MICAPS SVPRO4KUHD SERIES

C-mount USB 2.0 CMOS Cameras
SONY PREGIUS CMOS Sensor

The SVPRO4KUHD series HDMI Camera is a cutting-edge imaging system designed for live-view streaming in stunning 4K resolution at 30 frames per second. Built with a high-performance Sony Exmor CMOS sensor, it delivers exceptional image quality with high sensitivity, low noise, and accurate color reproduction, thanks to its RGB primary color mosaic filters. This camera is equipped with a standard C-mount interface, making it highly compatible with various microscopy systems. You can use it as a standalone device when connected to an HDMI monitor or TV, or stream it live to a PC via network or USB for capturing images and recording videos. With built-in hardware features like 3D denoising, sharpness adjustments, and tone mapping, the camera ensures improved clarity and overall image quality. The Windows software that comes with it offers powerful tools for image development, measurement, and advanced compositing, including image-stitching and extended-depth-of-focus. You can also calibrate scales for multi-level inspections at different magnifications. For Mac and Linux users, a lite version of the software is available, allowing for video and image capture with basic processing features. The SVPRO4KUHD series is ideal for capturing digital images from stereo microscopes, biological microscopes, or even for interactive online teaching sessions.

Features

- Sony Exmor/STARVIS back-illuminated CMOS sensor
- Rolling Shutter
- 4K HDMI/ WLAN/ USB multiple video outputs C-mount camera
- 4K/1080P auto switching according to monitor resolution
- Embedded SVPROView for the control of the camera and image processing
- Excellent ISP with local tone mapping and 3D denoising
- MicroView/MicroLite software for PC
- iOS/Android applications for smart phones or tablets
- SD card/USB flash drive for captured image and video storage, support local preview and playback

Applications

- Scientific research, education (teaching, demonstration and academic exchanges)
- 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)

Order Code	Sensor & Size(mm)	Pixel(µm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
SVPRO4KUHD8MPCA	4K/Sony IMX334(C) 1/1.8"(7.68x4.32)	2.0x2.0	505 mv with 1/30s 0.1mv with 1/30s	30@3840x2160(HDMI) 30@3840x2160(WLAN) 30@3840x2160(USB)	1x1	0.04ms~1000ms
SVPRO4KUHD8MPCC	4K/Sony IMX678(C) 1/1.8"(7.68x4.32)	2.0X2.0	1364mv with 1/30s 0.15mv with 1/30s	30@3840x2160(HDMI) 30@3840x2160(WLAN) 30@3840x2160(USB)	1x1	0.04ms~1000ms
SVPRO4KUHD8MPCD	4K/Sony IMX585(C) 1/1.2"(11.14x6.26)	2.9X2.9	1028mv with 1/30s 0.13mv with 1/30s	30@3840x2160(HDMI) 30@3840x2160(WLAN) 30@3840x2160(USB)	1x1	0.04ms~1000ms

C: Color

Interface OR Button	Function Description
USB Mouse	Connect USB mouse for easy operation with embedded software
USB 2.0	Connect USB flash drive to save pictures and videos
	Connect 5G WLAN module to transfer video wirelessly in real time
USB VIDEO	Connect PC or other host device to realize video image transmission
HDMI	Comply with HDMI1.4 standard. 4K/1080P format video output and supporting automatic switch between 4K and 1080P format according to the connected monitors
ON/OFF	Power switch
LAN	LAN port to connect router and switch to transfer video
SD	Comply with SDIO3.0 standard and SD card could be inserted for video and images saving
LED	LED status indicator
DC12V	Power adapter connection (12V/1A)

Software Environment Under Lan/wan/usb Video Output	
White Balance	Auto White Balance
Color Technique	Super 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 and Movie
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 / 8.1 /10(32 & 64 bit), OSx(Mac OS X), LINUX
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher, Memory: 4GB or More, Ethernet Port: RJ45 Ethernet Port, Display:19" or Larger, CD-ROM

Video Output Interface	Function Description
HDMI Interface	Comply with HDMI1.4 standard, 30fps@4K or 30fps@1080P
LAN Interface	support real time resolution switching(4K/1080P/720P) H264 encoded video DHCP configuration or manual configuration Unicast/multicast configuration
WLAN Interface	Connecting 5G WLAN adapter (USB2.0 slot) in AP/STA mode
USB Video Interface	Connecting USB Video port of PC for video transfer
Other Function	**Function Description**
Video Saving	Video format:8M(3840*2160) H264/H265 encoded Mp4 file Video saving frame rate:30fps in SD card or 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(Manual / Automatic / ROI Mode), Sharpening, 3D Denoise, Saturation Adjustment□ Contrast Adjustment□ Brightness Adjustment, Gamma Adjustment, Color to Gray, 50HZ/60HZ Anti-flicker Function
Video/Image Operation	Zoom In/Zoom Out(Up to 10X), Mirror/Flip, Color/Gray, Freeze, Cross Line, Overlay , Auto Focus, Compare(Comparison between real time video and images in SD card/ USB flash drive), Embedded Files Browser, Video Playback, 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 / Japanese / Italian / Russian

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/1 A Adapter