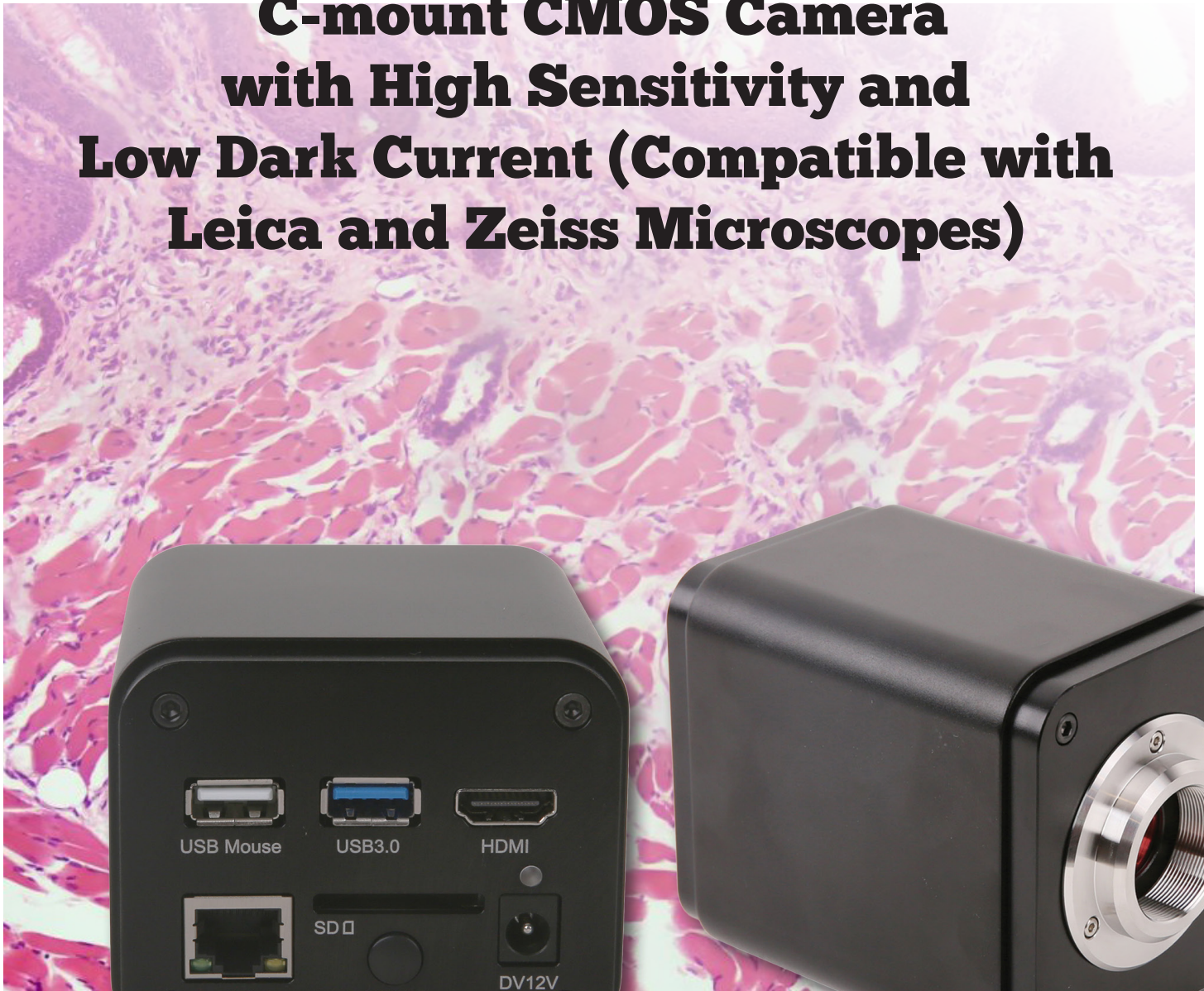




LC-31

HDMI/GigE/WiFi Multi-outputs

**C-mount CMOS Camera
with High Sensitivity and
Low Dark Current (Compatible with
Leica and Zeiss Microscopes)**



LC-31 HDMI/GigE/WiFi Multi-outputs C-mount CMOS Camera with High Sensitivity and Low Dark Current (Compatible with Leica and Zeiss Microscopes)

The LC-31 HDMI/GigE/WiFi Multi-outputs C-mount CMOS Camera with High Sensitivity and Low Dark Current is the next-generation live-view imaging-system with 4K resolution at 60/30 FPS.

LC-31 HDMI/GigE/WiFi Multi-outputs C-mount CMOS Camera with High Sensitivity and Low Dark Current comes with Sony Exmor CMOS sensor with high sensitivity, low dark current and no smear achieved through the adoption of R, G and B primary color mosaic filters.

The cameras use a standard C-mount interface for maximum compatibility with various microscopy-systems. It can be used as a stand-alone recorder when used with an HDMI monitor or television, or live-streamed to a PC via Gigabit Ethernet (GE) for image-capture and video-recording.

Hardware 3D denoising, sharpness and local tone mapping control functions greatly improve the image and video quality.

The included Windows software offers image-development and measurement tools, as well as advanced compositing features such as image-stitching and extended-depth-of-focus. With the ability to calibrate scales at multiple magnifications, the software can be used for multi-level inspection. For Mac and Linux, there is a lite version of the software which can capture video, still images, and includes limited processing features.

The LC-31 HDMI/GigE/WiFi Multi-outputs C-mount CMOS Camera with High Sensitivity and Low Dark Current is intended to be used for the acquisition of digital images from the stereo microscope, biological microscope or online interactive teaching.

FEATURES

The basic characteristics are listed as below:

1. Sony Exmor CMOS sensor;
2. 4K HDMI/ LAN/Wi-Fi / USB multiple video outputs;
3. 4K/1080P auto switching according to the monitor resolution;
4. SD card/USB flash disk for the captured images and videos storage, support local preview and playback;
5. Embedded XCAMView for the control of the camera and image processing with mouse, no shaking;
6. Excellent ISP with local tone mapping and 3D denoising;
7. ImageView software for PC;
8. iOS/Android applications for smart phones or tablets.

APPLICATION


1. Scientific research, digital teaching (teaching, demonstration and academic discussing);
2. Digital laboratory, medical research;
3. Machine vision (PCB detection, IC quality control);



4. Medical treatment (pathological observation);
5. Food (microbial colony observation and counting);
6. Aviation and military.

SPECIFICATIONS




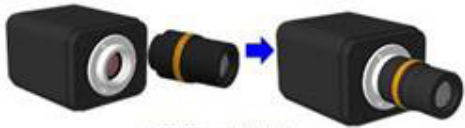

Model	LC-31
Sensor & Size(mm)	"4K/Sony IMX334(C) 1/1.8" (7.68x4.32)"
Pixel(μm)	2.0x2.0
G Sensitivity	505mv with 1/30s
Dark Signal	0.13mv with 1/30s
FPS/Resolution	60@3840*2160(HDMI) 30@3840*2160(NETWORK) 30@3840*2160(USB)
Binning	1x1
Exposure	0.04~2000

Interface & Button Functions		
 <p>The diagram shows the rear panel of the camera with the following components labeled: USB Mouse port, USB3.0 port, Multiple Function Interface, HDMI port, LED indicator, Power button, GE Port, SD Card slot, ON/OFF switch, and DV12V power input.</p>	USB Mouse	Connect USB mouse for easy operation of the embedded XCAMView software
	USB3.0	Connect USB flash drive to save pictures and videos(Host Mode);
		Connect 5G WLAN module to transfer video wirelessly in real time(AP/STA, Host Mode);
		Connect computer with USB connection to transfer video in real time (Device Mode).
	HDMI	Comply with HDMI2.0 standard. 4K/1080P format video output and supporting auto switching between 4K and 1080P format according to the connected monitor resolution
	LAN	LAN port to connect router and switch to transfer video
	SD	Comply with SDIO3.0 standard and SD card could be inserted for the images or videos storage
	DC12V	Power adapter connection (12V/1A)
	ON/OFF	Power switch
	LED	Camera status indicator

Other Specification for HDMI Output	
UI Operation	With USB Mouse
Image Capture	8M (3840*2160) JPEG/TIFF Image in SD Card or USB Flash Drive
Video Record	Video format: 4K(3840*2160) H264 encoded MP4 file;
	Video saving frame rate: 50~60fps (related with SD card and video resolution);

Measurement Saving	Measurement information saved in different layer with image content;
	Measurement information is saved together with image content in burn in mode.
Camera Control Panel	Including Exposure, Gain, White Balance, Color Adjustment, Sharpness and Denoising Control
Toolbar	Including Zoom, Mirror, Comparison (Video~image, image~image), Freeze, Cross, Browser Function
Other Specification for LAN Output	
White Balance	Auto/Manual/ROI White Balance
Color Technique	Ultra-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 or Video
Software Environment	
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
Operating Environment	
Operating Temperature (in Centigrade)	-10°~ 50°
Storage Temperature (in Centigrade)	-20°~ 60°
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 12V/1A Adapter
Standard Packing List	
A	Gift box : L:25.5cm W:17.0cm H:9.0cm (1pcs, 1.43Kg/ box)
B	LC-31
C	Power Adapter: Input: AC 100~240V 50Hz/60Hz, Output: DC 12V 1A
	American standard: Model: GS12U12-P1I 12W/12V/1A: UL/CUL/BSMI/CB/FCC
	EMI Standard: EN55022, EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338
	EMS Standard: EN61000-4-2,3,4,5,6,8,11, EN61204-3, Class A Light Industry Standard
	European standard: Model:GS12E12-P1I 12W/12V/1A; TUV(GS)/CB/CE/ROHS
	EMI Standard: EN55022, EN61204-3, EN61000-3-2,-3, FCC Part 152 class B, BSMI CNS14338
	EMS Standard: EN61000-4-2,3,4,5,6,8,11, EN61204-3, Class A Light Industry Standard

D	USB Mouse	
E	HDMI 2.0 Cable(Support 3840x2160, 60FPS)	
F	High-speed USB3.0 A male to A male gold-plated connectors cable /2.0m	
G	CD (Driver & utilities software, Ø12cm) , USB flash drive is optional	
Optional Accessory		
H	SD Card (16G or above; Speed: Class 10)	
I	USB WLAN adapter	
J	Ethernet cable	
K	Adjustable lens adapter	C-Mount to Dia.23.2mm Eyepiece Tube (Please choose 1 of them for your microscope)
		C-Mount to Dia.31.75mm Eyepiece Tube (Please choose 1 of them for your telescope)
L	Fixed lens adapter	C-Mount to Dia.23.2mm Eyepiece Tube (Please choose 1 of them for your microscope)
		C-Mount to Dia.31.75mm Eyepiece Tube (Please choose 1 of them for your telescope)
Note: For K and L optional items, please specify your camera type (C-mount, microscope camera or telescope camera), our engineer will help you to determine the right microscope or telescope camera adapter for your application;		
M	Dia.23.2mm to 30.0mm Ring/Adapter rings for 30mm eyepiece tube	
N	Dia.23.2mm to 30.5mm Ring/ Adapter rings for 30.5mm eyepiece tube	
O	Calibration kit	106011/TS-M1(X=0.01mm/100Div.);
		106012/TS-M2(X,Y=0.01mm/100Div.);
		106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)

Extension	Picture	
C-mount Camera		Machine vision; Medical imaging;
		Semiconductor equipment; Test instruments;
		Document scanners; 2D barcode readers;
		Web camera and security video;
		Microscope imaging.
Microscope Camera	  (23.2mm Adapter)	
Telescope Camera	  (31.75mm Adapter)	

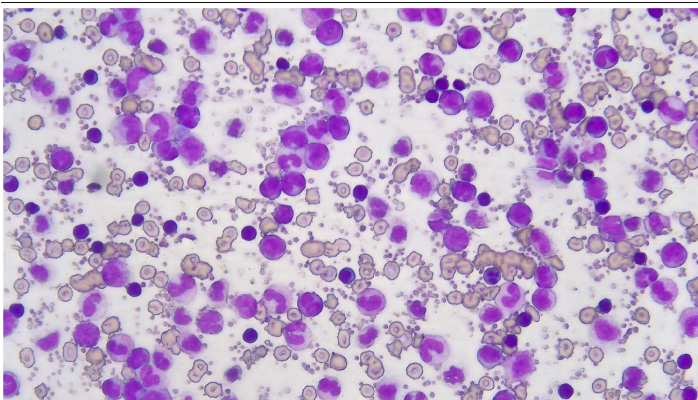
DIMENSION



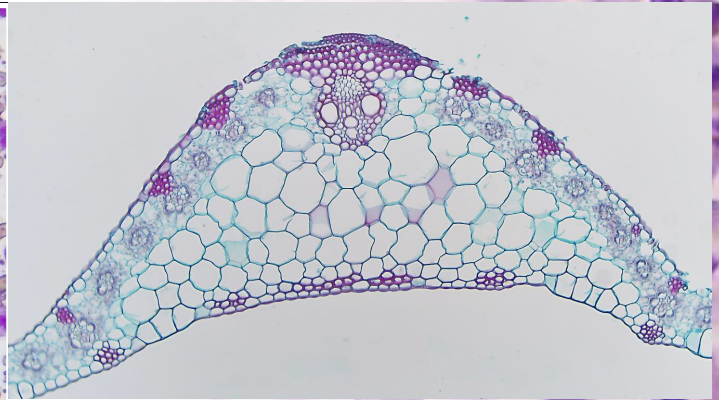
PACKAGING INFORMATION



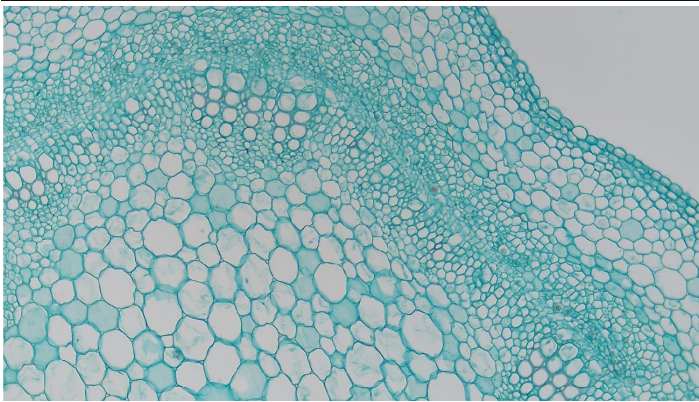
SAMPLE IMAGES



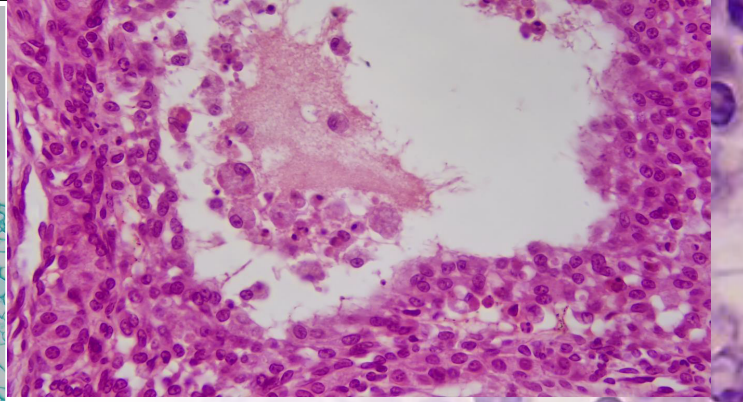
Blood Cells



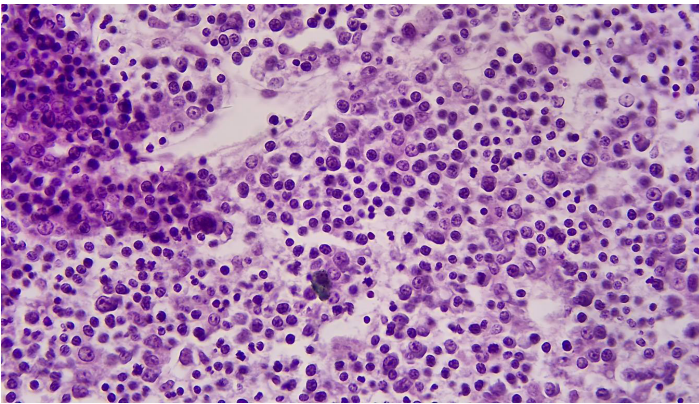
Corn Leaf



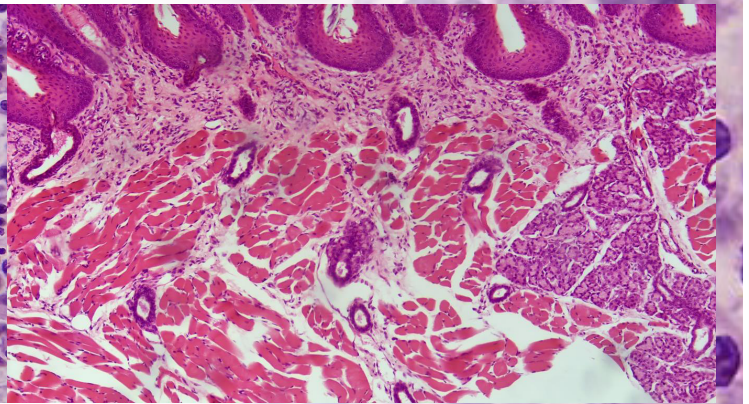
Cotton Stem



Ovary



Rabbit Embryo



Taste Bud

CAMERA AND MICROSCOPES



LC-31 and Leica Microscope



LC-31 and Zeiss Microscope