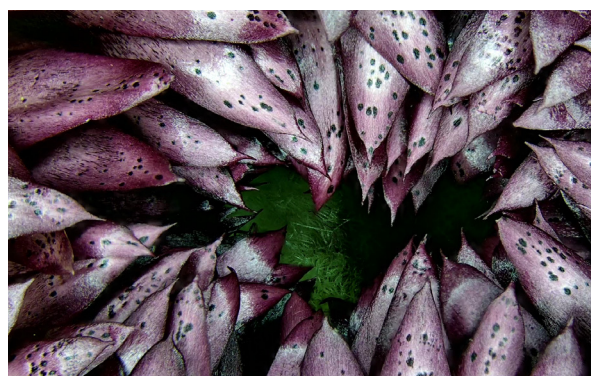
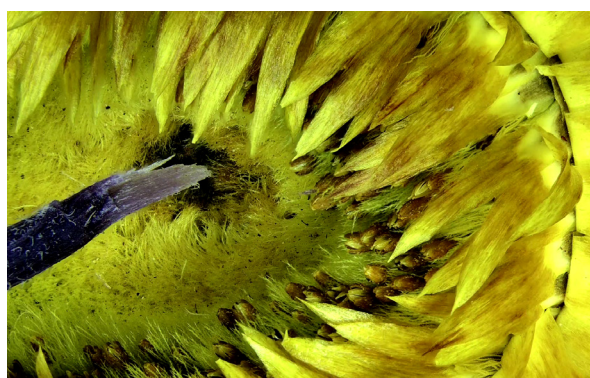
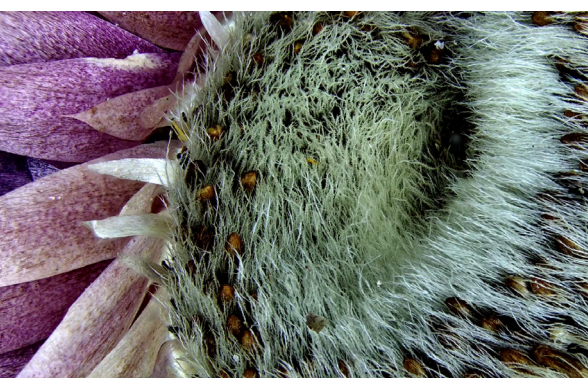
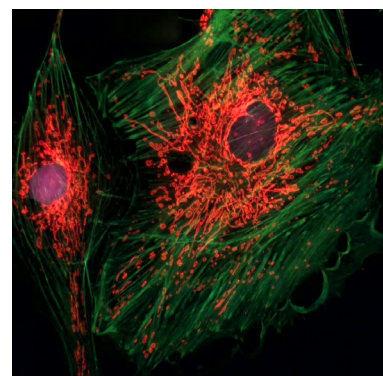
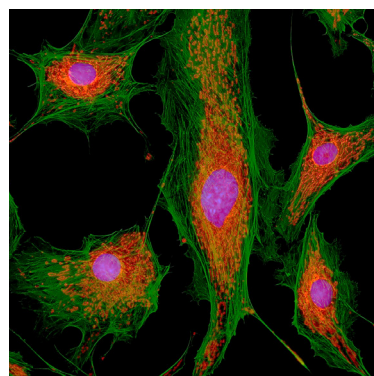
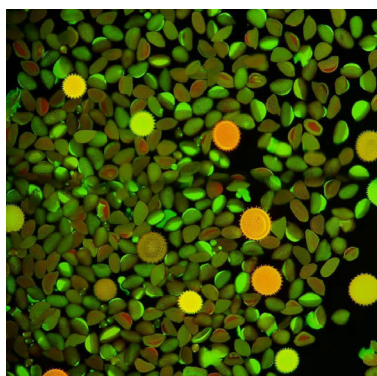
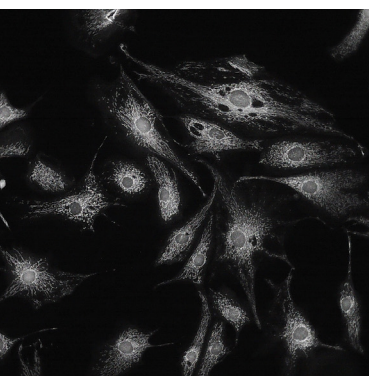
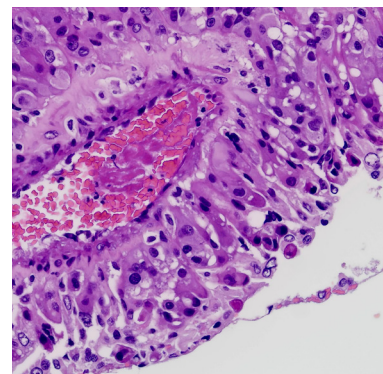
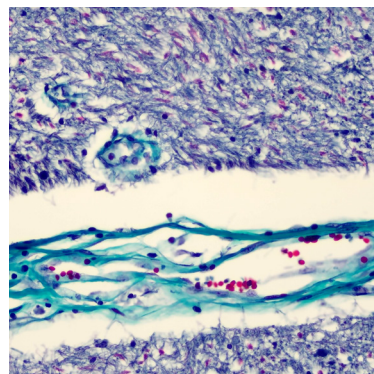
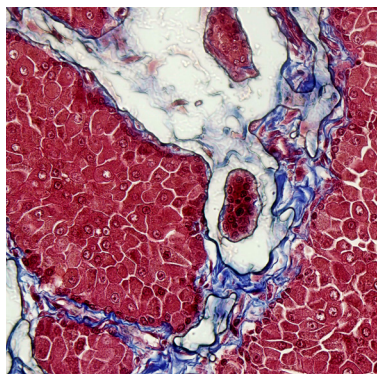
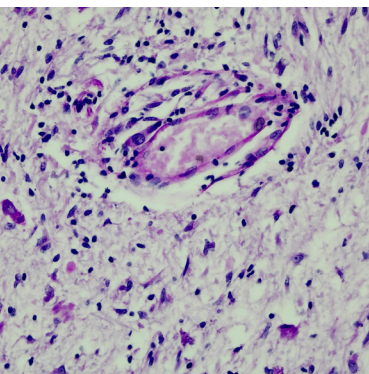


INNOVATED FOR TOP BRAND MICROSCOPES

Create a Stunning Microscope Imaging System for You



For Inverted Microscopes



Applicable Model:
Ts2

Solution ①

WiFi Camera (For BF)
With 0.43X tube lens



Solution ②

Smart display camera (For BF)
With 0.43X tube lens



Function Comparison

● Standard ○ Optional – N/A

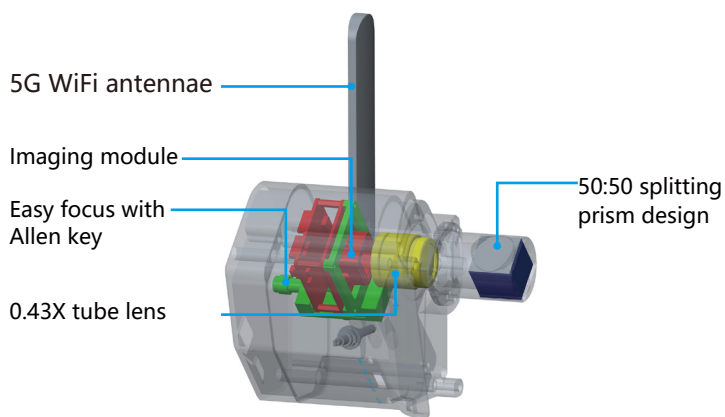
	Solution①	Solution②
Built-in Android OS	–	●
Pre-installed Office suits	–	●
15.6"high color gamut monitor	–	●
Image output methods		
5G WiFi	●	●
USB	●	–
HDMI or DP	● HDMI	● DP
Network	●	–

Solution① WiFi Camera

Multiple Outputs,Seamlessly Fits to Your Microscope



Features & Benefits



- Features a 50:50 light-splitting design that preserves the original optical system.
- Professional NPBS beam splitter prism to ensure true color reproduction.
- Includes a high-power 0.43X tube lens for a wide field of view.



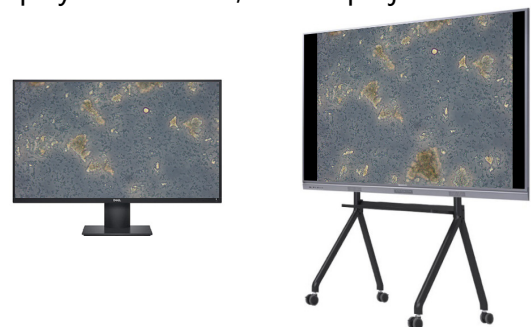
5G WiFi output

Compatible with various devices and operating systems, including Windows, iOS, and Android. Mobile devices can access the system by scanning a QR code.



HDMI output

Connects to PC via WiFi, with HDMI output for display on monitors, TVs and projectors.



No software, only live images are available, at which point the camera image properties can be controlled via WiFi or USB.



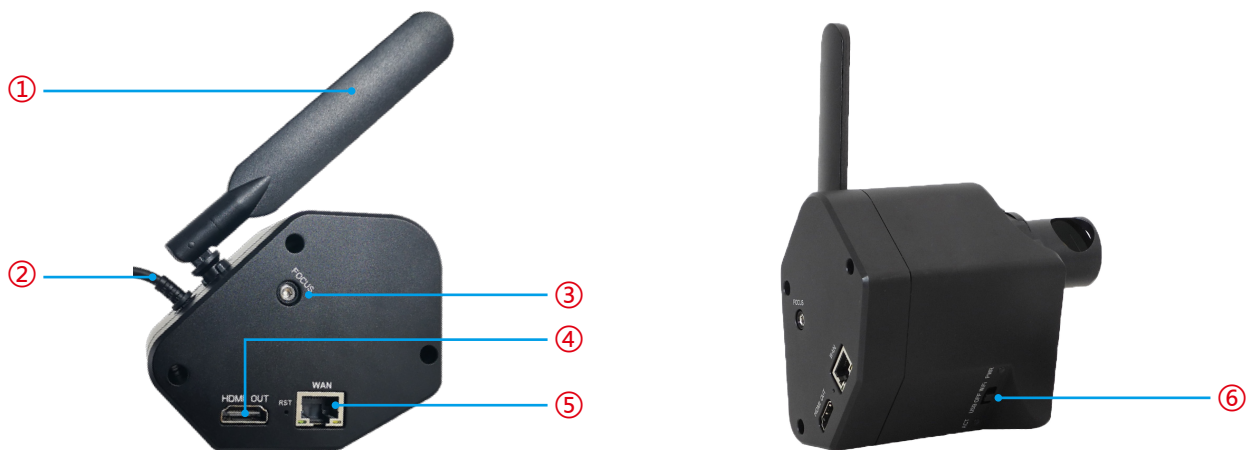
USB output

Supports connection to a computer via USB 2.0. You can utilize the KoPa Capture Pro software or any standard UVC 2.0 protocol software to access the camera's real-time images without the need for driver installation.



Network output

Connect the camera to the router or switch through the network cable, up to 13 units computers, mobile phones and tablets in the LAN can access and control the images as long as they have installed the software and APP.



①	5G WiFi antenna	5G WiFi signal transmission to connect the camera to capture images or control the camera
②	USB output/ power supply	Two in one: data transmission and power supply.
③	Easy focus with allen key	Simple and precise focus adjustment for synchronization between eyepiece and monitor.
④	HDMI output interface (only 12.0MP camera)	The display device is connected and the image can be displayed, but the image cannot be controlled.
⑤	Network output interface	Connect the camera to the router or switch through the network cable.
⑥	USB/OFF/WiFi working mode switching	Two working modes switching: USB and WiFi.

Specifications

Name	WiFi Camera(for BF)
Models	DF12
Category	GB-NS-12
Physical resolution	12.0MP
Image sensor	SONY IMX412 CMOS
Exposure mode	Rolling Shutter
Maximum resolution	4000×3000 (12,000,000Pixels)
ISO sensitivity	Equivalent to 100-12800
Sensor size	1/2.3"
Pixel size	1.55μm×1.55μm
Spectral response	380-650nm
Exposure capability	Real-time auto and manual adjustment
Exposure time	10μs-333ms
White balance	Real-time auto and manual RB adjustment
Preview resolution	4000×3000@30fps,3840×2160@30fps
Power supply	DC 5V 3A
Wireless protocol	5G WiFi IEEE802.11ac
A/D conversion bit depth	12bit
Optical interface	0.43X
Software and App	Windows Software:KoPa Capture Pro, App:KoPa WiFi Lab

Accessories

HDMI cable
(optional)

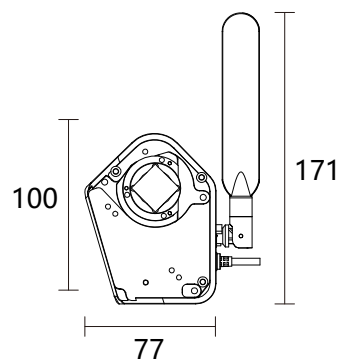
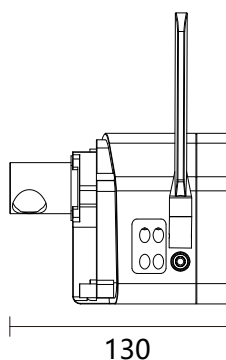


Gigabit Ethernet
cable(optional)



Dimensions(Unit:mm)

Net weight ≈1.1kg

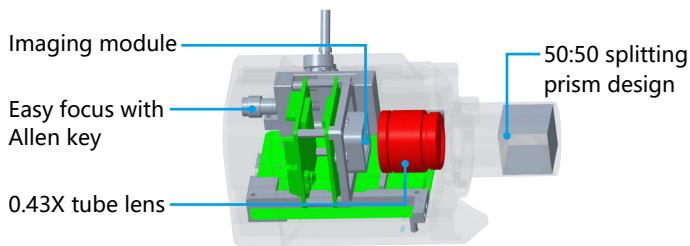


Solution② Smart Display Camera

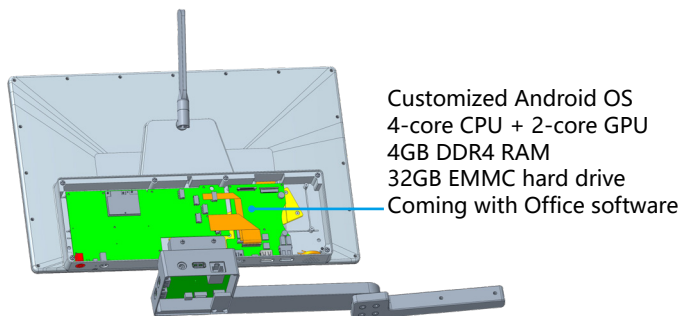
Build a PC-free Imaging System for Your Microscope



Features & Benefits



- Features a 50:50 light-splitting design that preserves the original optical system.
- Professional NPBS beam splitter to ensure true color reproduction.
- Includes a high-power 0.43X tube lens for a wide field of view.



- Built-in operating system Android processor RK3399, office suit(Word,Excel, Powerpoint) are preinstalled, no need computer.
- Integrated with 15.6" high-definition ISP display.
- Comes with an imaging app that displays live images upon startup.
- 32GB built-in eMMC with support for external U-disk storage for pictures and videos.
- USB interface allows for easy connection of keyboards and mouse.



5G WiFi and DP are simultaneous outputs



5G WiFi output

Compatible with various devices and operating systems, including Windows, iOS, and Android. Mobile devices can access the system by scanning a QR code. connects to PC via WiFi.



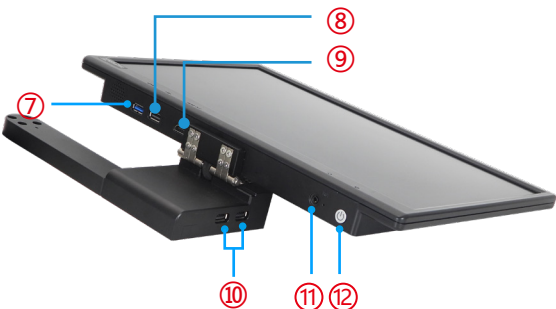
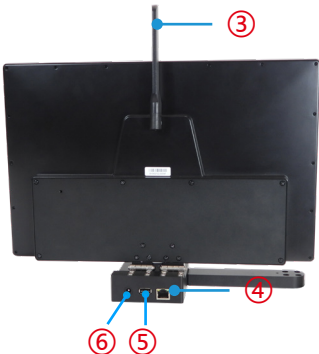
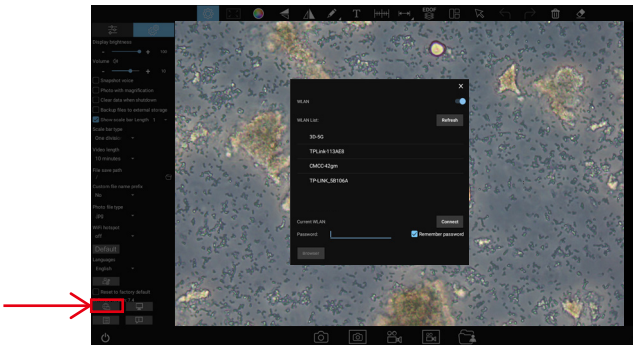
DP output

With DP output for display on monitors,Tvs and projectors.



Connecting to the Internet

The camera supports wireless Internet connection (only supports 5G WiFi router signal), by entering the password of any 5G WiFi network , you can directly open the browser to access the Internet. This will allow you to take advantage of online features and functionalities directly from your camera.



①	Easy focus with allen key	Simple and precise focus adjustment for synchronization between eyepiece and monitor.
②	Network output interface	Connected to the screen via a network cable, the image is captured via software.
③	5G WiFi antenna	5G WiFi signal transmission to connect the camera to capture images or control the camera

④	Network output interface	Connected to the screen via a network cable, the image is captured via software.
⑤	USB 2.0 interface	Can power the camera (output voltage 5V, maximum output current 2A)
⑥	Power Input	DC 12V 3A
⑦	USB 3.0 interface	Can be connected to a mouse, keyboard, USB flash drive (for copying videos and images).
⑧	USB 2.0 interface	
⑨	DP output interface	Through the DP cable, connect with the display device and transmit.
⑩	USB 2.0 interface	Can be connected to a mouse, keyboard, USB flash drive (for copying videos and images).Or you can use the manufacturer's optional USB to DC5V power cord to power the Ei and Si.
⑪	Headphone and microphone ports	Connect with headset cable for audio output.
⑫	Power switch	Switch on/off.

Specifications

Name	Smart Display Camera(for BF)
Models	YY48
Category	SD-NS-12
Physical resolution	12.0MP
Image sensor	SONY IMX412 CMOS
Exposure mode	Rolling Shutter
Maximum resolution	4000×3000 (12,000,000Pixels)
ISO sensitivity	Equivalent to 100-12800
Sensor size	1/2.3"
Pixel size	1.55μm×1.55μm
Spectral response	380-650nm
Exposure capability	Real-time auto and manual adjustment
Exposure time	10μs-333ms
White balance	Real-time auto and manual RB adjustment
Preview resolution	4000×3000@30fps,3840×2160@30fps
Power supply	DC 12V 3A
Wireless protocol	5G WiFi IEEE802.11ac
A/D conversion bit depth	12bit
Tube lens	0.43X
Software and App	Windows Software:KoPa Capture Pro,Embedded software:KoPa WiFi Lab AO, App:KoPa WiFi Lab

15.6" high color gamut display

Number of pixels	1920(horizontal) x 1080 (vertical)
Pixels arrangement	RGB vertical stripe
Colour gamut	100% (sRGB)
Display number of colors	16.7M(8Bit)
Surface treatment	Anti-glare
Surface hardness	3H
Viewing angel range	170 horizontal, 170 vertical
Contrast	800
Brightness	500cd/m² (average of 5 points)

Accessories

Power adapter and power cord
(Optional Chinese, American, European, Australian, Korean, British standard etc.)



USB mouse and keyboard

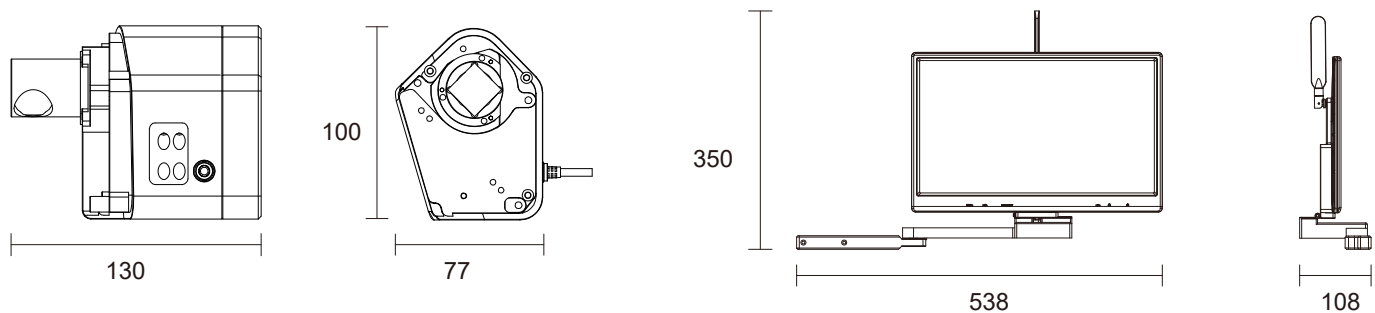


Gigabit Ethernet cable



Dimensions(Unit:mm)

Net weight ≈2.6kg



For Inverted Microscopes



Applicable Model:
Ts2-FL

Solution ③

Smart display camera(For Color FL)
With 0.43X tube lens
(8.3MP)



Solution ④

Smart display camera(For Color FL)
With 0.63X tube lens
(2.0MP)



Solution ⑤

Smart display camera(For Mono FL)
With 0.63X tube lens
(2.3MP)



Function Comparison

● Standard ○ Optional – N/A

	Solution③	Solution④	Solution⑤
Built-in Android OS	●	●	●
Pre-installed Office suits	●	●	●
15.6"high color gamut monitor	●	●	●
Image output methods			
5G WiFi	●	●	●
USB	–	–	–
HDMI or DP	● DP	● DP	● DP
Network	–	–	–

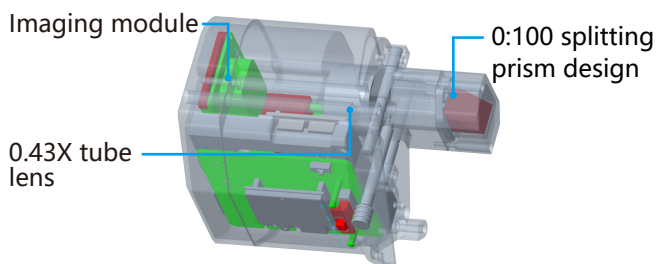
Solution③, ④, ⑤ Smart Display Camera

Build a PC-free Imaging System for Your Microscope



Features & Benefits

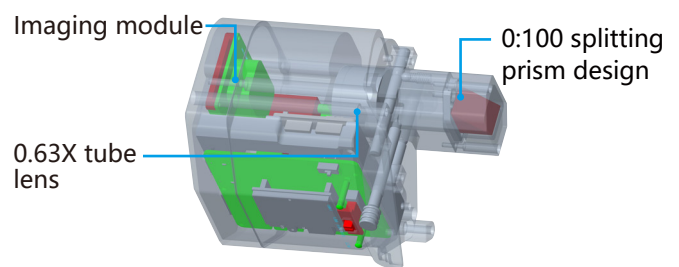
- Features a 0:100 light-splitting design that preserves the original optical system.
- Professional NPBS beam splitter to ensure true color reproduction.
- Includes a high-power 0.43X tube lens for a wide field of view.



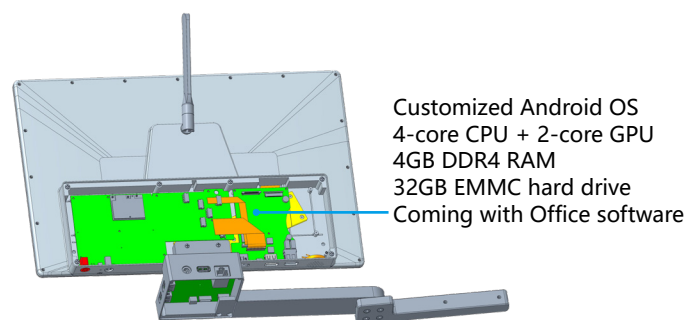
Solution③

- Built-in Operating System Android processor RK3399, office suit(Word,Excel, Powerpoint) are preinstalled, no need computer.
- Integrated with 15.6" high-definition ISP display.
- Comes with an imaging app that displays live images upon startup.
- 32GB built-in eMMC with support for external U-disk storage for pictures and videos.
- USB interface allows for easy connection of keyboards and mouse.

- Features a 0:100 light-splitting design that preserves the original optical system.
- Professional NPBS beam splitter to ensure true color reproduction.
- Includes a high-power 0.63X tube lens for a wide field of view.



Solution④ and Solution⑤



Customized Android OS
4-core CPU + 2-core GPU
4GB DDR4 RAM
32GB EMMC hard drive
Coming with Office software



5G WiFi and DP are simultaneous outputs



5G WiFi output

Compatible with various devices and operating systems, including Windows, iOS, and Android. Mobile devices can access the system by scanning a QR code. connects to PC via WiFi.



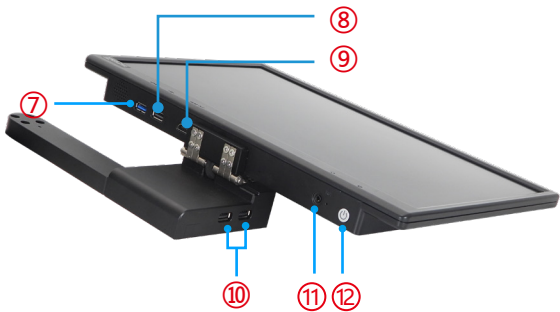
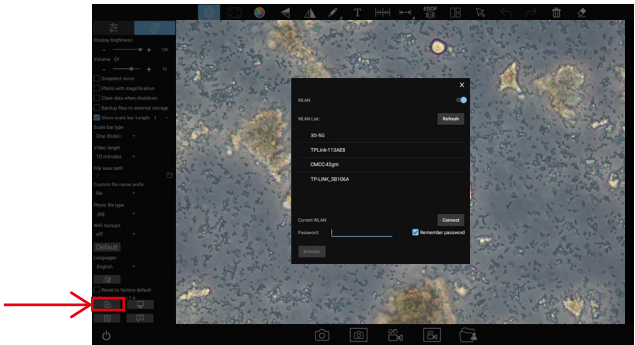
DP output

With DP output for display on monitors, TVs and projectors.



Connecting to the Internet

The camera supports wireless Internet connection (only supports 5G WiFi router signal), by entering the password of any 5G WiFi network , you can directly open the browser to access the Internet. This will allow you to take advantage of online features and functionalities directly from your camera.



①	Easy focus with allen key	Simple and precise focus adjustment for synchronization between eyepiece and monitor.
②	Network output interface	Connected to the screen via a network cable, the image is captured via software.
③	5G WiFi antenna	5G WiFi signal transmission to connect the camera to capture images or control the camera

④	Network output interface	Connected to the screen via a network cable, the image is captured via software.
⑤	USB 2.0 interface	Can power the camera (output voltage 5V, maximum output current 2A)
⑥	Power Input	DC 12V 3A
⑦	USB 3.0 interface	Can be connected to a mouse, keyboard, USB flash drive (for copying videos and images).
⑧	USB 2.0 interface	
⑨	DP output interface	Through the DP cable, connect with the display device and transmit.
⑩	USB 2.0 interface	Can be connected to a mouse, keyboard, USB flash drive (for copying videos and images).Or you can use the manufacturer's optional USB to DC5V power cord to power the Ei and Si.
⑪	Headphone and microphone ports	Connect with headset cable for audio output.
⑫	Power switch	Switch on/off.

Specifications

15.6" high color gamut display

Number of pixels	1920(horizontal) x 1080 (vertical)
Pixels arrangement	RGB vertical stripe
Colour gamut	100% (sRGB)
Display number of colors	16.7M(8Bit)
Surface treatment	Anti-glare
Surface hardness	3H
Viewing angel range	170 horizontal, 170 vertical
Contrast	800
Brightness	500cd/m ² (average of 5 points)

Name	Smart Display Camera(for color FL)
Models	YY48
Category	SD-NS-08
Physical resolution	8.3MP
Image sensor	SONY IMX678 CMOS
Exposure mode	Rolling Shutter
Maximum resolution	3840×2160 (8,294,400Pixels)
ISO sensitivity	Equivalent to 100-12800
Sensor size	1/1.8"
Pixel size	2μm×2μm
Spectral response	400-650nm
Exposure capability	Real-time auto and manual adjustment
Exposure time	10μs-10s
White balance	Real-time auto and manual RB adjustment
Preview resolution	3840×2160@30fps
Power supply	DC 12V 3A
Wireless protocol	5G WiFi IEEE802.11ac
A/D convertion bit depth	12bit
Tube lens	0.43X
Software and App	Windows Software:KoPa Capture Pro,Embedded software:KoPa WiFi Lab AO, App:KoPa WiFi Lab

Name	Smart display camera (color)	Smart display camera (monochrome)
Dovetail models	YY48	YY48
Category	SD-NS-02	SD-NS-2.3
Physical resolution	2.0MP(Color)	2.3MP(Monochrome)
Image sensor	SONY IMX482 CMOS	SONY IMX174 CMOS
Exposure mode	Rolling Shutter	Global Shutter
Maximum resolution	1920×1080 (2,073,600 Pixels)	1920×1200 (2,304,000Pixels)
ISO sensitivity	Equivalent to 100-12800	Equivalent to 100-12800
Sensor size	1/1.2"	1/1.2"
Pixel size	5.8μm×5.8μm	5.86μm×5.86μm
Spectral response	380-650nm	380-650
Exposure capability	Real-time auto and manual adjustment	Real-time auto and manual adjustment
Exposure time	10μs-9500ms	10μs-333ms(60fps),10μs-7000ms(30fps)
Read out the noise	1.5-12.9e	3.5e-6e
QE peak	85%	100%
Full well charge	51.5ke	32ke
White balance	Real-time auto and manual RB adjustment	N/A
Preview resolution	1920×1080@60fps	1920×1200@60fps,1920×1080@30fps(default)
Power supply	DC 12V 3A	DC 12V 3A
Wireless protocol	5G WiFi IEEE802.11ac	5G WiFi IEEE802.11ac
A/D conversion bit depth	10bit	12bit
Tube lens	0.63X	0.63X
Software and App	Windows Software: KoPa Capture Pro, Smart APP: KoPa WiFi Lab AO, App for mobiles: KoPa WiFi Lab	

Accessories

Power adapter and power cord
(Optional Chinese, American, European, Australian, Korean, British standard etc.)



USB mouse and keyboard

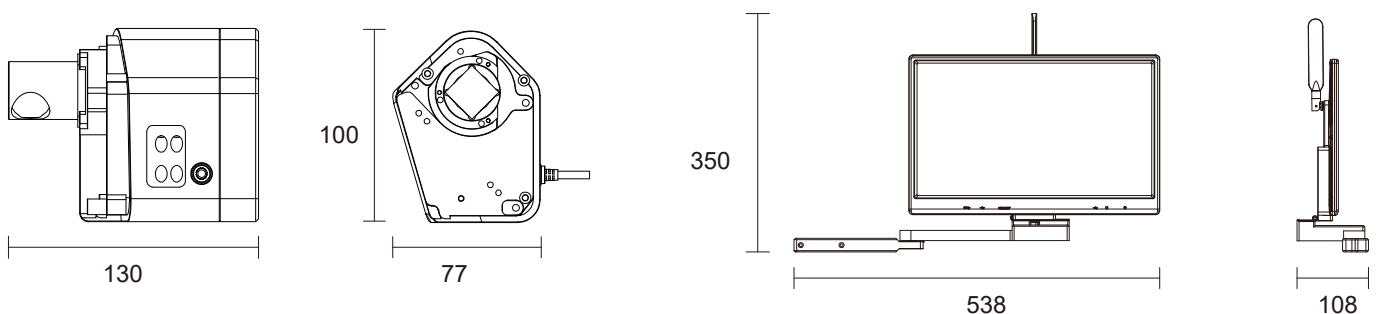


Gigabit Ethernet cable



Dimensions(Unit:mm)

Net weight ≈2.6kg



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 Japanese telecommunications law directive.
5. Comply with the “Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment” (RoHS) Directives in accordance with EU legislation.

Evaluation object	Certification	Certificate File Name & Report	Certificate number & corresponding report number
WF01A(5G WiFi 11ac)module Certification	US FCC Report	SZEM180100024801-5G wifi RPT-WF01A FCC Report	SZEM180100024801
		SZEM180100024802-RT-WF01A FCC Report	SZEM180100024802
		Appendix A-Photographs of EUT Constructional Details for SZEM1801000248CR-FCC	SZEM1801000248CR
	US FCC ID Certification	2AFO3WF01A_NII-WF01A FCC ID	2AFO3WF01A
	EU CE report	SZEM180100024901 EN301489 RPT-WF01A CE Report	SZEM180100024901
		SZEM180100024902 WIFI5G RPT-WF01A CE Report	SZEM180100024902
	Japanese MIC Certification	CSRT180084-WF01A Japanese MIC Certification	CSRT180084
	Japanese JATE Certification	CSTT180018-WF01A Japanese JATE Certification	CSTT180018

Patented

Patent category	Patent name	Patent number
Design patent	Electronic eyepiece	ZL 2015 3 0193227.8
	Wireless electronic eyepiece	ZL 2015 3 0193223.X
	Electronic eyepiece with spectroscopic system	ZL 2019 3 0331144.9
	Microscope (with splitting prism camera)	ZL 2019 3 0717439.X
	Microscope with camera	ZL 2019 3 0717442.1
Utility model patents	WiFi microscope eyepiece	ZL 2015 2 0296469.4
	Electronic eyepiece	ZL 2015 2 0426409.X
	Wireless electronic eyepiece	ZL 2015 2 0426313.3
	Microscope with displayer	ZL 2019 2 0928962.1
	Electronic eyepiece with splitting prism system	ZL 2019 2 1022863.3

Software copyright

Category	Name of software	Platform	License number
Computer software copyright registration certificate	KoPa Capture Pro	Windows	2021SR1287730
	KoPa WiFi Lab AO	Android	2021SR1304520
	KoPa WiFi Lab	Android	2019SR0117768
		iOS	2019SR0028558
	KoPa View	Linux	2024SR1617066

KoPa[®]

GuangZhou Ostec Electronic Technology Co.,Limited

Manufacturer: No.8 West Lane, Jiangcheng Road, Bangjiang East Village,Dalong street, Panyu District, Guangzhou, China.



High-Tech Enterprise certificate number:
GR202344009665



ISO9001 Verification No:00223Q26818R3S

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