INTRODUCTION

ACUCAL Microscopy cameras are particularly remarkable for their fast live images, short reaction times, high resolution and clear contrast. And they are compatible with almost all microscopes. Our product range covers digital Microscope Cameras with intuitive software for archiving, measurement, analysis and presentation. 100% reproducibility of the exposures and highly convenient remote control of the cameras and ensure a fast and economical workflow.

- ACUHCAM Series camera is a multiple interfaces (4K HDMI+USB+SD card+FLASH DRIVE) CMOS camera and it adopts ultra-high performance CMOS sensor as the image-picking device. USB is used as the data transfer interface.
- For 4K HDMI output, a camera control panel and toolbar are over layed on the HDMI screen, in this case, the USB mouse can be used to set the camera, browse and compare the captured image.
- For USB output, unplug the mouse and plug in the USB cable into your PC USB , then the video stream can be transfer to computer with the supplied software.

FEATURES

- All in 1(4K HDMI+USB +SD) C-mount camera with high sensitivity Sony CMOS sensor.
- Support COLOR image capture(JPEG, BMP, TIFF, PNG, PCX, TGA, TFT, DICOM) & Video Recording.
- Simultaneous 4K HDMI & USB output for support both, the operation in stand-alone mode and in combination with a computer and software. Built-in mouse control.
- Built-in image capture & video record to SD card or USB Flash Drive& viewing gallery of images & videos.
- Built-in camera control panel for mouse control on Screen Display for fine tuning camera parameters and the image file name shall be selected and adjusted via mouse and keyboard.
- Interfaced to a computer via USB technology for rapid image download.
- ULTRA HDMI resolution (stand-alone on-screen display (OSD) capable to capture display image on large screen Image acquisition & Video acquisition via mouse and keyboard without PC.
- Plug-to-use, suitable for imaging of any standard Biological, Stereo and Metallurgical microscopes for observations, such as bright field, DIC, phase contrast and fluorescence.
- Integrated zinc aluminum alloy housing & passive cooling system.
- Ultra-Fine color engine with perfect color reproduction capability.
- With advanced video & image processing application Software.
- Windows 7 / 8 / 8.1 / 10 (32/ 64 bit) /Linux/macOS/Android multiple platform SDK
- Supported Mobile Device OS: Version number: iOS 11 and later, Android 5.1 and later.
- Compatible with all makes of microscopes.

FIELDS OF APPLICATION

Materialography	Inspection Industry	Patrography
Quality Control	Geology	Mineralogy
Pathology	Forensic	Cell Biology

INTERFACE & BUTTON FUNCTIONS

Interface	Function Description
USB2.0/3.0 (for PC)	1. Connect USB flash drive to save pictures and videos. 2. Connect computer with USB connection to transfer Photo/video in real time with speed upto480Mbps.
HDMI (for Monitor without need of PC)	Comply with HDMI2.0 standard. 4K/1080P format video output and supporting automatic switch between 4K and 1080P format according to the connected monitors.
USB Mouse	Connect USB mouse for easy operation with embedded software.
SD	Comply with SDIO3.0 standard and SD card could be inserted for video and images saving.
DC12V	Power adapter connection (12V/1A).
ON/OFF	Power switch.
LED	LED status indicator.

SPECIFICATION

Description	ACUHCAM-8MP	ACUHCAM-8MPA
Image Sensor:	1/1.8" Single Plate type SONY Color CMOS (7.680 mm × 4.320 mm)	1/1.2" Single Plate type SONY Color CMOS (11.14 mm × 6.26 mm)
Frame Rate:	30 fps to 60fps	
Resolutions :	8.3 Megapixels Resolutions • 3840*2160(HDMI, USB, NETWORK) **4K ULTRA HD** • 1920*1080(HDMI, USB, NETWORK) **FULL HD**	
Pixel Size	2.0 µm to 2.4 µm	2.9 µm x 2.9 µm
Image Format	16/9	
G Sensitivity	505 mv with 1/30s	
Dark Signal	0.13mV at 1/30s	
Color Depth	1, 4, 8, 24 Bit	
Scan Mode	Progressive Scan	
Operating Temperature	0° C to + 60° C	
Operating Humidity	10%-85%, Non-condensing	
Exposure Time	0.04 ms to 30s	
Dynamic Range	72db	
Exposure Control	Automatic / Manual	
White Balance	Automatic / Manual	
Shutter	Electronic Rolling	
Quantum Effcency	$\geq$ 65% at 500nm	
IR Filter Range	380-650 (IR CUT)	
Digitization Bit Depth	12 bit	
ISO sensitivity	ISO 50 to ISO 3200	
Digital Binning	1x1	

Other Specification
- Camera Control Panel : Including Exposure, Gain, Gamma, Saturation, Contrast, White Balance Auto/Manual, Color Adjustment, Sharpness and Denoising Control
- Toolbar : Including Zoom, Mirror, Comparison, Freeze, Cross, Browser Function
- White Balance : Manual / Auto White Balance
- Color Technique : Ultra-Fine Color Engine
- Recording System : Still Picture or Movie

Standard Supply
- **HDMI Cable, USB Cable, Power Adopter, Software CD**