

### 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.



- ACUCAM-4K HDMI camera is a multiple interfaces (4K HDMI+USB+Wifi+LAN Network+SD card+Pen Drive) CMOS camera and it adopts ultra-high performance CMOS sensor as the image-picking device. USB or wifi is used as the data transfer interface to PC.
- 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 or plug wifi stick into your PC USB , then the video stream can be transfer to computer with the supplied software.

### FEATURES

- All in 1(4K HDMI+USB+WIFI+LAN Network +SD Card+Pen Drive) C-mount camera with high sensitivity Sony CMOS sensor.
- Support COLOR image capture(JPEG, BMP, TIFF, PNG, PCX, TGA, TIF, DICOM) & Video Recording.
- Simultaneous 4K HDMI & USB output.
- 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 settings.
- Interfaced to a computer via USB technology for rapid image download.
- ULTRA HDMI resolution (stand-alone) 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  
Quality Control  
Pathology

Inspection Industry  
Geology  
Forensic

Patrography  
Mineralogy  
Cell Biology

### INTERFACE & BUTTON FUNCTIONS

Interface	Function Description
USB Mouse	Connect USB mouse for easy operation with embedded software.
USB	1. Connect USB flash Pen drive to save pictures and videos. 2. Connect 5G WLAN (IEEE 802.11n) module to transfer video wirelessly in real time
USB2.0 (for PC)	Connect computer with USB connection to transfer Photo/video in real time.
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.
GE/LAN (Ethernet NETWORK)	Gigabit Ethernet port to connect router and switch to transfer content.
SD Card	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

- **Image Sensor** : 1/1.8" Single Plate type SONY Color CMOS (7.680 mm × 4.320 mm), 8 Mega pixels
- **Frame Rate**: 3840\*2160(HDMI, USB, NETWORK) **4K ULTRA HD**  
1920\*1080(HDMI, USB, NETWORK) **FULL HD**
- **Resolutions** : 30 fps to 60fps
- **Pixel Size**: 2.0 μm x 2.0 μm
- **Sensitivity**: 505 mv with 1/30s
- **Scan Mode**: Progressive Scan
- **Operating Temperature** : 0° C to + 50° C
- **Operating Humidity**: 30%-80%, Non-condensing
- **Exposure Time**: 0.04 ms to 1000ms
- **Exposure Control** :Automatic / Manual (1ms to 100 ms)
- **White Balance** :Automatic / Manual
- **Shutter**: Electronic Rolling
- **A/D Converter (bit depth)** : 10 bits
- **Dimensions & Weight** : 78 mm (W) × 65 mm (D) × 88 mm (H) approx. 470 g

#### Other Specification

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

#### Standard Supply

- **HDMI Cable, USB Cable, Power Adopter, Wifi Dongle, C Mount Adopter, Software CD**