port
- 2.USB 2.0 port
- 3. HDMI port
- 4. Easy focus with Allen Key

# WIFI FOR SMART DEVICES HDMI FOR LARGE DISPLAY

The WiFi function supports up to 13 mobile devices to simultaneously preview live images. Users only need to install a special app on their mobile phones or tablets and scan the QR code on the camera to automatically connect.











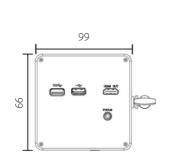


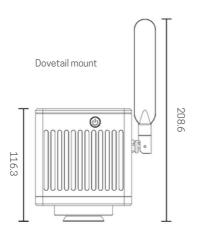
### **Specifications**

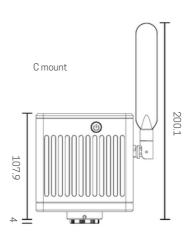
Sensor Type         Sony CMOS IMX412         Sony CMOS IMX147           CMOS Array         4000 x 3000 (12MP)         5183 x 3888 (20MP)           Pixel Size         1.55μm x 1.55μm         1.2μm x 1.2μm           Sensor Dimensions         11.1mm x 6.2mm (12.86mm diagonal)         8.74mm x 7.67mm (7.82mm diagonal)           Spectral Response         380-650nm         380-650nm           Shutter Type         Electronic rolling         Electronic rolling           Frame Rate         30 fps at full resolution         15 fps at 3840 x 2160           Exposure Time         10us ~ 330ms         10us ~ 330ms           Digital Interface         56 WiFi, HDMI         56 WiFi, HDMI           Shutter         Electronic rolling         Electronic rolling           White Balance         Realtime automatic, Manual         Realtime automatic, Manual           Optical Interface         C-mount or Dovetail mount (0.43X)         C-mount or Dovetail mount (0.43X)           WiFi Protocol         IEEE 802.11ac         IEEE 802.11ac           Image Format         JPG, BMP, PNG, TIFF         JPG, BMP, PNG, TIFF           Power Input         Corp. 2V, 5A         DC 12V, 5A           Software         KoPa WiFi Lab, Pixit Pro (Windows)         KoPa WiFi Lab, Pixit Pro (Windows)           Operating Systems         D			
Pixel Size 1.55µm x 1.55µm 1.2µm x 1.2µm x 1.2µm Sensor Dimensions 11.1mm x 6.2mm (12.86mm diagonal) 8.74mm x 7.67mm (7.82mm diagonal)  Spectral Response 380-650nm 380-650nm  Shutter Type Electronic rolling Electronic rolling  Frame Rate 30 fps at full resolution 15 fps at 3840 x 2160  Exposure Time 10us ~ 330ms 10us ~ 330ms  Digital Interface 5G WiFi, HDMI 5G WiFi, HDMI  Shutter Electronic rolling Electronic rolling  White Balance Realtime automatic, Manual Realtime automatic, Manual  Optical Interface C-mount or Dovetail mount (0.43X) C-mount or Dovetail mount (0.43X)  WiFi Protocol IEEE 802.11ac IEEE 802.11ac  Image Format JPG, BMP, PNG, TIFF JPG, BMP, PNG, TIFF  Power Input DC 12V, 5A DC 12V, 5A  Software KoPa WiFi Lab, Pixit Pro (Windows) KoPa WiFi Lab, Pixit Pro (Windows)  Operating Systems Deeply customized Android system  Stock Conditions Temperature: -20 °C +70 °C	Sensor Type	Sony CMOS IMX412	Sony CMOS IMX147
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Weight 1.3kg 1.3kg	Stock Conditions	Temperature: -20 °C +70 °C	Temperature: -20 °C +70 °C
	Weight	1.3kg	1.3kg

#### **Dimensions**

Unit: mm







Specifications are subject to change without any obligation on the part of the manufacturer.

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