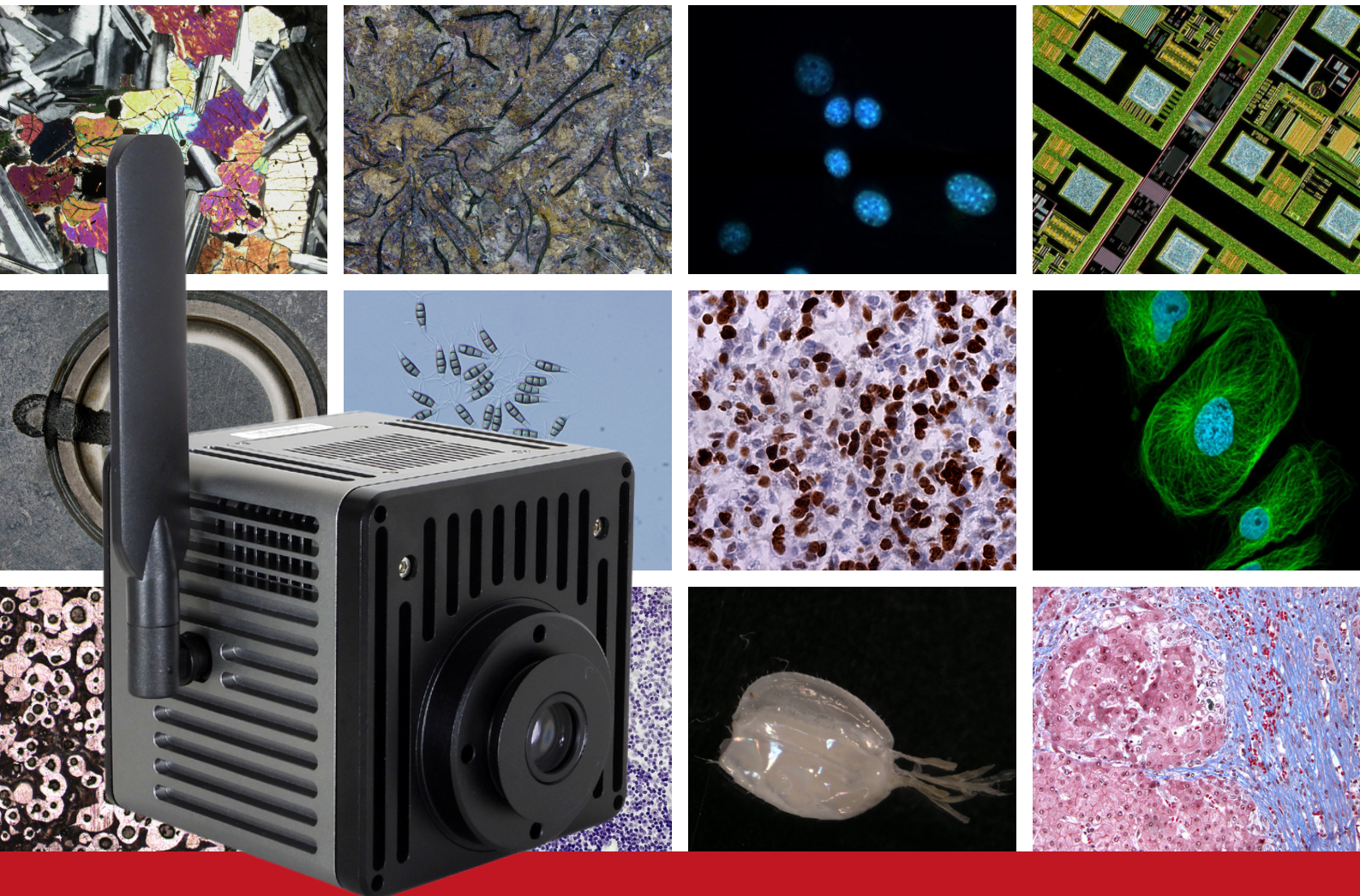




Digital Microscope Camera

# Catalog 2022



## **INNOVATED FOR TOP BRAND MICROSCOPES**

Create a Stunning Microscope Imaging Analysis System for You







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# MULTIPLE OUTPUTS, MORE APPLICATIONS

Lanoptik cameras provide four output methods: USB, WiFi, HDMI and WAN, and can stream live image simultaneously with multiple interfaces.



- 1**  **USB mode:** Unique algorithm guarantees high-speed transmission (30fps at 12 megapixel) through H264 stream protocol. No need to install driver.
- 2**  **5G WiFi mode:** Using dedicated APP 'KoPa WiFi Lab' to view realtime images through mobiles, tablets and laptops simultaneously, up to 10 devices.
- 3**  **HDMI mode:** Real-time stream images to monitor, TV, projector etc. through HDMI cable. Support 4K resolution (3840x2160 pixels).
- 4**  **Ethernet mode:** Connects to the router, allowing different computers in the same LAN to obtain real-time images simultaneously.

## SYNCHRONOUS OUTPUT MODES:

- USB + HDMI
- WiFi + HDMI
- WAN + HDMI
- WiFi + WAN + HDMI

**i** The camera can be directly connected to the monitor through HDMI without computer. In this mode, the USB cable is used with the power adapter only for power supply.

# MORE PIXELS, MORE DETAILS

Lanoptik cameras employ the latest back-illuminated and stacked CMOS image sensors with size type 1/2.3" and type 1/1.8". Max. recordable pixels are separately up to 4000x3000 (12 megapixel) and 5184x3888 (20 megapixel), supporting 4K output through HDMI.

## STUNNING IN BRIGHT FILED

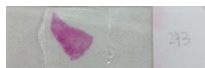
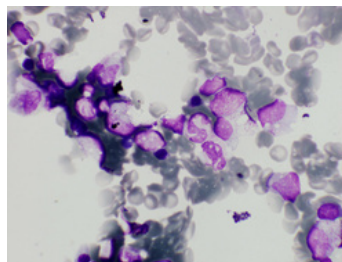
In bright field imaging, thanks to the optimized algorithm of automatic exposure and automatic white balance, it doesn't require many adjustments to get the desired image.

LAOPTIK Microscope Camera

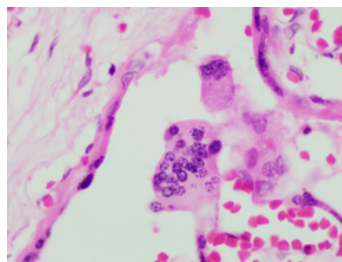
12.0MP CMOS, 1/2.3", 1.55µm x 1.55µm



Histological HE

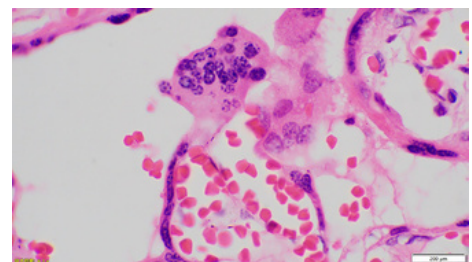
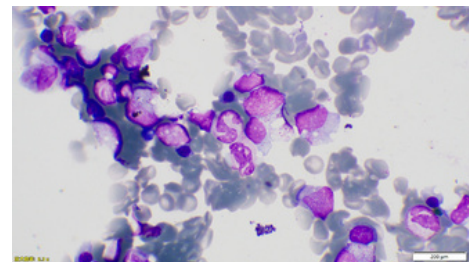


Histological HE



Top Brand Microscope Camera

2.3MP CMOS, 1/1.2", 5.86µm x 5.86µm



### Testing method:

Photos are taken at the same position in the same slide with same microscope 100X oil lens in bright field by the same person, the cameras are all adjusted to their best parameters.

# EXCELLENT IMAGE RETENTION

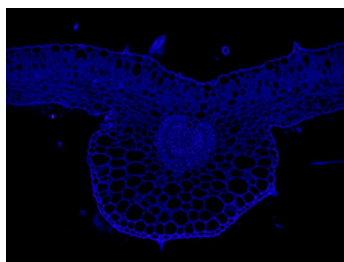
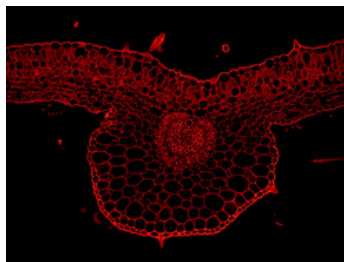
Lanoptik cameras have been color-calibrated according to the optical system of top brand microscopes to obtain perfect color balance. Biological mode and industrial mode can be selected for different application types.

## EXCEPTIONAL IN LOW LIGHT

Thanks to the dedicated color balance algorithm, the camera can not only obtain perfect "true color" images in bright field, but also perform well in dark field and fluorescence.

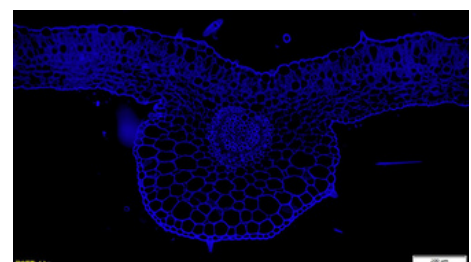
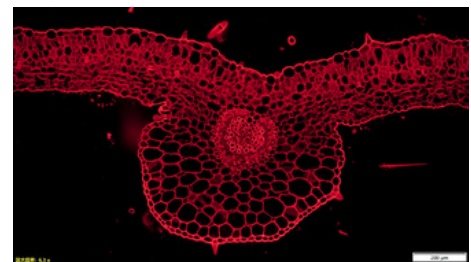
LAOPTIK Microscope Camera

12.0MP CMOS, 1/2.3", 1.55 $\mu$ m $\times$ 1.55 $\mu$ m



Top Brand Microscope Camera

2.3MP CMOS, 1/1.2", 5.86 $\mu$ m $\times$ 5.86 $\mu$ m



Pelargonium leaf

### Testing method:

Photos are taken at the same position in the same slide with same microscope 10X lens in fluorescence by the same person, the cameras are all adjusted to the best parameters.

# LARGE FIELD OF VIEW

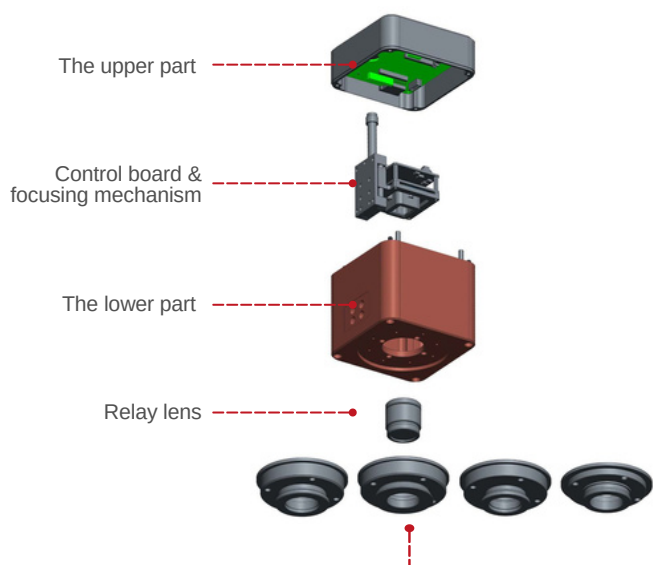
Lanoptik camera is designed with dovetail mount couples with different brands of microscope, without damaging the original optical path. The dedicated reduction lens perfectly matches the camera to provide a large field of view.

## NO WORRIES ABOUT THE SENSOR SIZE

\*Although the sensor used in HD1210 series cameras is not the largest, 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.

## ULTRA-PRECISION FOCUSING MECHANISM

The unique focusing mechanism easily ensures that the digital images from camera and the image from eyepiece are completely parfocal.



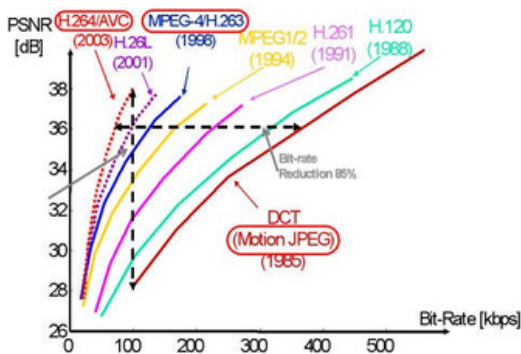
Variety of dovetail mounts compatible with different brands of microscope such as Olympus, Nikon, Leica and Zeiss.

# 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.

## 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.



## ONE CAMERA, MULTIPLE FIRMWARE

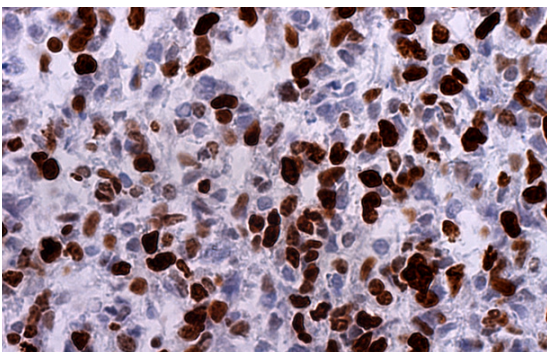
Multiple sets of image firmware have been built into the camera, allowing engineer to call the best matching firmware from the software according to user's microscope brand, type (biological, industrial, polarizing microscopes, etc.) and specimen with one key, the best image quality can be obtained without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

- ```

Type of microscope
o 9 Leica DM series(HI PLAN)
o 11 Leica DM series(N PLAN)
o 12 Leica DMI1(HI PLAN BF-RD/GD)
o 13 Leica DMI1(HI PLAN)
o 2 Nikon E series - Embedded camera
o 5 Nikon E series - C-mount / dovetail groove camera
o 10 Nikon TS2
o 1 OLYMPUS CX series - Embedded camera
o 4 OLYMPUS CX series - C-mount / dovetail groove camera
o 6 OLYMPUS BX series - C-mount / dovetail groove camera (BF-RD/GD)
o 7 OLYMPUS BX series - C-mount / dovetail groove camera (BF-GN)
o 8 OLYMPUS BX series - C-mount / dovetail groove camera (FL)
o 0 Stereo Microscope - Embedded camera
    
```

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

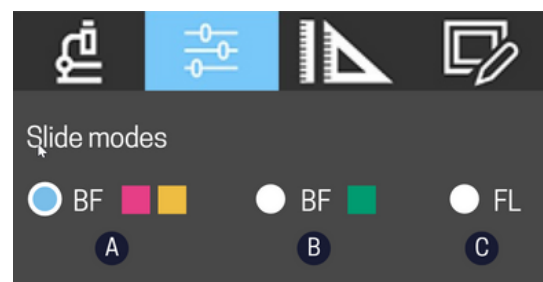
\*Source: <http://www.yaba.com.tw/cctv/h264mp4/h264mp4.htm>



## SLIDE MODES OPTIONS BASED ON COLOR CALIBRATION

Perseverance in pursuit of better image quality. Working modes:

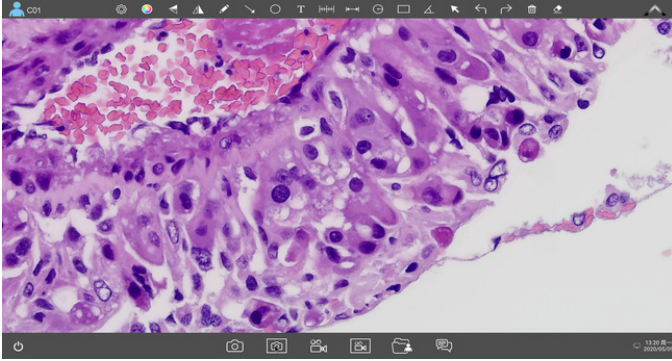
- Ⓐ Used in bright field for slides mainly in pink or gold.
- Ⓑ Used in bright field for slides mainly in cyan.
- Ⓒ Used in fluorescence mainly.



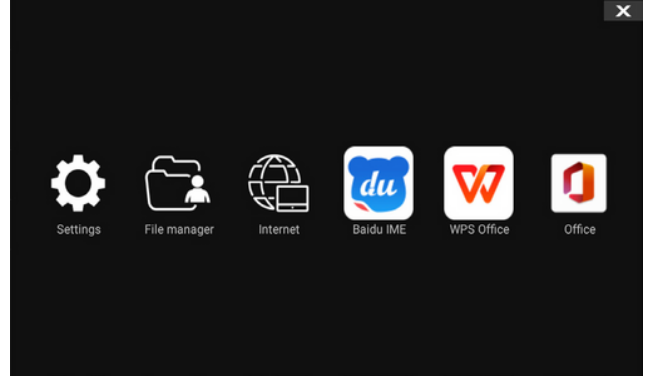
# KoPa WiFi Lab AO

## App Embedded on the Smart Camera

- Enter live image directly after booting.



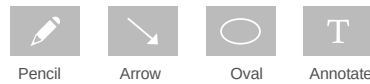
- The system comes with MS Office suite, input method and other Apps. (Allows to install any third-party android APP)



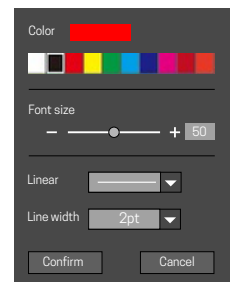
- Commonly-used tools



- Annotation tools



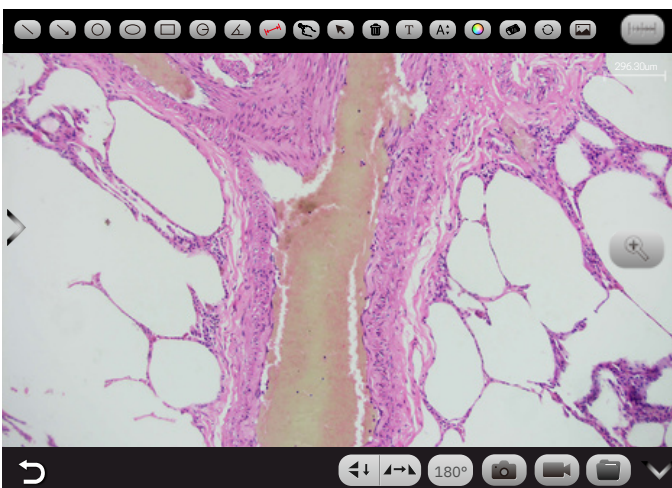
- Annotation property settings



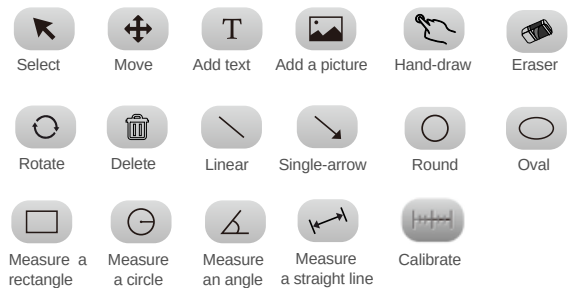
- Measuring tools



## App for smart devices: KoPa WiFi Lab



- Annotation and measuring tools



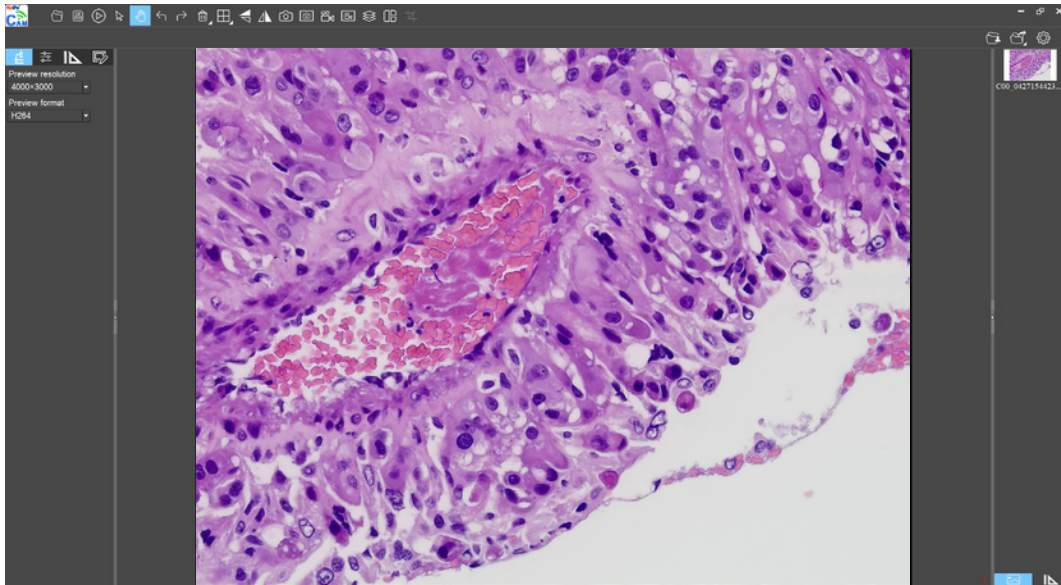
- Software operating environment requirements

| System  | System Version        | CPU                              | RAM         | Storage      | Protocol                |
|---------|-----------------------|----------------------------------|-------------|--------------|-------------------------|
| Android | 7.0 or later version  | Dual-core 1.7GHz or later versio | 3GB or more | 32GB or more | 5G WiFi IEEE 802.11(ac) |
| iOS     | 11.0 or later version | Dual-core 1.8GHz or later versio | 2GB or more | 32GB or more |                         |



Scan QR to download APP

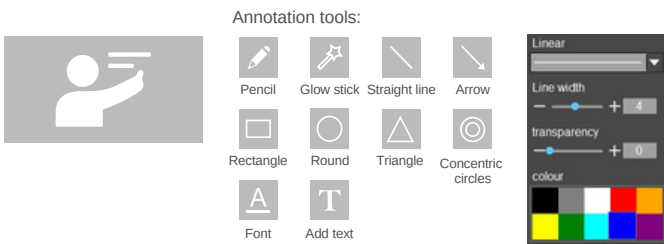




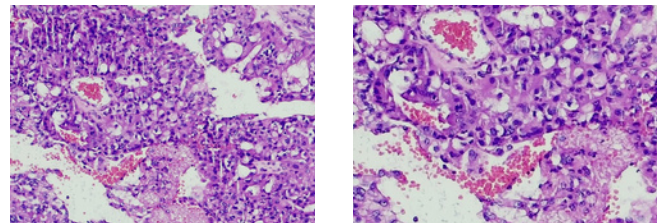
- Software operating environment requirements

| System                         | CPU                                | Hard disk      | Storage       | Graphics card      | Network card               |
|--------------------------------|------------------------------------|----------------|---------------|--------------------|----------------------------|
| Microsoft® Windows® 10(64 bit) | i7 8th generation or later version | 512 GB or more | 16 GB or more | Core graphics card | 10/100/1000M Self-adaptive |

- Annotation

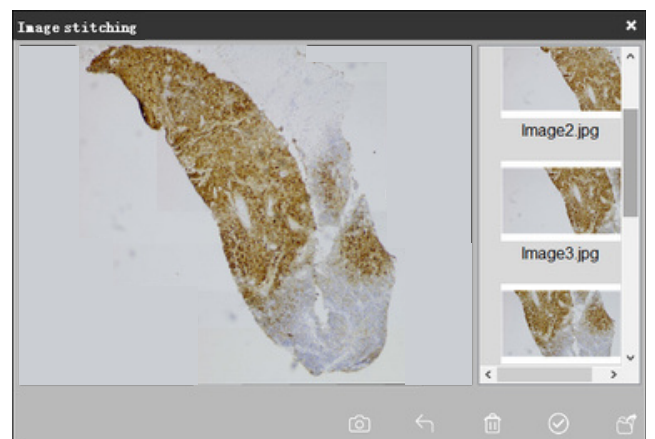
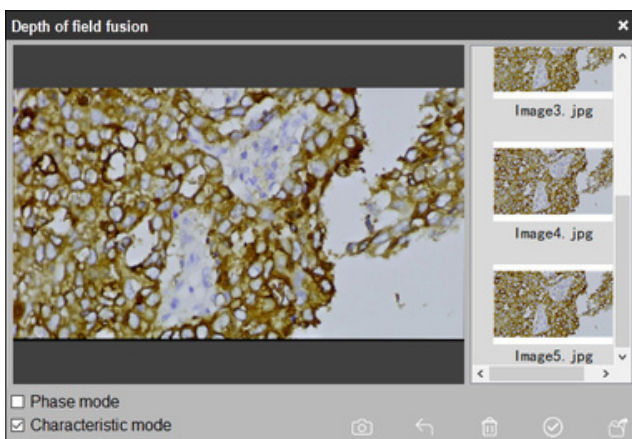


- Image comparison



The software can display any two or four images for analysis and comparison, supporting static image comparison, static and dynamic mixed comparison.

- Extend Depth of Field (EDF) images and Stitching images. (Valid for USB connection only)



# All-in-one Smart Embedded Camera

for binocular Microscope



**5G WiFi**  
synchronous live-stream to



The HE series All-in-one Embedded Smart Camera is intermediate module design which fits between the head and body of Olympus, Nikon, Leica, or Zeiss microscope. 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. Thanks to the 15.6" high-definition display, it can perfectly present live image.

The robust 5G WiFi module enables the camera to support up to 13 smart devices to preview live images simultaneously. Users only need to install the dedicated App on their mobile or tablet and then scan the QR code attached on the camera to automatically connect.



## ERGONOMIC DESIGN & FLEXIBLE DOVETAIL MOUNTING FOR OPTION

HE series cameras are a good for binocular microscope users. The structural parts are ingeniously designed, mainly suitable for Olympus, Nikon, Leica and Zeiss microscopes, with stable and durable quality, without damaging the original optical path. Users can digitize and wirelessly transmit microscopes without spending money on trinocular head.



# All-in-one Smart Embedded Camera

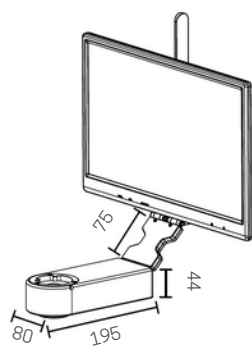
for binocular Microscope



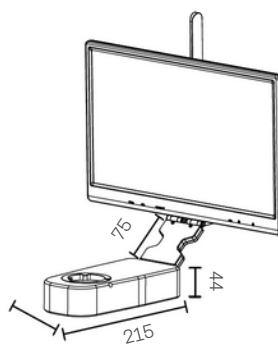
## SPECIFICATIONS

| Applicable to       | Olympus                              | Nikon     | Leica DM | Zeiss Primo | CX                                   | Nikon     | Leica DM | Zeiss Primo |
|---------------------|--------------------------------------|-----------|----------|-------------|--------------------------------------|-----------|----------|-------------|
| Model               | HE2010                               | HE2010-NE | HE2010-L | HE2010-Z    | HE1210                               | HE1210-NE | HE1210-L | HE1210-Z    |
| Physical resolution | 20 MP                                |           |          |             | 12 MP                                |           |          |             |
| Image sensor        | SONY IMX147 CMOS                     |           |          |             | SONY IMX412 CMOS                     |           |          |             |
| Shutter type        | Electronic rolling                   |           |          |             | Electronic rolling                   |           |          |             |
| Max. resolution     | 5184×3888 (20,155,392 Pixels)        |           |          |             | 4000×3000 (12,000,000 Pixels)        |           |          |             |
| Sensor size         | 1/2.3"                               |           |          |             | 1/2.3"                               |           |          |             |
| Pixel size          | 1.2µm x 1.2µm                        |           |          |             | 1.55µm x 1.55µm                      |           |          |             |
| Spectral response   | 380-650nm                            |           |          |             | 380-650nm                            |           |          |             |
| Exposure            | Real-time auto and manual adjustment |           |          |             | Real-time auto and manual adjustment |           |          |             |
| White balance       | Real-time auto and manual adjustment |           |          |             | Real-time auto and manual adjustment |           |          |             |
| Preview resolution  | 5184×3888@10fps, 3840×2160@15fps     |           |          |             | 4000×3000@30fps, 3840×2160@30fps     |           |          |             |
| Power consumption   | DC 12V 5A                            |           |          |             | DC 12V 5A                            |           |          |             |
| Wireless protocol   | 5G WiFi IEEE802.11ac                 |           |          |             | 5G WiFi IEEE802.11ac                 |           |          |             |

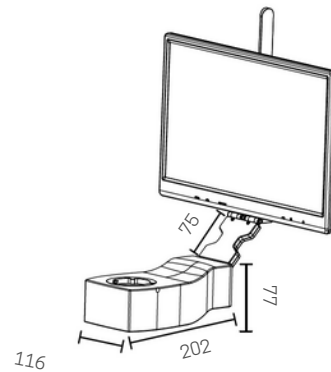
## DIMENSIONS



for Olympus



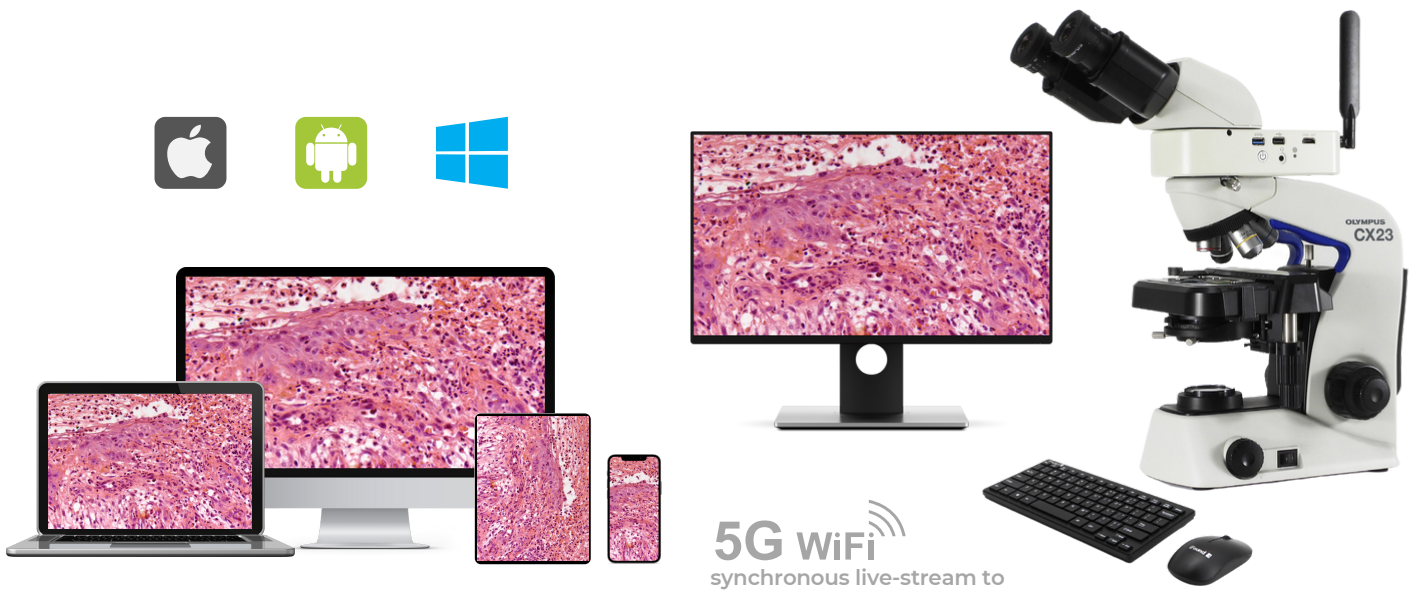
for Nikon, Zeiss



for Leica

# All-in-one Smart Embedded Camera

for binocular Microscope



The TE series Embedded Smart Camera is intermediate module design which fits between the head and body of Olympus, Nikon, Leica, or Zeiss microscope. 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 but one monitor.

The robust 5G WiFi module enables the camera to support up to 13 smart devices to preview live images simultaneously. Users only need to install the dedicated App on their mobile or tablet and then scan the QR code attached on the camera to automatically connect.



## ERGONOMIC DESIGN & FLEXIBLE DOVETAIL MOUNTING FOR OPTION

TE series cameras are a good for binocular microscope users. The structural parts are ingeniously designed, mainly suitable for Olympus, Nikon, Leica and Zeiss microscopes, with stable and durable quality, without damaging the original optical path. Users can digitize and wirelessly transmit microscopes without spending money on trinocular head.



# All-in-one Smart Embedded Camera

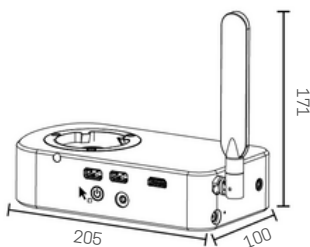
for binocular Microscope



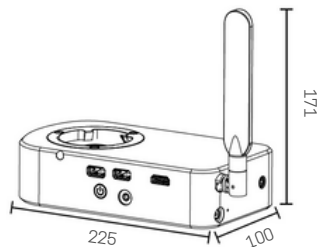
## SPECIFICATIONS

| Applicable to       | Olympus                              | Nikon     | Leica DM | Zeiss Primo | CX                                   | Nikon     | Leica DM | Zeiss Primo |
|---------------------|--------------------------------------|-----------|----------|-------------|--------------------------------------|-----------|----------|-------------|
| Model               | TE2010                               | TE2010-NE | TE2010-L | TE2010-Z    | TE1210                               | TE1210-NE | TE1210-L | TE1210-Z    |
| Physical resolution | 20 MP                                |           |          |             | 12 MP                                |           |          |             |
| Image sensor        | SONY IMX147 CMOS                     |           |          |             | SONY IMX412 CMOS                     |           |          |             |
| Shutter type        | Electronic rolling                   |           |          |             | Electronic rolling                   |           |          |             |
| Max. resolution     | 5184×3888 (20,155,392 Pixels)        |           |          |             | 4000×3000 (12,000,000 Pixels)        |           |          |             |
| Sensor size         | 1/2.3"                               |           |          |             | 1/2.3"                               |           |          |             |
| Pixel size          | 1.2µm x 1.2µm                        |           |          |             | 1.55µm x 1.55µm                      |           |          |             |
| Spectral response   | 380-650nm                            |           |          |             | 380-650nm                            |           |          |             |
| Exposure            | Real-time auto and manual adjustment |           |          |             | Real-time auto and manual adjustment |           |          |             |
| White balance       | Real-time auto and manual adjustment |           |          |             | Real-time auto and manual adjustment |           |          |             |
| Preview resolution  | 5184×3888@10fps, 3840×2160@15fps     |           |          |             | 4000×3000@30fps, 3840×2160@30fps     |           |          |             |
| Power consumption   | DC 12V 5A                            |           |          |             | DC 12V 5A                            |           |          |             |
| Wireless protocol   | 5G WiFi IEEE802.11ac                 |           |          |             | 5G WiFi IEEE802.11ac                 |           |          |             |

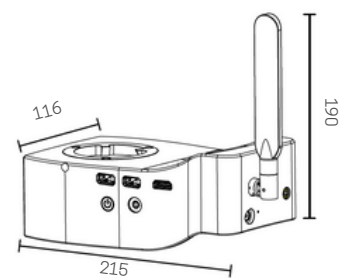
## DIMENSIONS



for Olympus



for Nikon, Zeiss



for Leica

# Multi-output Embedded Camera

for binocular Microscope



The CA series Embedded Camera is intermediate module design which fits between the head and body of Olympus, Nikon, Leica, or Zeiss microscope. The camera provides four output methods: USB, WiFi, HDMI, and Ethernet.

The robust 5G WiFi module enables the camera to support up to 13 smart devices to preview live images simultaneously. Users only need to install the dedicated App on their mobile or tablet and then scan the QR code attached on the camera to automatically connect.

The HDMI output can be used in synchronization with other outputs, which is very useful for meeting, training, seminar and other scenarios that require large-screen display.

The Ethernet output can be connected with router so that all users in the LAN can see the live image. HDMI output can be used together with other outputs.

## ERGONOMIC DESIGN & FLEXIBLE DOVETAIL MOUNTING FOR OPTION

CA series cameras are a good for binocular microscope users. The structural parts are ingeniously designed, mainly suitable for Olympus, Nikon, Leica and Zeiss microscopes, with stable and durable quality, without damaging the original optical path. Users can digitize and wirelessly transmit microscopes without spending money on trinocular head.



# Multi-output Embedded Camera

## for binocular Microscope



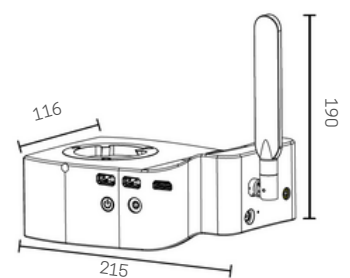
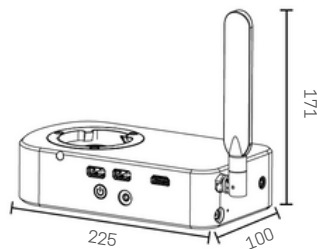
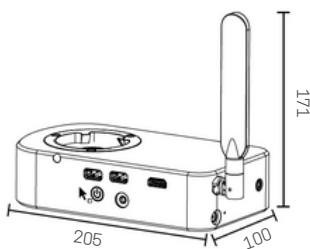
### SPECIFICATIONS

| Applicable to       | Olympus CX                           | Nikon Ei  | Leica DM | Zeiss Primo Star | Olympus CX                           | Nikon Ei  | Leica DM | Zeiss Primo Star |
|---------------------|--------------------------------------|-----------|----------|------------------|--------------------------------------|-----------|----------|------------------|
| Model               | CA2000                               | CA2000-NE | CA2000-L | CA2000-Z         | CA1200                               | CA1200-NE | CA1200-L | CA1200-Z         |
| Physical resolution | 20 MP                                |           |          |                  | 12 MP                                |           |          |                  |
| Image sensor        | SONY IMX147 CMOS                     |           |          |                  | SONY IMX412 CMOS                     |           |          |                  |
| Shutter type        | Electronic rolling                   |           |          |                  | Electronic rolling                   |           |          |                  |
| Max. resolution     | 5184×3888 (20,155,392 Pixels)        |           |          |                  | 4000×3000 (12,000,000 Pixels)        |           |          |                  |
| Sensor size         | 1/2.3"                               |           |          |                  | 1/2.3"                               |           |          |                  |
| Pixel size          | 1.2µm x 1.2µm                        |           |          |                  | 1.55µm x 1.55µm                      |           |          |                  |
| Spectral response   | 380-650nm                            |           |          |                  | 380-650nm                            |           |          |                  |
| Exposure            | Real-time auto and manual adjustment |           |          |                  | Real-time auto and manual adjustment |           |          |                  |
| White balance       | Real-time auto and manual adjustment |           |          |                  | Real-time auto and manual adjustment |           |          |                  |
| Preview resolution  | 5184×3888@10fps, 3840×2160@15fps     |           |          |                  | 4000×3000@30fps, 3840×2160@30fps     |           |          |                  |
| Power consumption   | DC 12V 5A                            |           |          |                  | DC 12V 5A                            |           |          |                  |
| Wireless protocol   | 5G WiFi IEEE802.11ac                 |           |          |                  | 5G WiFi IEEE802.11ac                 |           |          |                  |

### Models for stereo microscope:

- TE1200-OT / TE2000-OT for Olympus SZX series
- TE1200-NT / TE2000-NT for Nikon SMZ series
- TE1200-LT / TE2000-LT for Leica M125, M165, M205

### DIMENSIONS



# All-in-one Smart Camera

for Trinocular Microscope



5G WiFi  
synchronous live-stream to



JX series all-in-one 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. Thanks to the 15.6" high-definition display, it can perfectly present micro image details.



## ERGONOMIC DESIGN & FLEXIBLE DOVETAIL MOUNTING FOR OPTION

HW series cameras are a good for trinocular microscope users. The structural parts are ingeniously designed, mainly suitable for Olympus, Nikon, Leica and Zeiss microscopes, with stable and durable quality, without damaging the original optical path.





# All-in-one Smart Camera

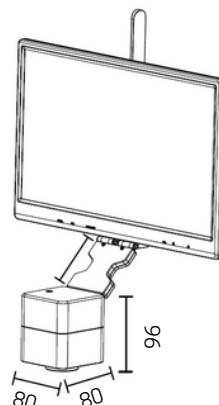
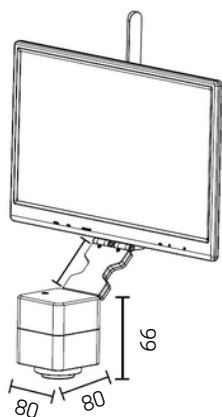
for Trinocular Microscope



## SPECIFICATIONS

| Applicable to       | Olympus CX                           | Nikon Ei | Leica DM | Zeiss Primo Star | Olympus CX                           | Nikon Ei | Leica DM | Zeiss Primo Star |
|---------------------|--------------------------------------|----------|----------|------------------|--------------------------------------|----------|----------|------------------|
| Model               | JX2000-O                             | JX2000-N | JX2000-L | JX2000-Z         | JX1200-O                             | JX1200-N | JX1200-L | JX1200-Z         |
| Physical resolution | 20 MP                                |          |          |                  | 12 MP                                |          |          |                  |
| Image sensor        | SONY IMX147 CMOS                     |          |          |                  | SONY IMX412 CMOS                     |          |          |                  |
| Shutter type        | Electronic rolling                   |          |          |                  | Electronic rolling                   |          |          |                  |
| Max. resolution     | 5184×3888 (20,155,392 Pixels)        |          |          |                  | 4000×3000 (12,000,000 Pixels)        |          |          |                  |
| Sensor size         | 1/2.3"                               |          |          |                  | 1/2.3"                               |          |          |                  |
| Pixel size          | 1.2μm x 1.2μm                        |          |          |                  | 1.55μm x 1.55μm                      |          |          |                  |
| Spectral response   | 380-650nm                            |          |          |                  | 380-650nm                            |          |          |                  |
| Exposure            | Real-time auto and manual adjustment |          |          |                  | Real-time auto and manual adjustment |          |          |                  |
| White balance       | Real-time auto and manual adjustment |          |          |                  | Real-time auto and manual adjustment |          |          |                  |
| Preview resolution  | 5184×3888@10fps, 3840×2160@15fps     |          |          |                  | 4000×3000@30fps, 3840×2160@30fps     |          |          |                  |
| Power consumption   | DC 12V 5A                            |          |          |                  | DC 12V 5A                            |          |          |                  |
| Wireless protocol   | 5G WiFi IEEE802.11ac                 |          |          |                  | 5G WiFi IEEE802.11ac                 |          |          |                  |

## DIMENSIONS



# 4K UHD Smart Camera

for Trinocular Microscope



5G WiFi  
synchronous live-stream to



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.



## ERGONOMIC DESIGN & FLEXIBLE DOVETAIL MOUNTING FOR OPTION

HW series cameras are a good for trinocular microscope users. The structural parts are ingeniously designed, mainly suitable for Olympus, Nikon, Leica and Zeiss microscopes, with stable and durable quality, without damaging the original optical path.



OLYMPUS



Nikon



Leica



ZEISS

# 4K UHD Smart Camera

for Trinocular Microscope

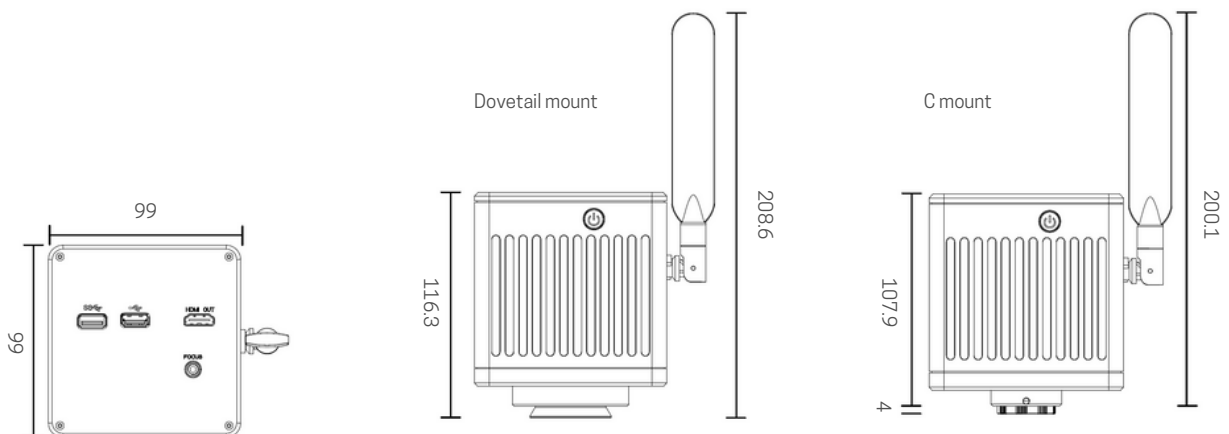


## SPECIFICATIONS

| Applicable to       | Olympus CX                           | Nikon Ei | Leica DM | Zeiss Primo Star | Olympus CX                           | Nikon Ei | Leica DM | Zeiss Primo Star |
|---------------------|--------------------------------------|----------|----------|------------------|--------------------------------------|----------|----------|------------------|
| Model               | HW2000-O                             | HW2000-N | HW2000-L | HW2000-Z         | HW1200-O                             | HW1200-N | HW1200-L | HW1200-Z         |
| Physical resolution | 20 MP                                |          |          |                  | 12 MP                                |          |          |                  |
| Image sensor        | SONY IMX147 CMOS                     |          |          |                  | SONY IMX412 CMOS                     |          |          |                  |
| Shutter type        | Electronic rolling                   |          |          |                  | Electronic rolling                   |          |          |                  |
| Max. resolution     | 5184×3888 (20,155,392 Pixels)        |          |          |                  | 4000×3000 (12,000,000 Pixels)        |          |          |                  |
| Sensor size         | 1/2.3"                               |          |          |                  | 1/2.3"                               |          |          |                  |
| Pixel size          | 1.2µm x 1.2µm                        |          |          |                  | 1.55µm x 1.55µm                      |          |          |                  |
| Spectral response   | 380-650nm                            |          |          |                  | 380-650nm                            |          |          |                  |
| Exposure            | Real-time auto and manual adjustment |          |          |                  | Real-time auto and manual adjustment |          |          |                  |
| White balance       | Real-time auto and manual adjustment |          |          |                  | Real-time auto and manual adjustment |          |          |                  |
| Preview resolution  | 5184×3888@10fps, 3840×2160@15fps     |          |          |                  | 4000×3000@30fps, 3840×2160@30fps     |          |          |                  |
| Power consumption   | DC 12V 5A                            |          |          |                  | DC 12V 5A                            |          |          |                  |
| Wireless protocol   | 5G WiFi IEEE802.11ac                 |          |          |                  | 5G WiFi IEEE802.11ac                 |          |          |                  |

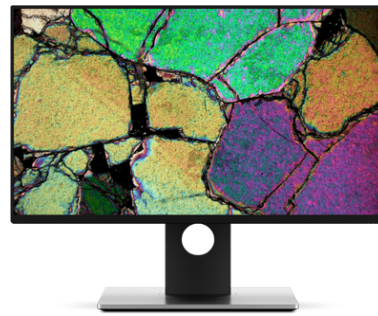
## DIMENSIONS

Unit: mm



# Multi-output Camera

for Trinocular Microscope



5G WiFi  
synchronous live-stream to



The HD series camera provides four output methods: USB, WiFi, HDMI, and Ethernet.

The robust 5G WiFi module enables the camera to support up to 13 smart devices to preview live images simultaneously. Users only need to install the dedicated App on their mobile or tablet and then scan the QR code attached on the camera to automatically connect.

The HDMI output can be used in synchronization with other outputs, which is very useful for meeting, training, seminar and other scenarios that require large-screen display.

The Ethernet output can be connected with router so that all users in the LAN can see the live image. HDMI output can be used together with other outputs.

## ERGONOMIC DESIGN & FLEXIBLE DOVETAIL MOUNTING FOR OPTION

HD series cameras are a good for trinocular microscope users. The structural parts are ingeniously designed, mainly suitable for Olympus, Nikon, Leica and Zeiss microscopes, with stable and durable quality, without damaging the original optical path.



# Multi-output Camera

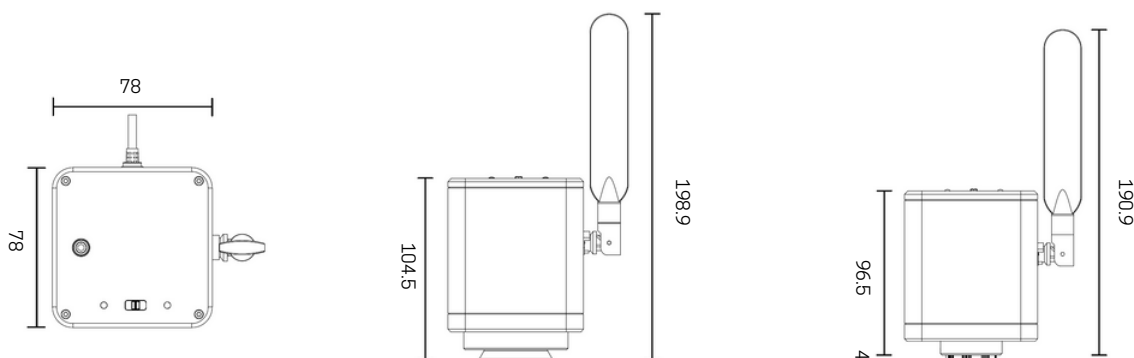
## for Trinocular Microscope



### SPECIFICATIONS

| Applicable to       | Olympus CX                           | Nikon Ei  | Leica DM  | Zeiss Primo Star | Olympus CX                           | Nikon Ei  | Leica DM  | Zeiss Primo Star |
|---------------------|--------------------------------------|-----------|-----------|------------------|--------------------------------------|-----------|-----------|------------------|
| Model               | HD2010W-O                            | HD2010W-N | HD2010W-L | HD2010W-Z        | HD1210W-O                            | HD1210W-N | HD1210W-L | HD1210W-Z        |
| Physical resolution | 20 MP                                |           |           |                  | 12 MP                                |           |           |                  |
| Image sensor        | SONY IMX147 CMOS                     |           |           |                  | SONY IMX412 CMOS                     |           |           |                  |
| Shutter type        | Electronic rolling                   |           |           |                  | Electronic rolling                   |           |           |                  |
| Max. resolution     | 5184×3888 (20,155,392 Pixels)        |           |           |                  | 4000×3000 (12,000,000 Pixels)        |           |           |                  |
| Sensor size         | 1/2.3"                               |           |           |                  | 1/2.3"                               |           |           |                  |
| Pixel size          | 1.2µm x 1.2µm                        |           |           |                  | 1.55µm x 1.55µm                      |           |           |                  |
| Spectral response   | 380-650nm                            |           |           |                  | 380-650nm                            |           |           |                  |
| Exposure            | Real-time auto and manual adjustment |           |           |                  | Real-time auto and manual adjustment |           |           |                  |
| White balance       | Real-time auto and manual adjustment |           |           |                  | Real-time auto and manual adjustment |           |           |                  |
| Preview resolution  | 5184×3888@10fps, 3840×2160@15fps     |           |           |                  | 4000×3000@30fps, 3840×2160@30fps     |           |           |                  |
| Power consumption   | DC 12V 5A                            |           |           |                  | DC 12V 5A                            |           |           |                  |
| Wireless protocol   | 5G WiFi IEEE802.11ac                 |           |           |                  | 5G WiFi IEEE802.11ac                 |           |           |                  |

### DIMENSIONS



# Multi-output Camera

Exclusively for Nikon Inverted Microscope Ts2, MA100N



Option A



High performance camera  
0.43X-C mount optical adapter  
50:50 splitting prism design



Option B



High performance camera 0.43X-C mount optical adapter 50:50 splitting prism design Bracket with USB hub for tablet



Tablet PC



Option C



0.43X-C mount optical adapter  
50:50 splitting prism design



Option D



1X-C mount optical adapter  
50:50 splitting prism design



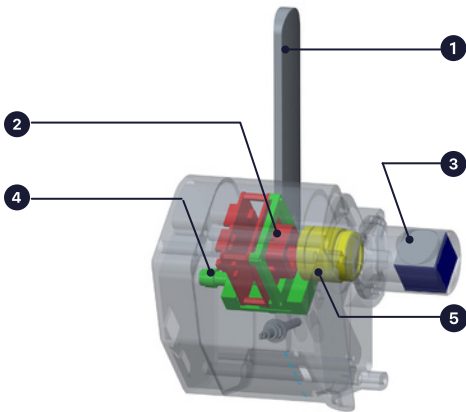
# Multi-output Camera

Exclusively for Nikon Inverted Microscope Ts2, MA100N



## Option A

Built-in optical adapter, no damage to original optical path



- 1. 5G WiFi antenna
- 2. High performance CMOS sensor
- 3. 50:50 splitting prism
- 4. Easy focus with Allen key
- 5. 0.43X relay lens



## Synchronous Output Mode:

- ✓ USB + HDMI
- ✓ WiFi + HDMI
- ✓ WAN + HDMI
- ✓ WAN + WiFi + HDMI

\*USB and WiFi cannot be output at the same time



- 1. 5G WiFi output
- 2. USB output
- 3. HDMI output
- 4. Ethernet output

## USB+HDMI Simultaneous Output



24~27 inch high color gamut UHD monitor is recommended



# Multi-output Camera

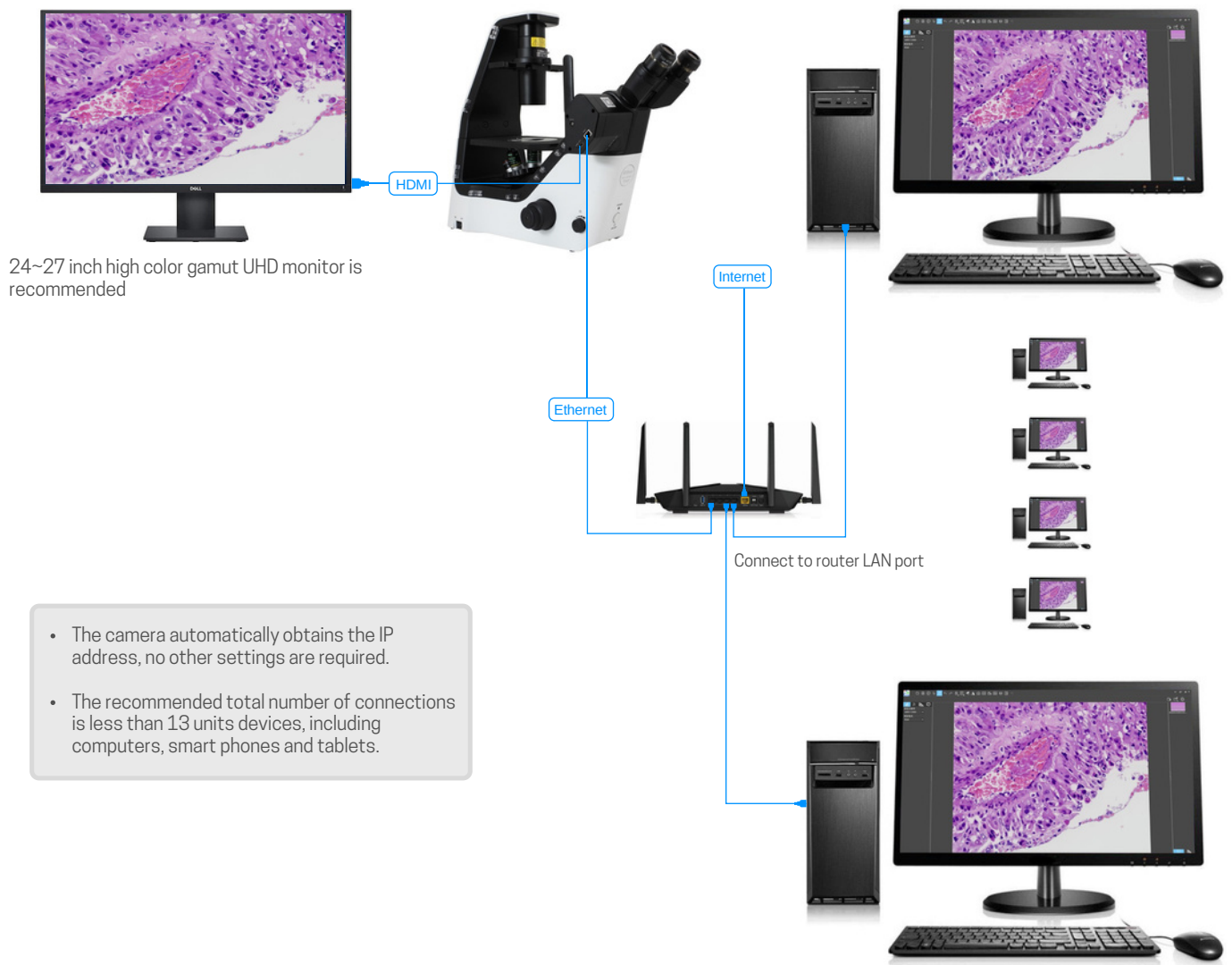
Exclusively for Nikon Inverted Microscope Ts2, MA100N



## 5G WiFi+HDMI Simultaneous Output



## WAN+HDMI Simultaneous Output



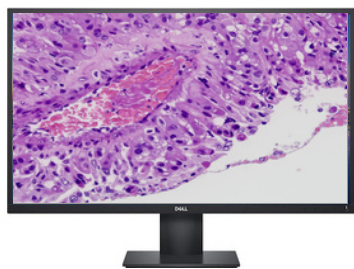


# Multi-output Camera

Exclusively for Nikon Inverted Microscope Ts2, MA100N



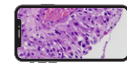
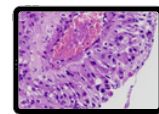
## 5G WiFi+WAN+HDMI Simultaneous Output



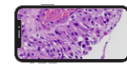
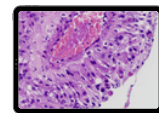
24~27 inch high color gamut UHD monitor is recommended



**5G WiFi**  
synchronous live-stream to



**5G 2.4G WiFi**  
synchronous live-stream to



After the smart phones, tablets and PC are connected to the local wireless router, just simply run the APP and PC software, you will get live-stream image.



- The camera automatically obtains the IP address, no other settings are required.
- The recommended total number of connections is less than 13 units devices, including computers, smart phones and tablets.

# Multi-output Camera

Exclusively for Nikon Inverted Microscope Ts2, MA100N



**Option B** = Option A + Bracket with USB hub for tablet + Tablet

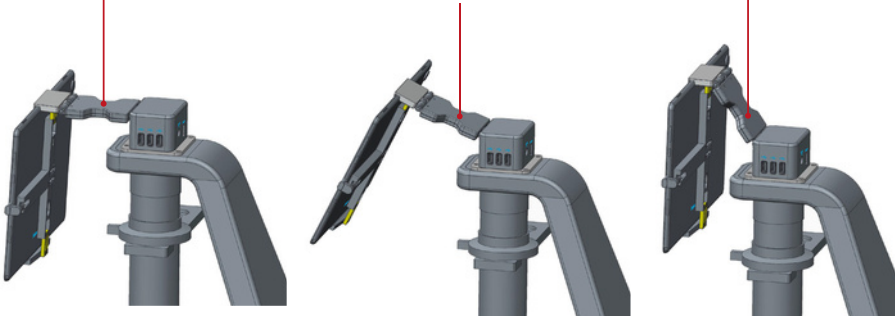
## Ingenious structure with clever functions

USB ports  
Supports mouse, keyboard, and USB flash drive

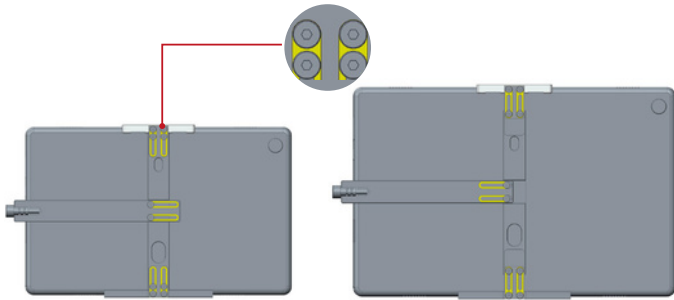
DC12V power in  
Camera USB input



Two-axis adjustable bracket with ergonomic viewing angle.  
The torque remains constant after 5000 times consecutive folding.



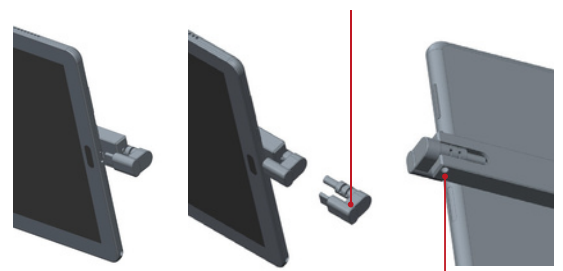
Use double row precision socket head cap screws to lock, which has the advantages of stability and durability



10.4 inch  
Compatible tablet dimensions:  
Length: 245.2-286.5mm; Width: 155-184.7mm;  
Recommended Huawei 10.4~12.6 inch tablet

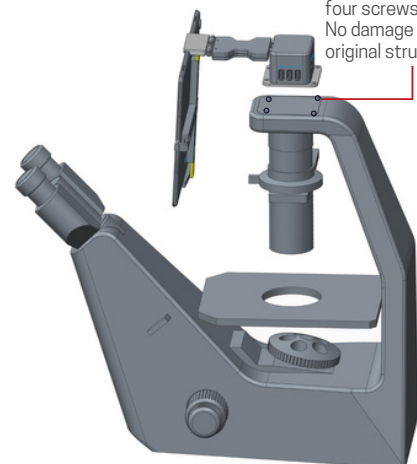
12.6 inch  
thickness: 6.5-8.5mm

U-shaped Type-C interface, for synchronize input image signal and charge tablet.



Lock with hexagon screw, never loose

Uses the microscope original four screws to install bracket. No damage to microscope original structure.



Ultra-thin bezels that won't block the tablet camera.  
Prevent touch screen misuse.



Precision U-shaped brackets, never loose.

# Multi-output Camera

Exclusively for Nikon Inverted Microscope Ts2, MA100N



## Option C



## Option D



# Multi-output Camera

Exclusively for Nikon Inverted Microscope Ts2, MA100N



Option A



Option B



Option C



Option D

## SPECIFICATIONS

| Option              | Option A                             | Option B    | Option A                             | Option B    | Option C        | Option D |
|---------------------|--------------------------------------|-------------|--------------------------------------|-------------|-----------------|----------|
| Model               | HD2010W-TS                           | HD2010W-TSB | HD1210W-TS                           | HD1210W-TSB | CMA43           | CMA01    |
| Physical resolution | 20 MP                                |             | 12 MP                                |             | C mount adapter |          |
| Image sensor        | SONY IMX147 CMOS                     |             | SONY IMX412 CMOS                     |             | /               |          |
| Shutter type        | Electronic rolling                   |             | Electronic rolling                   |             | /               |          |
| Max. resolution     | 5184×3888 (20,155,392 Pixels)        |             | 4000×3000 (12,000,000 Pixels)        |             | /               |          |
| Sensor size         | 1/2.3"                               |             | 1/2.3"                               |             | /               |          |
| Pixel size          | 1.2µm x 1.2µm                        |             | 1.55µm x 1.55µm                      |             | /               |          |
| Spectral response   | 380-650nm                            |             | 380-650nm                            |             | /               |          |
| Exposure            | Real-time auto and manual adjustment |             | Real-time auto and manual adjustment |             | /               |          |
| White balance       | Real-time auto and manual adjustment |             | Real-time auto and manual adjustment |             | /               |          |
| Preview resolution  | 5184×3888@10fps, 3840×2160@15fps     |             | 4000×3000@30fps, 3840×2160@30fps     |             | /               |          |
| Power consumption   | DC 12V 5A                            |             | DC 12V 5A                            |             | /               |          |
| Optical Mount       | 0.43X                                |             | 0.43X                                |             | 0.43X           | 1X       |
| Wireless protocol   | 5G WiFi IEEE802.11ac                 |             | 5G WiFi IEEE802.11ac                 |             | /               |          |

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

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