MICAPS
MSH4K8MPCC

C-mount USB3.0 CMOS Cameras
SONY STARVIS 2 CMOS Sensor

The MSH4K8MPCC HDMI Camera is intended for acquisition of digital images from stereo microscopes, biological microscopes. Here are basic characteristics of the camera

Features

- Sony STARVIS 2 back-illuminated CMOS sensor
- 4K/1080P auto switching according to monitor resolution
- Support 4K 60fps low delay HDMI output mode, with an average delay of 40ms
- USB flash drive for captured image and video storage, support local preview and playback
- Support the capture and display of RAW format images
- Supports USB voice control module, enabling real-time control of the camera through voice
- commands for taking photos, recording videos, freezing, and other operations
- Supports scanning gun to capture images
- Excellent ISP with local tone mapping and 3D denoising

- New browsing function, providing rich file operation functions, image to image comparison, image to real-time video comparison, multi-image EDF function, multi-image Stitch function
- Provide real-time video EDF function and real-time video WDR output function
- Provide real-time Stitch function to obtain higher quality images through real-time processing
- 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

Model No.	Sensor & Size(mm)	Pixel(µm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
MSH4K8MPCC	Sony IMX678(C) 1/1.8"(7.68x4.32)	2.0x2.0	3541mv with 1/30s 0.15mv with 1/30s	60@3840*2160(HDMI)	1x1	0.019~1000

Interface or Button	Function Description
USB3.0(2)	Connect USB mouse for easy operation with embedded MicroView software Connect USB flash drive to save pictures and videos Connect USB microphone to record audio and video Connect USB voice control for enable real-time control of camera snap, recording, freezing, and other operations
HDMI	Comply with HDMI2.0 standard. 4K/1080P format video output and supporting automatic switch between 4K and 1080P format according to the connected monitors
LED	LED status indicator
DC12V	Power adapter connection (12V/1A)

Video Output Interface	Function Description
HDMI Interface	Comply with HDMI2.0 standard,60fps@4K or 60fps@1080P

Other Function Description

Video Saving	Video format：8M(3840*2160) H264/H265 encoded MP4 file, Video saving frame rate: 60fps in 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 in layered mode Measurement information is saved together with image content in burn in mode
ISP	Exposure(Automatic / Manual Exposure) /White Balance, Sharpening，3D Denoise，Saturation Adjustment，Contrast Adjustment，Brightness Adjustment，Gamma Adjustment, Dark Enhance, Color to Gray，50HZ/60HZ Anti-flicker Function
Image Operation	Zoom In/Zoom Out(Up to 10X), Mirror/Flip, Freeze, Cross Line, PIP, Browser (including picture browsing, video playback, video compare, picture compare. EDF, Stitch, 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 / 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/1A Adapter