



# PrimeCam Intervision SMZ

## All-in-one Microscope Camera

Solution for  
Binocular  
Microscopes



**4K**  
ULTRAHD  
High  
Resolution

**5G**  
Wireless  
Wi-Fi Smart

**LIVE**  
View  
Real-Time

Headphone  
Output

**USB  
3.0**  
USB  
Speed



Multiple  
Devices



App for iOS and Android  
Available on the  
App Store  
Available on Google play

Available for  
**Nikon**

**High Resolution camera**, Wi-Fi 5G smart for **multiple devices in real time**, HDMI, 12 MP. Upgrade your **microscope with camera without any adapter**, between the body and observation tube.

Camera  
software  
  
Windows 10

Digital Camera

# PrimeCam Intervision SMZ

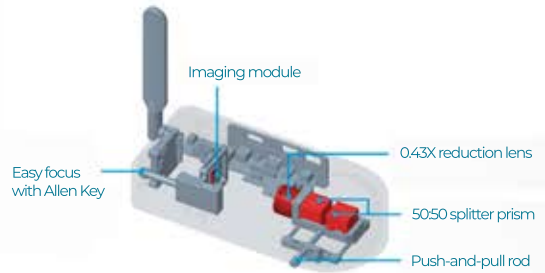
## All-in-one Microscope Camera

Solution for  
Binocular  
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### Product Advantages

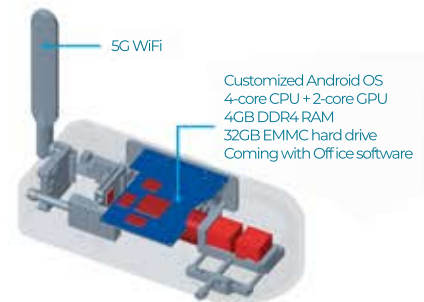
#### Integrated architecture, precise coupling beam splitting

50:50 splitter prism, 0.43X aberration correcting tube lens, precision parfocal mechanism.



#### High capacity control board

With Standalone mode you don't need a computer, to use and manage your camera. Connect a keyboard and mouse to use all camera functions and storage your images.



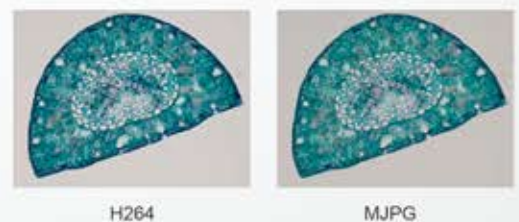
#### Customized built-in software

Compatible with mobile Microsoft Office and WPS office suite, can install third-party Android Apps. System resource calling, microscopic image processing, easy to operate.



#### High frame rate at full resolution true color restoration

H264 image algorithm, dual stream real time output. Accurate color reproduction, under the mirror is the screen, a camera with multiple working modes.



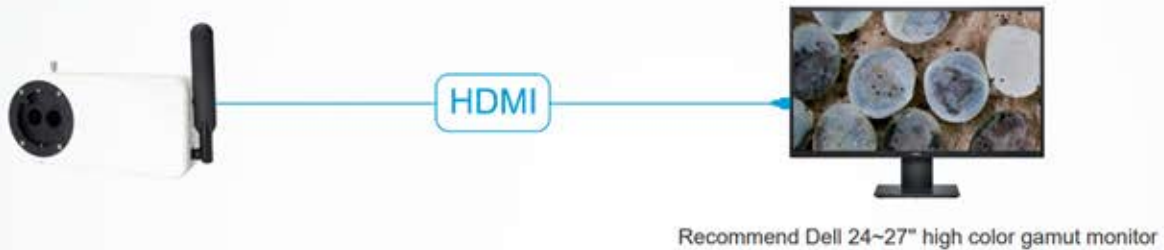
## Scalable linkage APP and PC Software

Mobile terminals or PCs equipped with the company's dedicated software (or APP) can control the camera synchronously through 5G WiFi hotspot in the main board.



## Multiple image output methods

The output combinations are: 5G WiFi, HDMI.



## Accessories, product dimensions and weight

Power adapter and power cord



HDMI cable (2m)

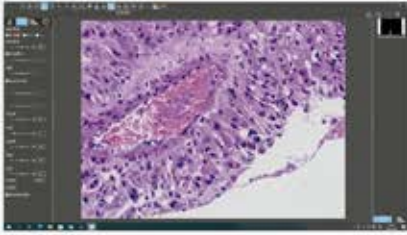


Allen Key (3mm)

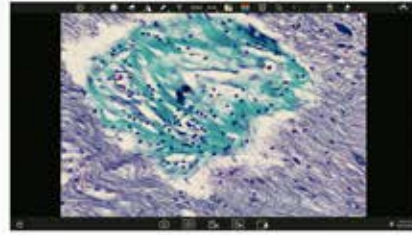




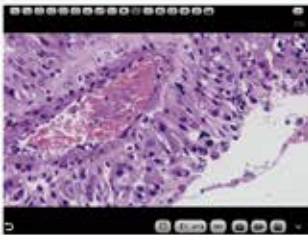
## About Software and APP for Stand-alone Cameras



**For Windows**



**Camera  
Built-in Software**



**For IOS and Android**



## Windows Software: PrimeCam Pro

**5G WiFi** 

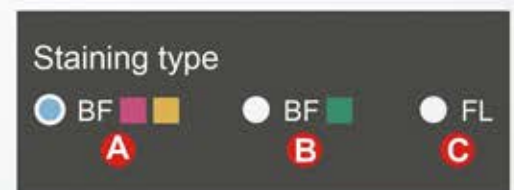
PrimeCam Pro is a ready-to-use Windows version software that requires no additional driver installation. It works with the full range of PrimeCam 12.0MP, and higher resolution cameras and supports WiFi 5G connections, providing users with more versatile and convenient ways to transfer images.



### Staining type based on color calibration

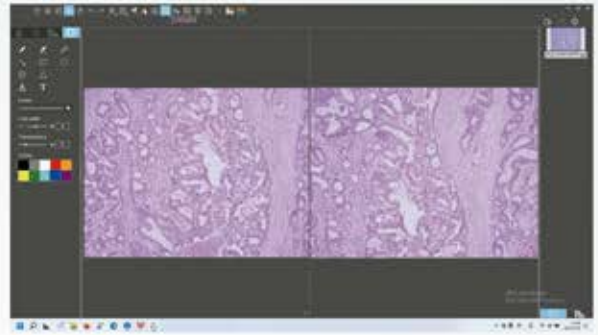
Users can choose different image modes according to the staining method of pathological sections to obtain more accurate image color.

- 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.



## Comparison Mode

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



## Common tools



## Annotation Tools



## Measuring tools

PrimeCam Pro provides the commonly-used measurement tools & scale bar, and supports the generation of reports in PDF, Word or Excel format according to measurements.



name	length	reference(Pixel)	unit	Note
Sample	100	200	µm	

name

Actual length

Reference(Pixel)

Unit

µm

Decimal Places

3

Additional remark

Apply Add Edit Delete

- Export to PDF
- Export to Word
- Export to Excel
- Print
- Export to email

Serial No.	Measure Item	Measured value
1	Circular measurement	Radius=48.500µm Perimeter=304.734µm Area=7389.612µm
2	Concentric circle measurement	Radius1=76.800µm Perimeter1=231.222µm Area1=4254.502µm Length=125.680µm Radius2=17.361µm Perimeter2=115.620µm Area2=2454.300µm

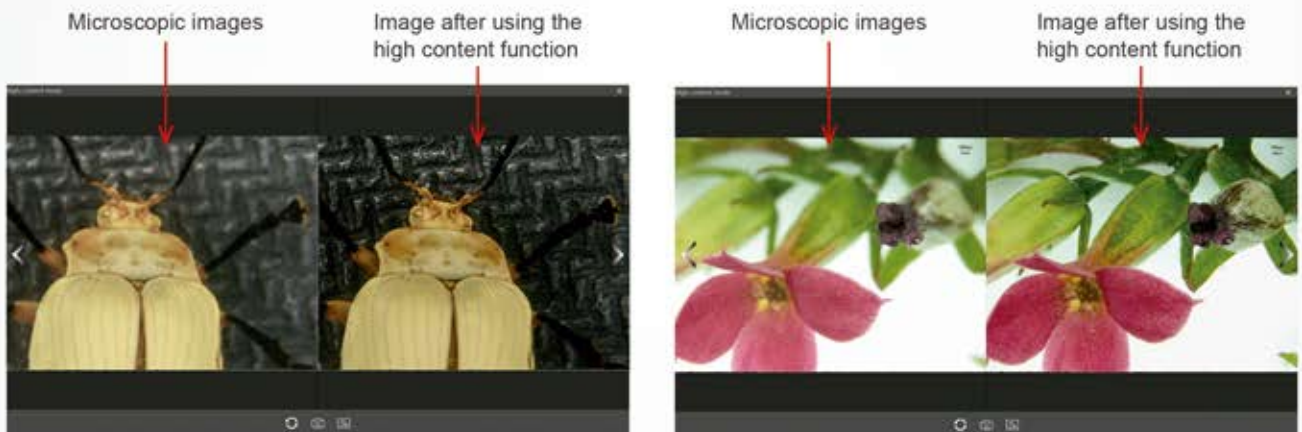
## Camera properties settings

With image properties memory function, restarting the software will restore the image properties value before the software is closed. Support adjusting target brightness, exposure, gain, white balance, image RB parameters, contrast, chroma, saturation, sharpness, gamma, restore the default parameters (Default) and etc.



## Automatic depth-of-field fusion function for high content type images

The automatic depth-of-field fusion function for high content images uses cutting-edge image processing algorithms and real-time fusion technology, aiming to break through the limitation of insufficient depth-of-field in high magnification objective lenses, and to adjust the focal length can obtain a greater depth of field, thus obtaining a sharper image than a real-time single-frame image. Support PrimeCam PRO and higher resolution cameras, take one picture, two archives.



## Manual counting function

Convenient to count the number of cell nuclei and export statistical reports with one click

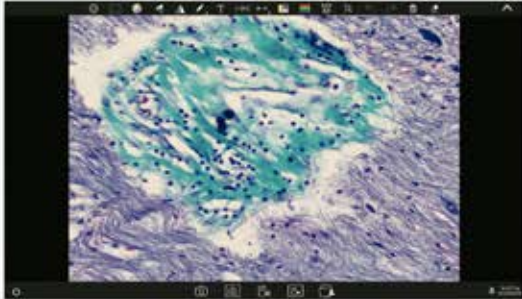


### Statistical reports

Serial	Area	Perimeter	Intensity
1	245	124	50
2	888	401	52
3	202	801	92
4	274	1204	70
5	271	1092	61
6	707	2360	108
7	638	2772	51
8	124	2884	12
9	622	1228	85
10	1877	149	88
11	1788	1281	99
12	1244	1595	117
13	1223	1268	52
14	1002	2028	62
15	1461	2528	71
16	2360	2828	102
17	2628	2271	72
18	2884	1274	47
19	2874	1524	72
20	2442	149	82
<b>Statistics</b>			
Area	1	2	Intensity
Min	71	124	12
Max	2884	2528	117
Avg	2128	2024	72
Std	2884	1274	102
Mean	1474.75	1478.75	22.75
Variance	1049157	888724.6	222.4921
Std Dev	1024.284	941.5728	22.24171
Sample	20		

## Manual counting function

PrimeCam Pro is an Android version APP, which is pre-installed into the PrimeCam cameras or smart cameras at the factory and does not need to be installed by the user. After the camera hardware starts, it will automatically enter the PrimeCam main interface. This APP can not be uninstalled by the user, but it can be updated and upgraded through a USB flash drive.



## Calibration and Measurement

Built-in calibration for 4X, 10X, 40X, 100X of microscopes CX23, Ei, E100, students do not need to calibrate themselves; support creating calibration for other microscope models.



## Application built-in stand-alone Cameras



### Camera properties settings

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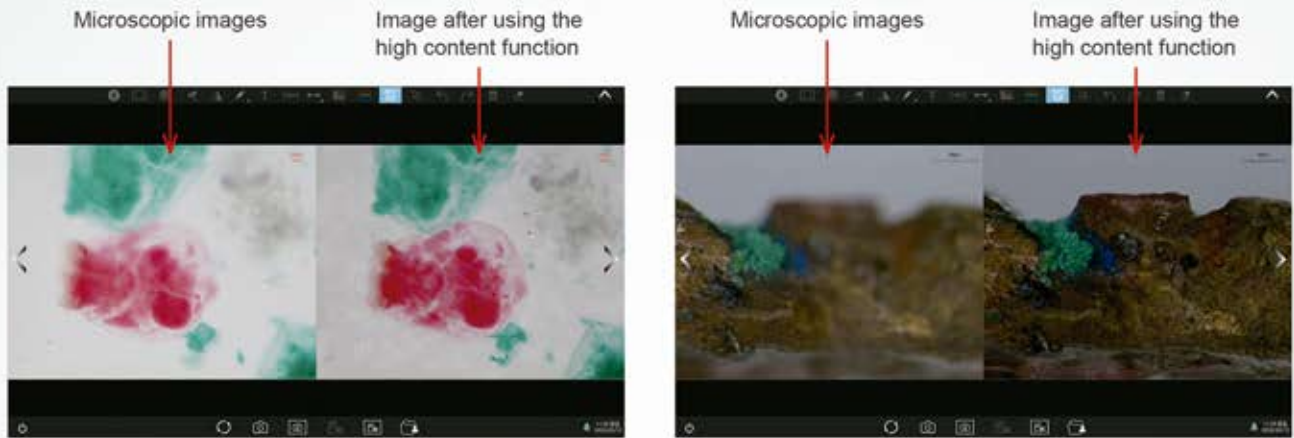
### Preference Settings

Users can set preferences such as language, brightness, sound, video duration, scale bar, back up files to a USB drive, restore factory settings, etc.



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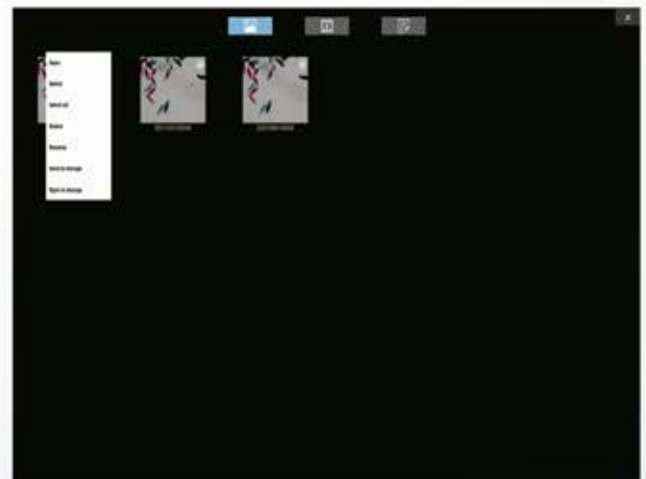


Provide two QR codes for cell phone/tablet to download APP and scan to live stream image.



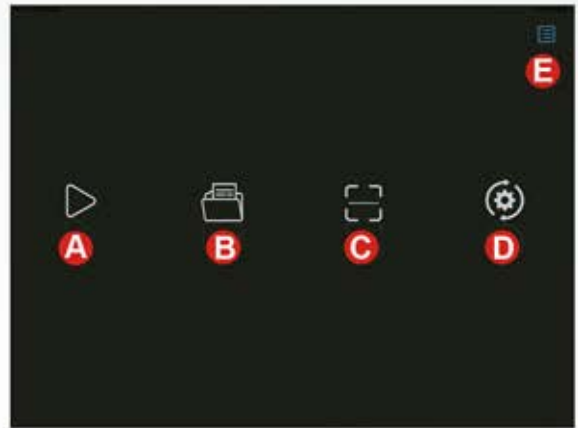
## Image and docs management

Image and video gallery:  
Files can be viewed, renamed, copied to a USB drive, etc.



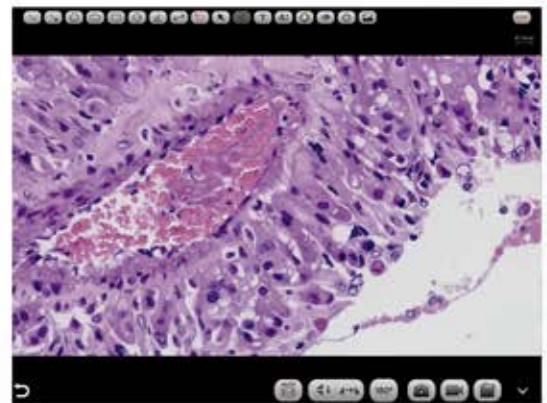


- A Preview:** Image preview window.
- B Folder manage:** photos and videos management.
- C Scan:** scan the camera's serial number QR code to obtain images (to ensure preview speed, it is recommended that no more than 10 smart terminals are connected to the same camera at the same time).
- D Settings:** App settings.
- E Operation guide:** show/hide.



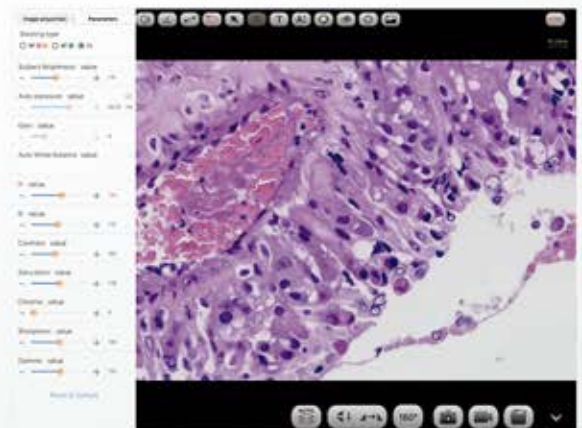
Navigation interface

## Commonly used tools: annotations, measurements, image capture



## Camera settings

Almost adjustment-free, open manual adjustment, support adjusting target brightness, auto/manual exposure, gain, auto/manual white balance (RB channels are adjusted separately), contrast, chromatic, saturation, sharpness, gamma, restore default

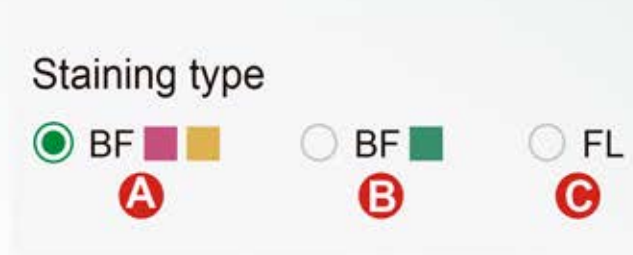


## Staining type based on color calibration

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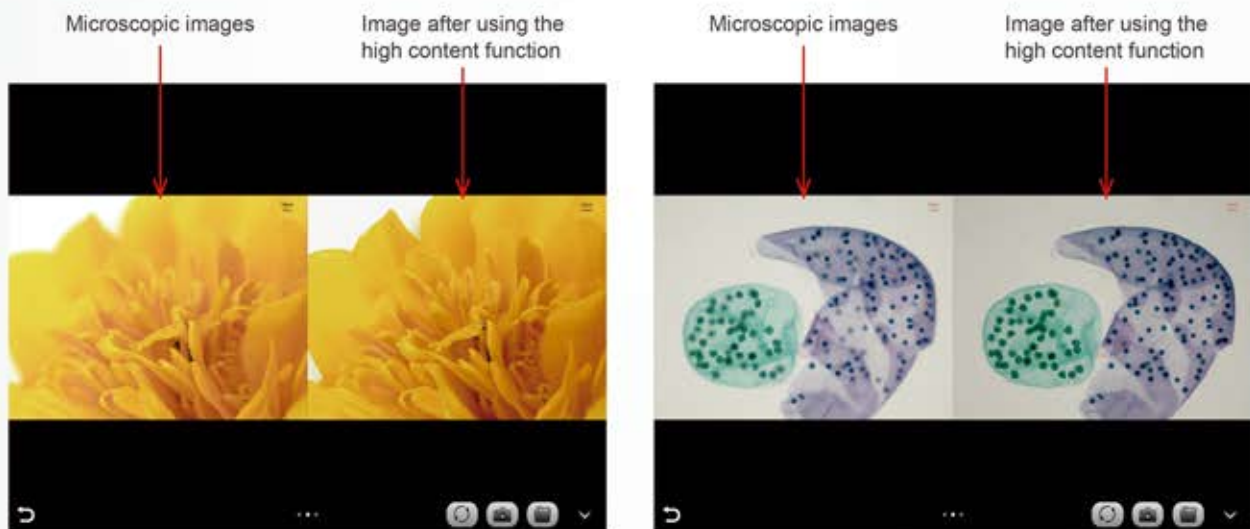
Preset mode

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## Folder Management

Supports viewing pictures and videos, renaming, exporting to local albums, sharing to social networks, deleting, and searching by file name.





## Camera intervision series available:



## Connection Camera

### Download PrimeCam APP



### Scan QRCode camera and get the image in yor in device



## Specifications

Applicable to	Nikon
Models	SMZ12
Physical Resolution	12.0 MP
Image Sensor	SONY IMX412 CMOS
Exposure Mode	Rolling Shutter
Maximum Resolution	4000x3000 (12000Pixels)
ISO sensitivity	Equivalent to 100-12800
Sensor Size	1/2.3"
Pixel Size	1.55µm x 1.55µm
Spectral Response	380-650nm
Exposure Capability	Real-time auto and manual adjustment
Exposure Time	10µs x 333ms
White Balance	Real-time auto and manual RB adjustment
Preview Resolution	4000x3000@30fps - 3840x2160@30fps
Power Suplly	DC 12V 5A
WiFi Protocol	5G WiFi IEEE802.11ac
Conversion Bit Depth	12bit
Software and App	PrimeCam

## Certifications

1. Comply with FCC certification of The US Federal Communication Commission.
2. Comply with European (standard) safety CE certification.
3. Comply with the MIC certification issued by the Ministry of Internal Affairs and Communications of Japan (Electric Wave Method and Electro-Optical Communication Business Law).
4. Comply with Jate certification of Japaneses telecommunications law directive.
5. Comply with the "Directive on the Restrictive of the Use of Certain Hazardous Substances in Eletrical and Eletronic Equipment" (RoHS) Directives in accordance with EU legislation.



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