

### 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-WL Series 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 overlaid 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 transferred 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 (AVI, MOV).
- 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/Projector 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  
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.<br>2. Connect 5G WLAN (IEEE 802.11n) module to transfer video wirelessly in real time        |
| USB2.0/3.0 (for PC)                    | Connect computer with USB connection to transfer Photo/video in real time with speed upto480Mbps.                                                        |
| HDMI ( for Monitor without need of PC) | Comply with HDMI 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

| Description                | ACUHCAM-WL8MP                                                                | ACUHCAM-WL8MPA                                                               |
|----------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Image Sensor :             | 1/1.8" Single Plate type SONY Color CMOS (7.810 mm × 4.980 mm)               | 1/1.2" or 1" Single Plate type SONY Color CMOS                               |
| Frame Rate:                | 30 fps to 60fps                                                              | 30 fps to 60fps                                                              |
| Resolutions :              | 8.3 Megapixels Resolutions<br>• 3840*2160 4K ULTRA HD<br>• 1920*1080 FULL HD | 8.3 Megapixels Resolutions<br>• 3840*2160 4K ULTRA HD<br>• 1920*1080 FULL HD |
| Pixel Size:                | 1.85µm to 2.4 µm                                                             | 1.85µm to 3.45 µm                                                            |
| Sensitivity:               | 505 mv with 1/30s                                                            |                                                                              |
| Scan Mode:                 | Progressive Scan                                                             |                                                                              |
| Operating Temperature :    | 0° C to + 60° C                                                              |                                                                              |
| Operating Humidity:        | 10%-85%, Non-condensing                                                      |                                                                              |
| Gain                       | 1x to 22x                                                                    |                                                                              |
| Dynamic Range              | 72db                                                                         |                                                                              |
| SN Ratio                   | 38.1db                                                                       |                                                                              |
| Exposure Time:             | 0.04 ms to 2000ms                                                            |                                                                              |
| Color Depth                | 24bit                                                                        |                                                                              |
| Exposure Control & Range:  | 0.0ms -1000ms, ROI-Automatic / Manual                                        |                                                                              |
| White Balance :            | ROI, Manual Temp Tint Adjustment- Automatic / Manual                         |                                                                              |
| Shutter:                   | Electronic Rolling                                                           | Global                                                                       |
| A/D Converter (bit depth): | 8/10/12/16 bits Parallel                                                     |                                                                              |
| Dimensions & Weight:       | 78 mm (W) × 65 mm (D) × 88 mm (H) approx. 470 g                              |                                                                              |
| Binning                    | 1x1                                                                          |                                                                              |

#### 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, SD Card-32GB, C Mount Adopter, Software CD