OPTO-EDU A59.2243 8.0M 4K HDMI+USB+WIFI+LAN+SD Digital Microscope Camera

Basic Information

- Place of Origin: China
- Brand Name: CNOEC, OPTO-EDU
- Certification: CE, Rohs
- Model Number: A59.2243
- Minimum Order Quantity: 1 pc
- Price: FOB $1~1000, Depend on Order Quantity
- Packaging Details: Carton Packing, For Export Transportation
- Delivery Time: 5~20 Days
- Payment Terms: T/T, West Union, Paypal
- Supply Ability: 5000 pcs/ Month

Product Specification

- Applications: Microscope
- Certification: CE|Rohs
- Output: HDMI
- Product Name: Microscope Accessories
- Senser: CMOS
- Compatible: Windows XP/Vista
- Highlight: **4K HDMI Microscope Camera**,
                            USB Microscope Camera,
                            8.0M Microscope Camera

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A59.2243 4K HDMI+USB+WIFI+LAN+SD Digital Camera, 8.0M, Mouse Measure

A59.2243 camera is the next-generation live-view imaging-system with 4K resolution(Video) at 30 FPS. It 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.
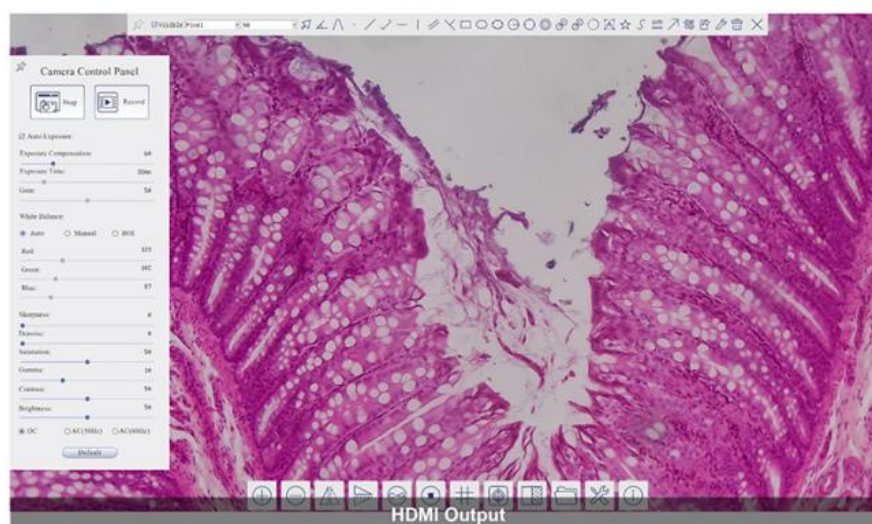
A59.2243 uses a standard C-mount interface for maximum compatibility with various microscopy-systems. It can be used as a stand-alone recorder when used with an HDMI monitor or television, or live-streamed to a PC via NETWORK/USB for image-capture and video-recording.

Hardware 3D denoising, sharpness and 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 and still images, and includes limited processing features.

A59.2243 4K series camera is intended to be used for the acquisition of digital images from the stereo microscope, biological microscope or online interactive teaching.

USB Output

HDMI Output

A59.2243 Features & Sample Pictures

- 4K HDMI+USB+WIFI+LAN+SD Card Digital Camera With Sony Exmor CMOS Sensors Resloution 8.0M
- 4K/1080P Auto Switch According to Display Resolution, Save Image & Record Video to SD Card
- Built-in HDMI Mouse Control Panel For Image & Video Capture, Full Kinds of Measuring Function
- Optional WIFI Adapter On USB Port Enable HDMI/WiFi Output Simultaneously
- Advanced Video & Image Processing Software Image View, Support SDK For Win/Linux/Mac/Android
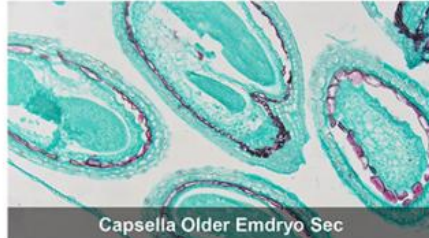
Capsella Older Emdryo Sec
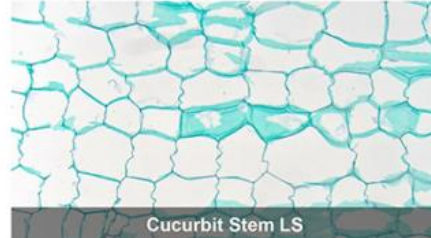
Cucurbit Stem LS

Pear Sec Showing Stone Ceil

Simple Cuboidal Epithelium Sec
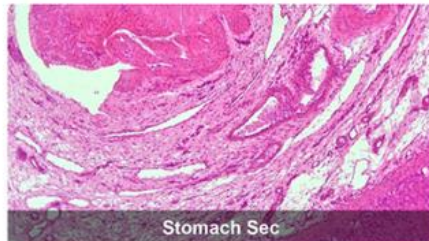
Stomach Sec
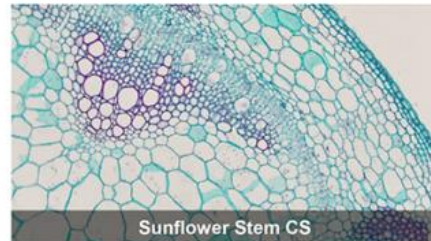
Sunflower Stem CS

A59.2243 Specification

Order Code	Sensor & Size(mm)	Pixel(µm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure(ms)
4K8MPA	Sony IMX334© 1/1.8" (7.68x4.32)	2.0x2.0	505mv with 1/30s 0.1mv with 1/30s	30@3840*2160 (HDMI) 30@3840*2160 (NETWORK) 30@3840*2160 (USB)	1x1	0.04~1000

				30@3840x2160 (HDMI) 30@3840x2160 (NETWORK) 30@3840x2160 (USB)		
4K8MPB	IMX485(C) 1/1.2" (11.14x6.26)	2.9 x 2.9	2188mv with 1/30s 0.39mv with 1/30s	30@3840x2160 (HDMI) 30@3840x2160 (NETWORK) 30@3840x2160 (USB)	1x1	0.04~1000
4K8MPC	Sony IMX678© 1/1.8" (7.68x4.32)	2.0x2.0	1364mv with 1/30s 0.15mv with 1/30s	30@3840*2160 (HDMI) 30@3840*2160 (NETWORK) 30@3840*2160 (USB)	1x1	0.04~1000
4K8MPD	Sony IMX585(C)1/1.2 "(11.14x6.26)	2.9x2.9	1028mv with 1/30s 0.13mv with 1/30s	30@3840*2160 (HDMI) 30@3840*2160 (NETWORK) 30@3840*2160 (USB)	1x1	0.04~1000

Remark: C - Color, M-Monocolor, GS-GS Shutter

INTERFACE & BUTTON FUNCTION	
USB Mouse	Connect USB mouse for easy operation on HDMI menu
USB 2.0	Connect USB flash drive to save pictures and videos
	Connect 5G WLAN module to transfer video wirelessly in real time
USB Video	Connect PC or other host device to realize video image transmission
HDMI	Comply with HDMI2.0 standard. 4K/1080P format video output and supporting auto switching between 4K and 1080P format according to the connected display resolution
LAN	Gigabit Ethernet port to connect to the peripheral for the video streaming
SD	Comply with SDIO3.0 standard and SD card could be inserted for the images or videos storage
ON/OFF	Power On/Off Switch
LED	Camera status indicator
DC12V	Power adapter connection (12V/1A)

VIDEO OUTPUT INTERFACE	
HDMI	Comply with HDMI1.4 standard, 30fps@4K or 30fps@1080P
	support real time resolution switching(4K/1080P/720P)
LAN	H264 encoded video
	DHCP configuration or manual configuration
	Unicast/multicast configuration
WIFI	Connecting 5G WLAN adapter (USB2.0 slot) in AP/STA mode (WIFI Adapter Is Optional)
USB Video	Connecting USB Video port of PC for video transfer, MJPEG format video

GE OUTPUT INTERFACE	
Video Saving	Video format:8M(3840*2160) H264/H265 encoded MP4 file
	Video saving frame rate:30fps
Image Capture	8M (3840*2160) JPEG/TIFF image in SD card or USB flash drive
Measurement Saving	Measurement information saved in different layer with image content
	Measurement information is saved together with image content in burn in mode
ISP	Exposure(Automatic, Manual Exposure), Gain, White Balance(Manual, Automatic, ROI Mode), Sharpening, 3D Denoise, Saturation Adjustment, Contrast Adjustment, Brightness Adjustment, Gamma Adjustment, Color to Gray, 50HZ/60HZ Anti-flicker Function
Image Operation	Zoom In/Zoom Out(Up to 10X), Mirror/Flip, Freeze, Cross Line, Compare(Comparison between real time video and images in SD card or USB flash drive), Embedded Files Browser, Video Playback, Measurement Function
Embedded RTC	To support accurate time on board (Optional)
Restore	Restore camera parameters to its factory status
Multiple Language	English, Simplified Chinese, Traditional Chinese, Korean, Thailand, French, German, Japanese, Italian, Russian

SOFTWARE ENVIRONMENT UNDER LAN/WLAN/USB VIDEO OUTPUT	
White Balance	Auto White Balance
Color Technique	Ultra-Fine Color Engine
Capture/Control SDK	Win/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
Recording System	Still Picture or Movie
Operating System	Microsoft® Windows® XP, Vista, 7, 8, 8.1 /10 /11(32 & 64 bit)
	OSx(Mac OS X)
	Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory: 4GB or More
	Display:19" or Larger
	CD-ROM

OPERATING ENVIRONMENT	
Operating Temperature	-10 ℃~ 50 ℃
Storage Temperature	-20 ℃~ 60 ℃
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 12V/2A Adaptor

Dimension of A59.2243 Series Camera

A59.2243 Camera body, made from tough, CNC aluminium alloy, ensures a heavy duty, workhorse solution. The camera is designed with a high quality IR-CUT to protect the camera sensor. No moving parts included. This design ensures a rugged, robust solution with an increased lifespan when compared to other industrial camera solutions.

A59.2243 Size: mm

A59.2243 Packing List

Packing List of A59.2243 Series Camera			
Standard Outfit			
A	Gift box : L:25.5cm W:17.0cm H:9.0cm (1pcs, 1.57Kg/ box)		
B	Digital camera		
C	Power Adaptor: 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 Cable		
F	USB2.0 A male to A male gold-plated connectors cable /2.0m		
G	CD (Driver & utilities software, Ø12cm)		
Optional Accessory			
H	SD Card(16G or above; Speed: class 10)		
I	Focus Adjustable Eyepiece Adapter	For Microscope	0.37x, C-Mount to Dia.23.2mm	A55.2202-A37
			0.50x, C-Mount to Dia.23.2mm	A55.2202-A50
			0.75x, C-Mount to Dia.23.2mm	A55.2202-A75
		For Telescope	0.37x, C-Mount to Dia.31.75mm	A55.2204-A37
			0.50x, C-Mount to Dia.31.75mm	A55.2204-A50
			0.75x, C-Mount to Dia.31.75mm	A55.2204-A75
J	Focus Fixed Eyepiece Adapter	For Microscope	0.37x, C-Mount to Dia.23.2mm	A55.2202-F37
			0.50x, C-Mount to Dia.23.2mm	A55.2202-F50
			0.75x, C-Mount to Dia.23.2mm	A55.2202-F75
		For Telescope	0.37x, C-Mount to Dia.31.75mm	A55.2204-F37
			0.50x, C-Mount to Dia.31.75mm	A55.2204-F50
			0.75x, C-Mount to Dia.31.75mm	A55.2204-F75
K	Adaptor Rings Dia.23.2mm to 30.0mm For 30.0mm Microscope Eyepiece Tube		A55.2203-30
L	Adaptor Rings Dia.23.2mm to 30.5mm For 30.5mm Microscope Eyepiece Tube		A55.2203-30.5
M	Calibration	X=0.01mm/100Div.	
		X,Y=0.01mm/100Div	

	Stage Micrometer	X=0.01mm/100Div., 0.10mm/100Div
N	USB Disk	
O	USB WIFI Adapter	
P	Ethernet Cable	

Camera Connect To Microscope

A55.2002
C-Mount to 23.2mm Adapter
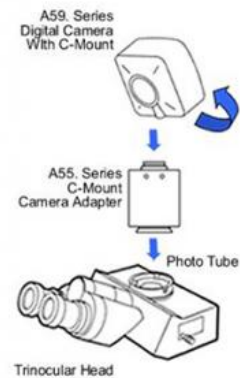For Microscope
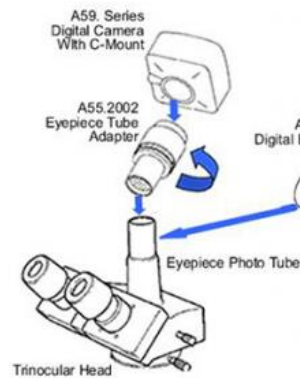
A55.2004
C-Mount to 31.75mm Adapter
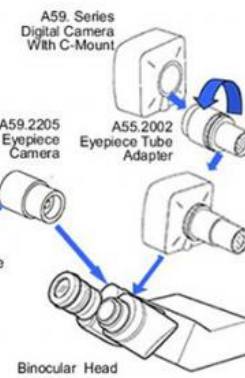For Telescope

OPTO-EDU **How Camera Connect To Microscope**

1. To Trinocular Microscope On Straight Photo Tube
2. To Trinocular Microscope On Eyepiece Photo Tube
3. To Binocular Microscope On Eyepiece Tube