MICAPS
ISVIS4K8MPCA

The ISVIS4K8MPCA is a versatile all-in-one camera that features a 13.3-inch display and a 4K image acquisition and processing system, ideal for capturing digital images from stereo microscopes, biological microscopes, or for use in online interactive teaching.

Features

- The Camera and display screen are integrated together, eliminating wiring and facilitating installation
- Sony STARVIS 2 back-illuminated CMOS sensor
- The average delay of display screen output is 40ms
- Support HDMI2.0 interface connection to external displays for synchronous output,
- 4K/1080P auto switching according to monitor resolution
- Support USB 3.0 interface for synchronous output of real-time video
- Provide real-time video WDR output function
- Provide real-time video EDF function
- USB flash drive for captured image and video storage, support local preview and playback
- Excellent ISP with local tone mapping and 3D denoising
- Provide two sets of default ISP parameters for biological microscope and stereo microscope
- Embedded MicroView for the control of the Camera and image processing, supporting automatic edge finding and measurement functions
- New browsing function, providing rich file operation functions, image to image comparison, image to real-time video comparison, multi-image EDF and other functions

Applications

- Digital laboratory, medical research
- Industrial visual (PCB examination, IC quality control)
- Medical treatment (pathological observation)
- Food (microbial colony observation and counting)
- Aerospace, military (high sophisticated weapons)
- Scientific research, education (teaching, demonstration and academic exchanges)

Model	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
ISVIS4K8MPCA	IMX678(C) 1/1.8"(7.68x4.32)	2.0x2.0	3541mv with 1/30s 0.15mv with 1/30s	60@3840x2160	1X1	0.019~1000

C: Color.

Model	Video Saving(FPS/Resolution)	HDMI2.0(FPS/Resolution)	USB3.0(FPS/Resolution)	WiFi(FPS/Resolution)
ISVIS4K8MPCA	60@3840x2160 60@1920x1080	60@3840x2160 60@1920x1080	30@3840x2160 45@2688x1512 60@1920x1080	30@3840x2160 60@1920x1080 60@1280x720

Interface or Button	Function Description
USB 2.0	Connect USB mouse for easy operation with embedded MicroView software
USB Video	Connect PC or other host device to realize video image transmission
USB	Connect USB flash drive to save pictures and videos. Connect 5G WiFi module to transfer video wirelessly in real time Connect USB microphone for audio and video recording
ON/OFF	Power switch (Short press to turn on, long press to turn off)
HDMI OUT	Comply with HDMI2.0 standard. Used to extend 4K/1080P format video output and supporting automatic switch between 4K and 1080P format according to the connected monitors
LED	LED status indicator
+/-	Display brightness adjustment button
MENU	Display menu key
DC 12V2A	Power adapter connection (12V/2A)

Interface or Button	Function Description
HDMI Interface	Synchronize video output through HDMI OUT interface, comply with HDMI2.0 standard; 60fps@4K Or 60fps@1080P
WiFi Interface	Connecting 5G WiFi adapter (USB3.0 slot) in AP/STA mode
USB Video Interface	Connecting USB Video port of PC for video transfer H264/MJPEG format video

Operating Environment	
Operating Temperature (in Centidegree)	-10°~ 50°
Storage Temperature (in Centidegree)	-20°~ 60°
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 12V/2A Adapter

Other Function	Function Description
Video Saving	Video format： 8M(3840*2160) H264/H265 encoded MP4 file Video saving frame rate: 60fps on low delay mode; 30fps in WDR mode
Image Capture	8M (3840*2160) JPEG/TIFF image in USB flash drive
Measurement Saving	Measurement information saved in different layer with image content Measurement information is saved together with image content in burn in mode
ISP	Exposure (Automatic / Manual Exposure) / Gain, White Balance, Sharpness, 3D Denoising, Saturation Adjustment, Contrast Adjustment, Brightness Adjustment, Gamma Adjustment, Color to Gray,50HZ/60HZ Anti-flicker Function
Image Operation	Zoom In/Zoom Out (Up to 10X), Mirror/Flip, Freeze, Video EDF, Cross Line, Overlay, PIP, Browser (including Picture Browsing, Video Playback, Video Compare, Picture Compare, Picture EDF, Image Processing), Measurement Function
Embedded RTC(Optional)	To support accurate time on board
Restore Factory Settings	Restore Camera parameters to its factory status
Multiple Language Support	English / Simplified Chinese / Traditional Chinese / Korean / Thailand / French / German / Spanish / Japanese / Italian / Dutch / Portuguese

Software Environmentunder WiFi/USBVideo Output	
White Balance	Auto White Balance
Color Technique	Ultra-Fine Color Engine
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK (Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
Recording System	Still Picture or Movie
Operating System	Microsoft® Windows® 8 / 8.1 / 10 / 11(32 & 64 bit) OSx(Mac OS X), Linux

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