OPTIKA®
MICROSCOPES
ITALY

CAMERAS & DIGITAL Solutions

Cameras for Microscopy & Digital Scanner

CAMERAS & DIGITAL Solutions

The most flexible way to create a digital microscope is to combine a digital camera to a standard microscope. You can then move the camera on different microscopes and different cameras on any microscope for an incredible versatility. Moreover, since microscope camera technology is improving so rapidly, it is easy to replace a camera as new ones are released.

OPTIKA offers an impressive amount of microscope camera, all of which are easy-to-use, affordable and professionally selected for excellent color resolution and rapid transmission. Downloadable, free of charge software is always available to enable the latest updates.

Applications include standard image capture and documentation for education, schools, home as well as professional image analysis for laboratories and industrial inspections, including very advanced solutions for critical applications like low light fluorescence imaging and material science applications.

Entry-Level Microscope Cameras
Valuable solutions for teaching and basic laboratory needs page 359

Professional Microscope Cameras
Refined imaging solutions for laboratories and industrial inspections page 383

High-End Microscope Cameras for Fluorescence Microscopy
Top-class imaging technologies for specific applications and requirements page 407

Icons

- Multi-Plug low voltage power supply
- Li-Ion Rechargeable battery
- CCD sensor
- CMOS sensor
- -- MP Camera resolution
- Cooling system
- USB-IN USB 2.0 input (mouse)
- USB-OUT USB 2.0 output
- USB 3.0 USB 3.0 output
- -- " Tablet screen size
- Software included
- ETHERNET ETHERNET output
- HDMI HDMI output
- SD/MicroSD slot
- Wi-Fi
- BlueTooth
- Mouse included

Entry-Level Microscope Cameras

Smart & Affordable Solutions
Not Only For Schools & Education...

A wide range of affordable solutions with diversified live resolution for clear and crisp images to be combined via USB, HDMI or Wi-Fi ensuring smooth and productive teaching experiences on PC, tablets, projectors and other devices.
These models can also being used for basic requirements in laboratories adn industries.
Compatible with any microscope brand, thanks to the projection lens and rings (included in most of the cases).

Entry-Level Microscope Cameras

E like Essential

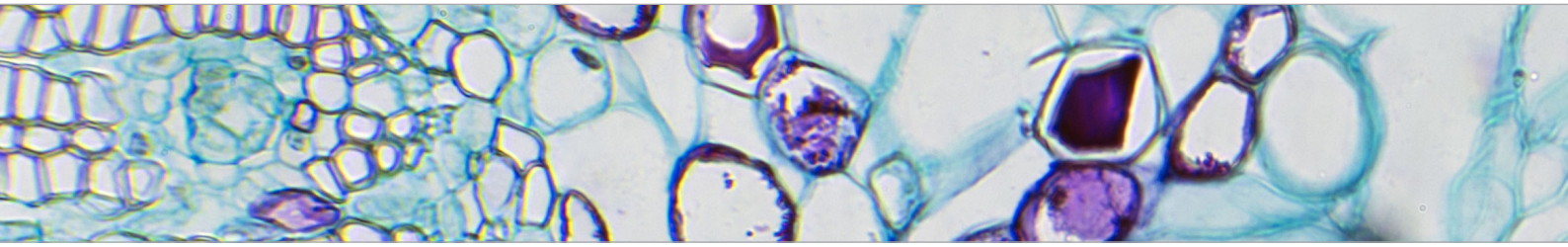
Simply the most essential eyepiece camera (C-E2). That's it!

C-E2	E2 eyepiece camera, 2 MP CMOS, USB2.0

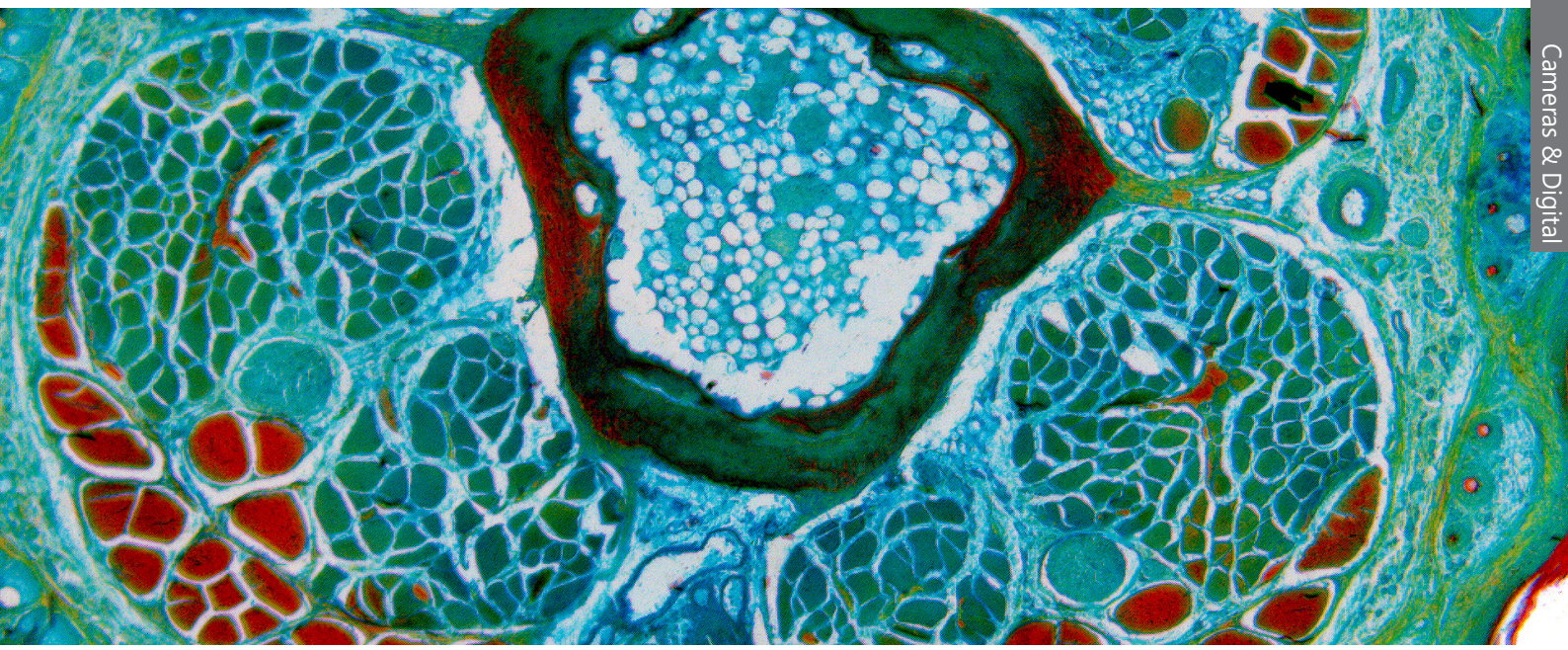
B like Basic - C-B Series

The cost-effective OPTIKA C-B cameras are generally recommended for basic/general applications in education and home use.
With C-B+ models, faster transmission speed is achieved through USB3.0 connection, being ideal especially on moving specimens.

C-B1	B1 camera, 1.3 MP CMOS, USB2.0
C-B3A	B3 camera, 3.1 MP CMOS, USB2.0
C-B5	B5 camera, 5.1 MP CMOS, USB2.0
C-B16	B16 camera, 16 MP CMOS, USB2.0
C-B10+	B10+ camera, 10 MP CMOS, USB3.0
C-B18+	B18+ camera, 18 MP CMOS, USB3.0



Entry-Level Microscope Cameras



TB like Tablet - TB Series

The combination of OPTIKA C-B cameras with Windows tablet PC for
a completely new, revolutionary experience. Not a simple tablet but a real PC with large touch screen for smooth and responsive control, representing an extremely comfortable solution for open discussions.

TB-3W	Windows tablet PC with B3 camera, 3.1 MP CMOS, USB2.0, EU
TB-5W	Windows tablet PC with B5 camera, 5.1 MP CMOS, USB2.0, EU

HE like HDMI Essential - C-HB & C-HBSC

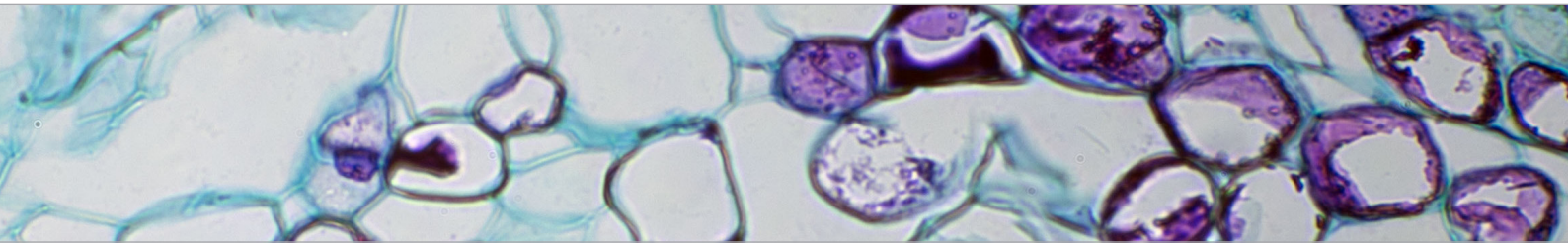
Recommended for its easy operation, no software installation is required with image captured on SD card.
SC version includes a 11.5" Full HD screen for an all-in-one solution, with tilting features and saving space on the bench.

C-HB	HB Camera, 1080p, 2 MP CMOS, HDMI, multi-plug
C-HBSC	HB Camera, 1080p, 2 MP CMOS, HDMI, with screen, multi-plug

WIFI Cameras – WiFi Series

The most flexible and versatile camera on the market!
New frontiers are opened thanks to its rechargeable batteries (C-WFR), allowing the camera to be moved from one microscope to another, whilst transferring the live view on any device (using Windows, Android or IOS).

C-WF	WF camera, 1 MP CMOS, Wi-Fi, multi-plug
C-WFR	WFR rechargeable camera, 1 MP CMOS, Wi-Fi, multi-plug



Essential

C-E2

Simply the most essential, user-friendly and handy eyepiece camera for low budget, with 2 MP resolution, CMOS sensor and USB2.0 connection.
Ready to use on any microscope with direct eyepiece tube connection, thanks to the rings included. Connectable also on trinocular tube.
Downloadable, free of charge software (Windows, Mac OS or Linux) is always available to enable the latest updates.

Model:
C-E2: E2 eyepiece camera, 2 MP CMOS, USB2.0

	C-E2
Digital camera resolution	2 MP
Analog camera resolution	NO
Signal output	USB 2.0
Audio Signal	NO
Sensor Size	1\3.2"
Sensor technology	CMOS
Image format	4\3
Full Image size	1600 x 1200
Frame rate full resolution	5 fps (1600x1200) / 7,5 fps (1280x1024) / 20fps (800x600) / 22fps (640x480)
Max Exposure time	Auto
ON board Memory	NO
External Memory Card	NO
External camera power	PC USB
White Balance	Auto
Gain Control	Auto
Back light control	Auto
Exposure control	Auto
C-Mount connection	NO
CS-Mount connection	NO
Arm length	-
8mm objective	NO

Accessories included:
C-E2: 30 mm / 30.5 mm ring adapters, 1.8 m USB cable.

Essential

C-E2

- » Simple operation, driver-free
- » Universal connection to any microscope brand
- » Direct eyepiece & trino port connection
- » Crisp 2 MP images
- » High frame rate
- » Reliable color fidelity
- » Rings included
- » USB cable included
- » Downloadable, free of charge software
- » OPTIKA ProView & LiteView for Windows
- » OPTIKA LiteView for Mac OS or Linux

C-B Series

1.3/18 MP

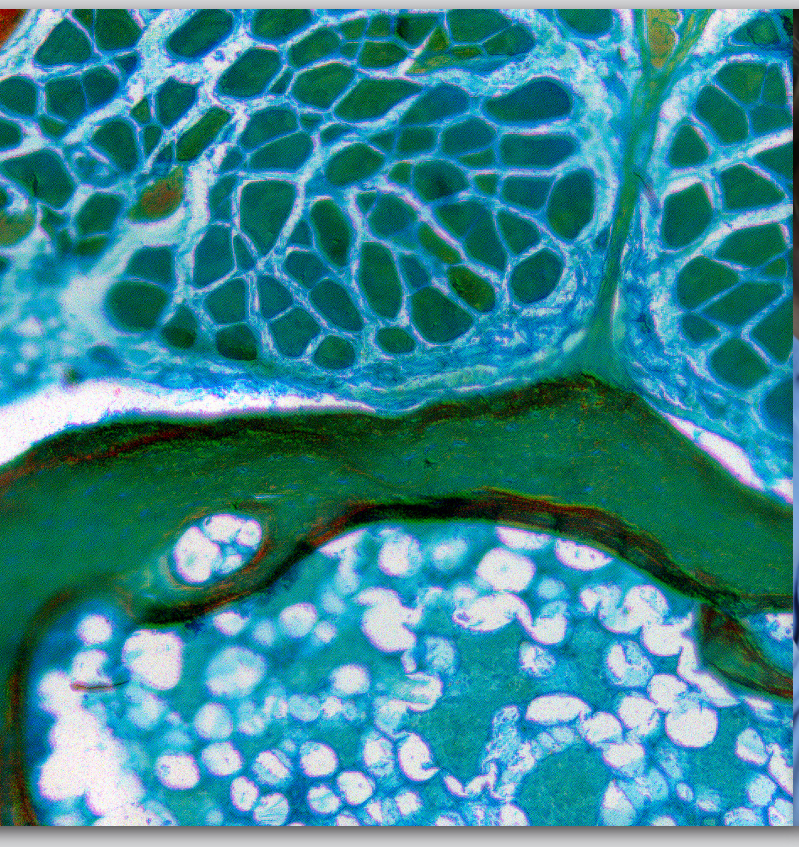
CMOS

USB-OUT

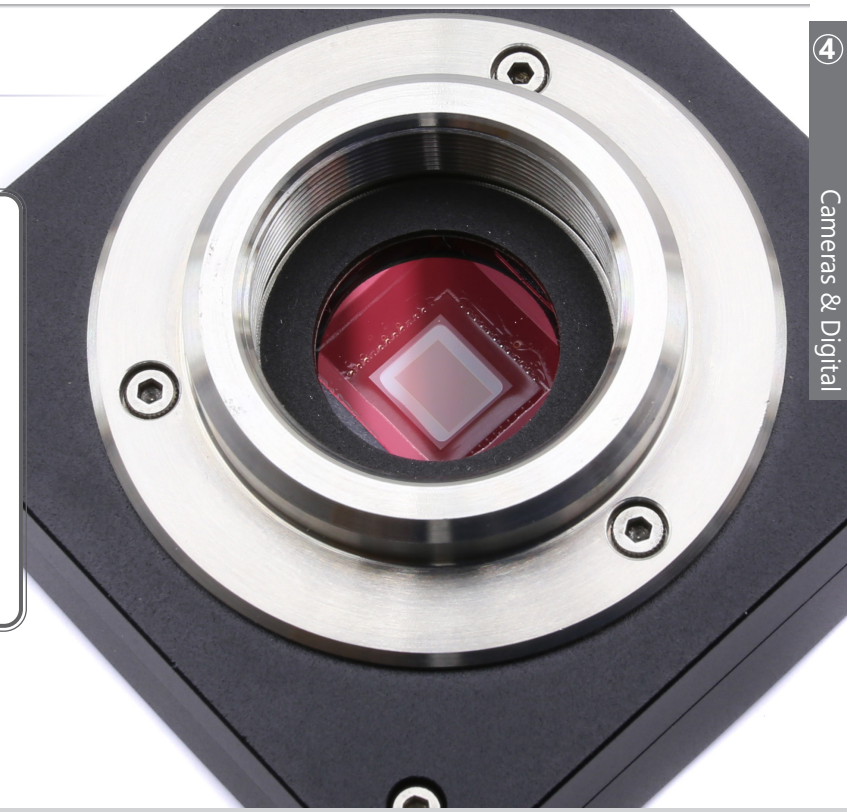
C-B

C-B+

Cost-effective, user-friendly cameras with several resolutions (from 1.3 up to 18 MP), CMOS sensor and USB2.0 or USB3.0 connection, recommended for basic/general applications in education and home use especially on moving specimens.
Ready to use on any microscope with direct eyepiece tube connection, thanks to the C-mount projection lens and rings included.
Connectable also to all the trinocular tube of different brands using the C-mount projection lens included or additional focusable C-Mount adapter.
Downloadable, free of charge software (Windows, Mac OS or Linux) is always available to enable the latest updates.



C-B Series



» Simple operation, driver-free
» Universal connection to any microscope brand
» Direct eyepiece & trino port connection
» Crisp 1.3 MP crisp images
» Reliable color fidelity
» C-Mount projection lens and rings included
» USB cable and calibration slide included
» Downloadable, free of charge software
» OPTIKA ProView & LiteView for Windows
» OPTIKA LiteView for Mac OS or Linux

C-B Series

C-B Models:

C-B1: B1 camera, 1.3 MP CMOS, USB2.0
C-B3: B3 camera, 3.1 MP CMOS, USB2.0
C-B5: B5 camera, 5.1 MP CMOS, USB2.0
C-B16: B16 camera, 16 MP CMOS, USB2.0

C-B+ Models:

C-B10+: B10+ camera, 10 MP CMOS, USB3.0
C-B18+: B18+ camera, 18 MP CMOS, USB3.0

C-B Series - Specifications

	C-B1	C-B3A	C-B5
Digital camera resolution	1.3 MP (1280 x 1024)	3.1 MP (2048 x 1536)	5.1 MP (2592 x 1944)
Signal output	USB 2.0	USB 2.0	USB 2.0
Sensor Size	1/3"	1/2.8"	1/2.5"
Sensor technology	CMOS	CMOS	CMOS
Sensor type	Aptina CMOS	Aptina CMOS	Aptina CMOS
Image format	5/4	4/3	4/3
Pixel size	3.6 x 3.6 µm	2.5 x 2.5 µm	2.2 x 2.2 µm
Frame rate full resolution	15 fps (1280 x 1024)	10.5 fps (2048x1536)	7 fps (2592 x 1944)
Frame rate other resolutions	50 fps (320 x 256)	15 fps (1920x1080)	27 fps (1280 x 960); 90fps (640 x 480)
Sensitivity	1 V/lux-second	600mV at 1/30sec	0.53 V/lux-second
Signal / noise ratio	44 dB	40.5 dB	40.5 dB
Dynamic range	74 dB	66.5 dB	66.5 dB
ADC conversion	8 Bit	8 Bit	8 Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit ; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.14 msec - 2 sec	0.244 msec - 2 sec	0.294 msec - 2 sec
Binning	1x1; 2x2; 4x4	1x1; 2x2; 3x3	1x1; 2x2; 4x4
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Camera power	PC USB	PC USB	PC USB
C-mount	YES	YES	YES

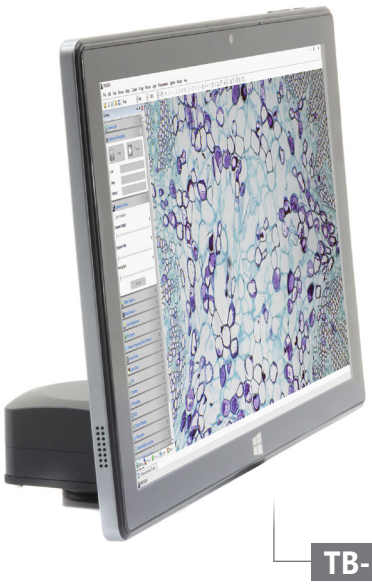
C-B Series

C-B Contents:
USB camera
USB 2.0 cable
30 & 30.5 mm rings
C-mount projection lens
Micrometric slide

C-B+ Contents:
USB camera
USB 3.0 cable
30 & 30.5 mm rings
C-mount projection lens
Micrometric slide

C-B16	C-B10+	C-B18+
16 MP (4632 x 3488)	10 MP (3584 x 2748)	18 MP (4912 x 3684)
USB 2.0	**USB 3.0**	**USB 3.0**
1/2.3"	1/2.3"	1/2.3"
CMOS	CMOS	CMOS
Aptina CMOS	Aptina CMOS	Aptina CMOS
4/3	4/3	4/3
1.335 x 1.335 µm	1.67 x 1.67 µm	1.25 x 1.25 µm
2 fps (4632 x 3488)	7.2 fps (3584 x 2746)	5.6 fps (4912 x 3684)
8 fps (2320 x 1740); 11 fps (1536 x 1160)	24.5 fps (1792 x 1372);	18.1 fps (2456 x 1842); 32.2 fps (1228 x 922)
0.31 V/lux-second	0.31 V/lux-second	0.62 V/lux-second
-	34 dB	36.3 dB
65 dB	65.2 dB	65.8 dB
8 Bit	8 Bit - 12 Bit	8 Bit - 12 Bit
1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit
0.2 msec - 2 sec	0.4 msec - 2 sec	0.1 msec - 2 sec
1x1; 2x2; 3x3	1x1; 2x2; 4x4	1x1; 2x2; 4x4
380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
PC USB	PC USB	PC USB
YES	YES	YES

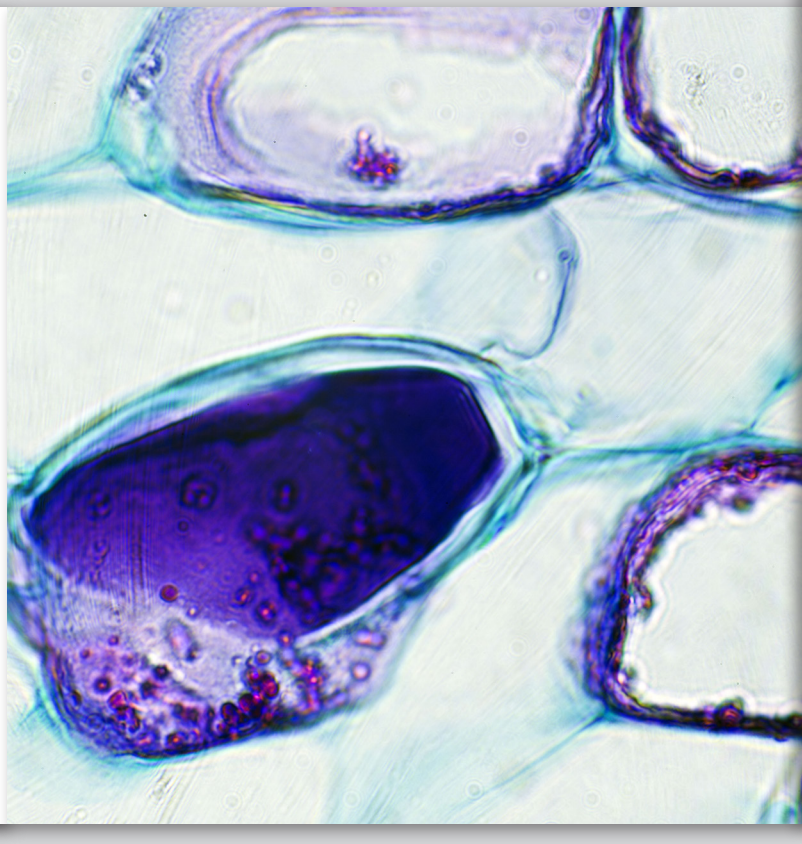
TB Series



TB-3W

TB-5W

Exclusive, powerful Windows tablet PC combined to a CMOS sensor cameras with USB2.0 connection, recommended for discussion groups and educational purposes thanks to the easy operation, space-saving features and unparalleled comfort.
The unique holding solution for open discussion is 360° rotating and tilting for any adjustement, whilst the large touch screen provides fast, responsive and smooth control.
At any time, the tablet PC can be easily detached to be used as a laptop.
Non-stop operation is granted by the simultaneous camera and power connection for long-term use and class/lesson alternation.
Connectable also to all the trinocular tube of different brands using the projection lens included or additional focusable C-Mount adapter.
Downloadable, free of charge software is always available to enable the latest updates.



TB Series

» External digital camera connected to Windows tablet PC
» Large touch screen with fast, responsive and smooth control
» Easily detachable, can be used as a laptop
» A 2-in-1 solution that you can use like a PC, being Windows-based
» Simultaneous camera and power connection for long-term operation
» Powerful Intel processor ensuring top performance and speed
» High-resolution, vivid color graphic display
» Crisp 3.1 or 5.1 MP images
» High frame rate
» Reliable color fidelity
» C-mount connection (direct or via dedicated adapter, on any microscope)
» C-mount projection lens and calibration slide included
» Downloadable, free of charge software
» OPTIKA ProView for Windows

TB Series

Tablet Models:

TB-3W: Windows tablet PC with B3 camera, 3.1 MP CMOS, USB2.0, EU

TB-5W: Windows tablet PC with B5 camera, 5.1 MP CMOS, USB2.0, EU

OPTIONAL

TB Series - Specifications

CAMERA TECHNICAL SPECIFICATIONS	TB-3W	TB-5W
Digital camera resolution	3.1 MP (2048 x 1536)	5.1 MP (2592 x 1944)
Signal output	USB 2.0	USB 2.0
Sensor Size	1/2"	1/2.5"
Sensor technology	CMOS	CMOS
Sensor type	Aptina CMOS	Aptina CMOS
Image format	4/3	4/3
Pixel size	3.2 x 3.2 µm	2.2 x 2.2 µm
Frame rate full resolution	12 fps (2048 x 1536)	7 fps (2592 x 1944)
Frame rate other resolutions	32 fps (1024 x 768); 45 fps (680 x 510)	27 fps (1280 x 960); 90fps (640 x 480)
Sensitivity	1 V/lux-second	0.53 V/lux-second
Signal / noise ratio	43 dB	40.5 dB
Dynamic range	61 dB	66.5 dB
ADC conversion	8 Bit	8 Bit
Color Depth	1 Bit ; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.244 msec - 2 sec	0.294 msec - 2 sec
Binning	1x1; 2x2; 3x3	1x1; 2x2; 4x4
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Camera power	PC USB	PC USB
C-mount	YES	YES

TB Series

TB Contents:
USB camera
Windows tablet PC
C-mount projection lens
Micrometric slide
OTG cable (micro USB-C to USB-A)
USB cable USB-B to USB-A (0.5m)
External power supply

TB Series - Tablet specifications

TABLET TECHNICAL SPECIFICATIONS	
Operating system	Windows 10 (64Bit)
CPU	Gemini-Lake, N4100
CPU speed	1.10 GHz
Graphic card	Intel® HD Graphics 600
RAM	Ram 6 GB LPDDR3
Display size	LED 10.1" IPS Multi Touch Screen
Display resolution	1920x1200
Storage	Hdd 128 GB
Network	WiFi (2.4G / 5G) - Bluetooth 5.0
Input ports	USB-C (1 USB2.0 for battery charge, 1 USB3.0) - Micro SD card reader
Output ports	Microphone - Headphone - Micro HDMI
Battery Type	Lithium-ion
Battery capacity	6500 mAh
Power consumption	24.05W
Power supply	12V 2A EU
Dimensions (mm)	261 x 167 X 9
Weight (Kg)	0.53
Language	Multilanguage
Weight	530 g
Tablet accessories included	OTG cable (micro USB-C to USB-A) USB cable USB-B to USB-A (0.5m)

C-HB & C-HBSC

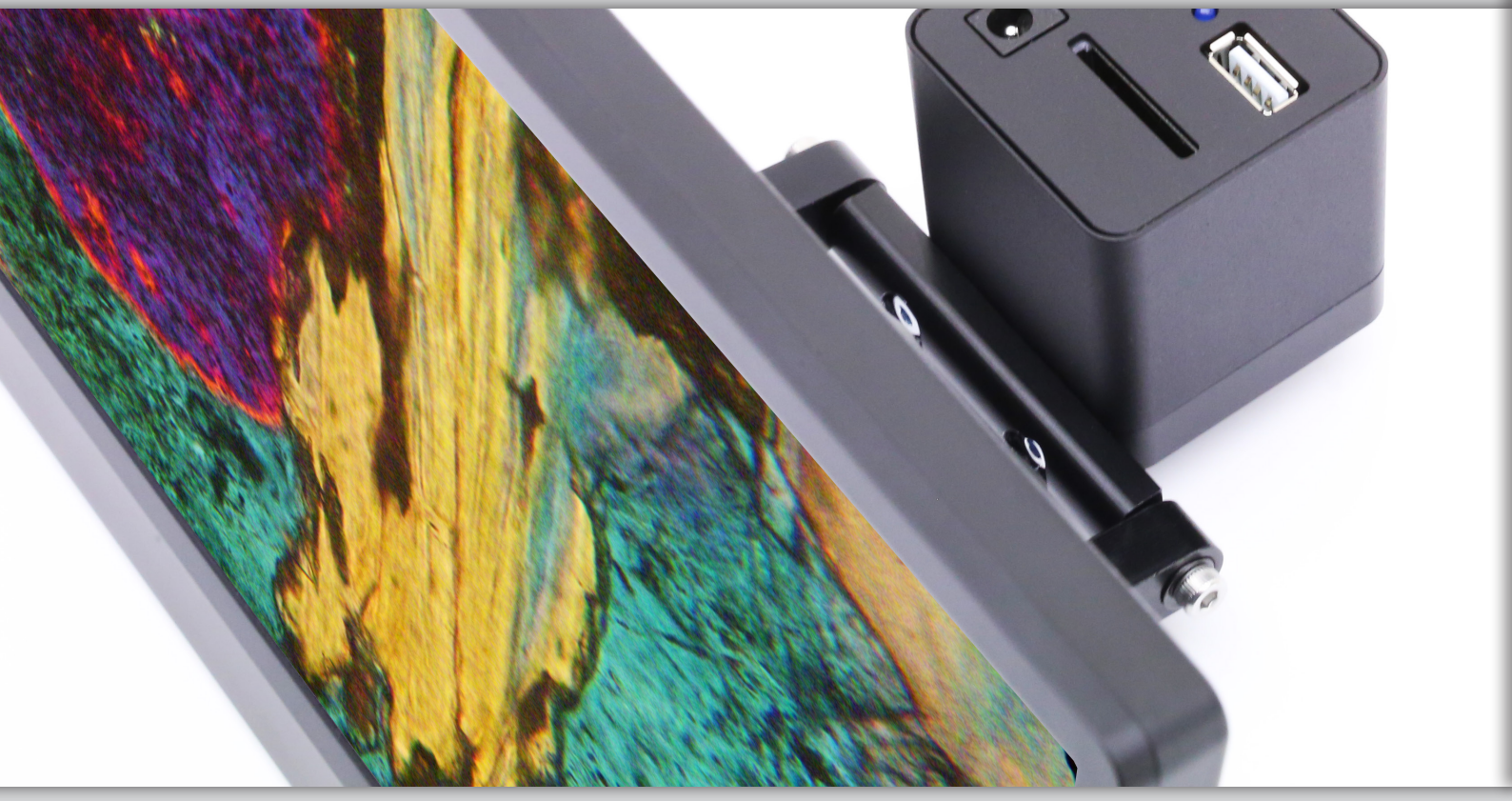
2.0 MP
CMOS
HDMI
USB-IN

C-HB

2.0 MP
CMOS
HDMI
USB-IN
11.5"

C-HBSC

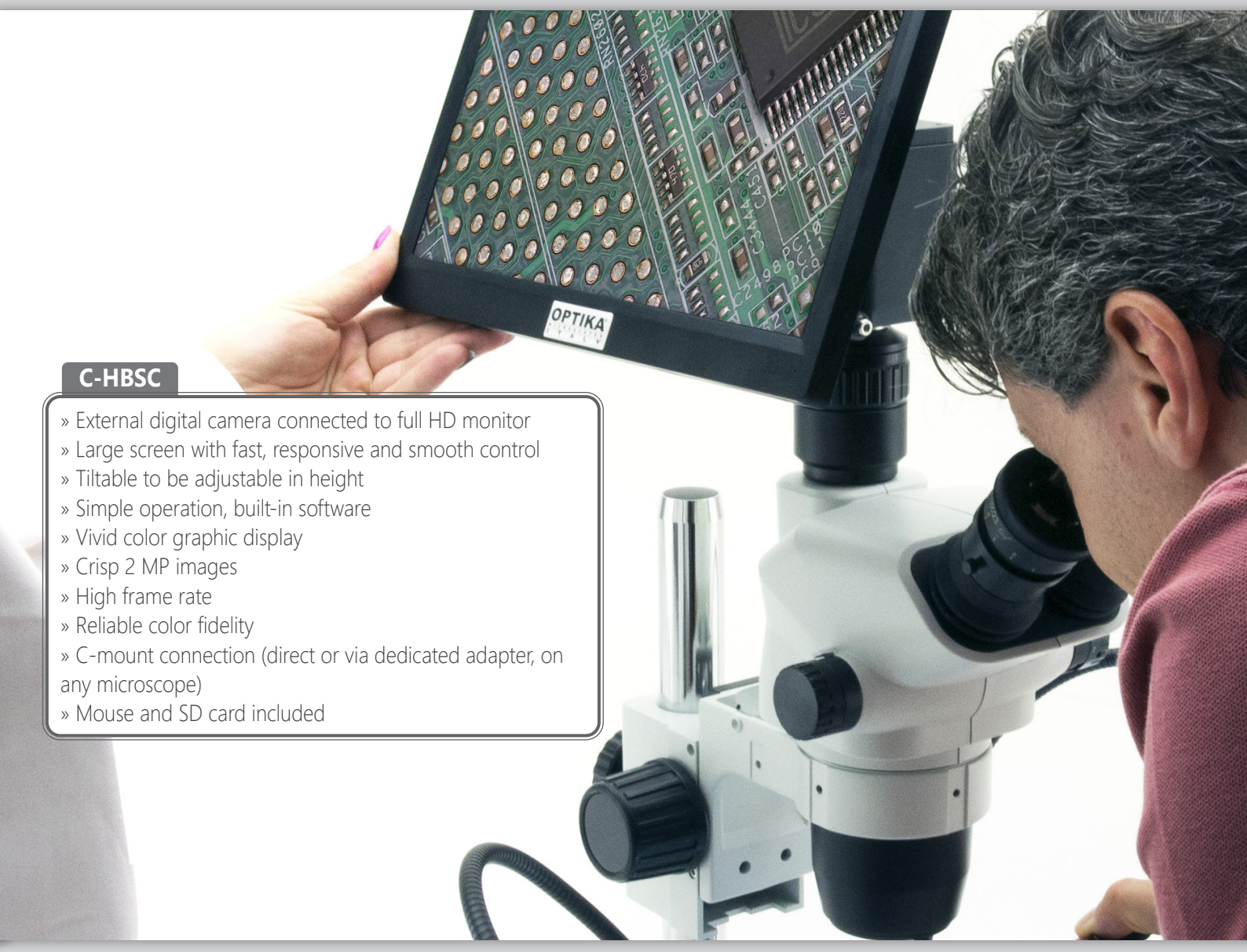
Cost-effective, entry-level HD camera with 1080p, 2 MP resolution, CMOS sensor and HDMI connection, recommended for its easy operation, no software installation is required with image capturing on SD card.
Connection into the eyepiece tube or to the trinocular tube of any microscope brand via dedicated adapter (to be purchased separately).
Wireless mouse, SD card and built-in software included.



C-HB & C-HBSC

C-HB

» Simple operation, built-in software
» Crisp 2 MP images
» High frame rate
» Reliable color fidelity
» C-mount connection (direct or via dedicated adapter, on any microscope)
» Mouse and SD card included



C-HBSC

» External digital camera connected to full HD monitor
» Large screen with fast, responsive and smooth control
» Tiltable to be adjustable in height
» Simple operation, built-in software
» Vivid color graphic display
» Crisp 2 MP images
» High frame rate
» Reliable color fidelity
» C-mount connection (direct or via dedicated adapter, on any microscope)
» Mouse and SD card included

C-HB & C-HBSC

C-HB Models:

C-HB: HB camera, 1080p, 2 MP CMOS, HDMI, multi-plug

C-HBSC: HB camera, 1080p, 2 MP CMOS, HDMI, with screen, multi-plug

C-HB & C-HBSC - Specifications

	C-HB	C-HBSC
Video resolution (USB output)	-	-
Video resolution (HDMI output)	HD 1080p	HD 1080p
Digital camera resolution	2 MP (1280 x 720)	2 MP (1280 x 720)
Signal output	HDMI	HDMI
Sensor Size	1/2.8"	1/2.8"
Sensor technology	CMOS	CMOS
Sensor type	SONY STARVIS	SONY STARVIS
Image format	16/9	16/9
Pixel size	2.9 x 2.9 µm	2.9 x 2.9 µm
Frame rate (HDMI)	60@1920X1080	60@1920X1080
Sensitivity	1300 mV at 1/30sec	1300 mV at 1/30sec
Dark Signal	0.15mV at 1/30sec	0.15mV at 1/30sec
Exposure Time	0.01 msec - 1 sec	0.01 msec - 1 sec
Binning	1x1	1x1
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Camera power	DC 12V 1A	DC 12V 1A
C-mount	YES	YES
White balance	Auto/Manual//ROI	Auto/Manual//ROI
Live HDMI measurement	Yes	Yes
Exposure control	Auto / Manual	Auto / Manual

C-HB & C-HBSC

C-HB Contents:

HDMI camera
HDMI cable
SD card
Wireless mouse
Multi-plug external power supply
Calibration slide

C-HBSC Contents:

HDMI camera
HDMI monitor
HDMI cable
SD card
Wireless mouse
Multi-plug external power supply (2 pcs.)
calibration slide

C-HB & C-HBSC - Monitor Specifications

MONITOR TECHNICAL SPECIFICATIONS	
Size	11,5"
Power supply	12V / 2,5A
HDMI cable	150 cm

WIFI Cameras – WiFi Series

5.0 MP

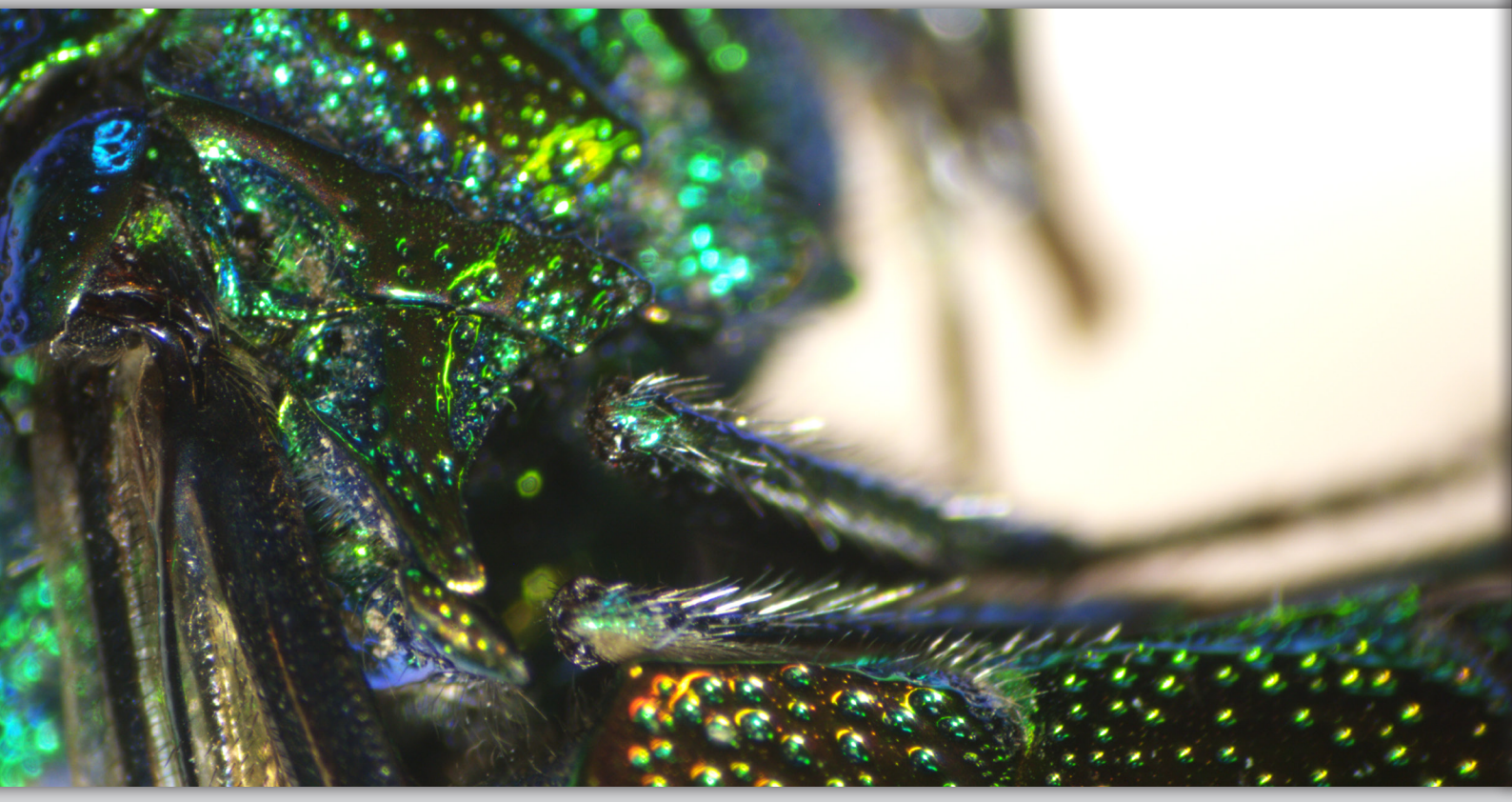
CMOS

USB-OUT

C-WF

C-WFR

Cost-effective and user-friendly Wi-Fi camera with good resolution, CMOS sensor and Wi-Fi connection, recommended for basic/general applications in education and home use.
Complete cordless operation is ensured thanks to the rechargeable batteries (5 hours autonomy per single charge) (C-WRF) and direct Wi-Fi as no router is required thanks to the direct remote application for simplified use.
Ready to use on any microscope with direct eyepiece tube connection, thanks to the C-mount projection lens and rings included.
Connectable also to all the trinocular tube of different brands using the C-mount projection lens included or additional focusable C-Mount adapter.
Downloadable, free of charge software (Windows, Mac OS or Linux) is always available to enable the latest updates.



WIFI Cameras – WiFi Series

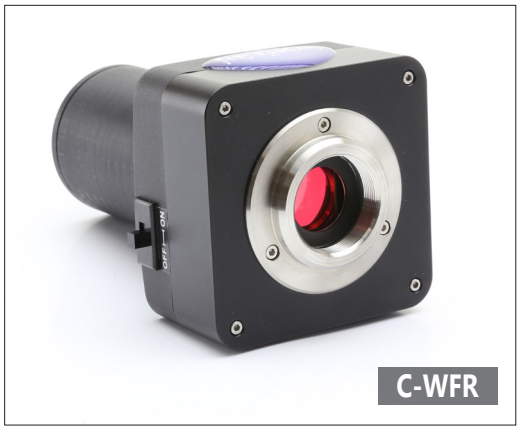
» Simple, intuitive operation with powerful software
» Universal connection to any microscope brand
» Direct eyepiece & trino port connection
» Wi-Fi interface
» Direct Wi-Fi connection (no router is required)
» Cordless use, totally independent from the mains connection (C-WFR)
» Battery-operated to enable portable use for approx. 5 hours (C-WFR)
» Image and video capturing function when used in Wi-Fi mode
» Reliable colour fidelity
» C-mount projection lens and rings included
» USB cable for batteries recharge (C-WFR) and calibration slide included
» Downloadable, free of charge software
» OPTIKA ProView & LiteView for Windows
» OPTIKA LiteView for Mac OS or Linux

WIFI Cameras – WiFi Series

WiFi Series model:

C-WF: WF camera, 1 MP CMOS, Wi-Fi, multi-plug

C-WFR: WFR rechargeable camera, 1 MP CMOS, Wi-Fi, multi-plug



WiFi Series - Specifications

CAMERA TECHNICAL SPECIFICATIONS	C-WF / C-WFR
Camera sensor resolution	2592x1944
Signal output	USB 2.0
Sensor Size	1/2"
Sensor technology	CMOS
Sensor type	Aptina CMOS
Image format	4/3
Pixel size	2.2 x 2.2 µm
Frame rate full resolution	10 fps (1280x720)
Frame rate other resolutions	10 fps (1280x720) (WiFi)
Sensitivity	1 V/lux-second
Signal / noise ratio	43 dB
Dynamic range	61 dB
ADC conversion	8 Bit
Color Depth	8 Bit
Exposure Time	Auto
Binning	2x2
IR filter	380-650 nm (IR-cut filter)
Camera power	**Ni-MH (AA-size) Rechargeable batteries (only on C-WFR model)** Multiplug 100-240Vac/6Vdc external power supply
C-mount	YES

WIFI Cameras – WiFi Series

C-WF Contents:
Wi-Fi camera
30 & 30.5 mm rings
C-mount projection lens
Micrometric slide
Multi-plug external power supply

C-WFR Contents:
Wi-Fi rechargeable camera
30 & 30.5 mm rings
C-mount projection lens
Micrometric slide
Multi-plug external power supply

Recommended Camera Adapters

		Upright			
		Monocular Binocular (Ø 23 mm)	Trinocular (Ø 23 mm)	Binocular (Ø 30 mm)	Trinocular
Camera model	Sensor size	Ecovision / B-60 / B-150 B-190-290 / B-380 (ALC)	B-190 / B-290 B-380 (with M-699)	B-510 / B-810 / B-1000	B-380 / B-510 B-810 / B-1000
C-B1	1/3″	Included with the camera	Included with the camera	Included with the camera	M-620
C-B3A	1/2.8″	Included with the camera	Included with the camera	Included with the camera	M-620
C-B5	1/2.5″	Included with the camera	Included with the camera	Included with the camera	M-620.1
C-B16	1/2.33″	Included with the camera	Included with the camera	Included with the camera	M-620.1
C-B10+	1/2.3"	Included with the camera	Included with the camera	Included with the camera	M-620.1
C-B18+	1/2.3"	Included with the camera	Included with the camera	Included with the camera	M-620.1
TB-3W	1/2″	-	Included with the camera	M-114 + M-113.1	M-620.1
TB-5W	1/2.5″	-	Included with the camera	M-114 + M-113.1	M-620.1
C-HB	1/2.8"	M-115	M-115	M-115 + M-113.1	M-620
C-HBSC	1/2.8"	M-115	M-115	M-115 + M-113.1	M-620
C-WF/C-WFR	1/2.5″	Included with the camera	Included with the camera	M-114 + M-113.1	M-620.1

M-114 / M-115

M-113.1 / M-113.2

M-620

M-620.1

Recommended Camera Adapters

Inverted	Stereo		
Trinocular	Binocular (Ø 30.5 mm)	Binocular (Ø 30 mm)	Trinocular
IM-3 / IM-5	SFX	SLX / SZ / SZP	SLX / SZ / SZP
M-620	Included with the camera	Included with the camera	M-620
M-620	Included with the camera	Included with the camera	M-620
M-620.1	Included with the camera	Included with the camera	M-620.1
M-620.1	Included with the camera	Included with the camera	M-620.1
M-620.1	Included with the camera	Included with the camera	M-620.1
M-620.1	Included with the camera	Included with the camera	M-620.1
M-620.1	Included with the camera	Included with the camera	M-620.1
M-620.1	Included with the camera	Included with the camera	M-620.1
M-620	M-115 + M-113.2	M-115 + M-113.1	M-620
M-620	M-115 + M-113.2	M-115 + M-113.1	M-620
M-620.1	Included with the camera	Included with the camera	M-620.1

Headquarters and Manufacturing Facilities

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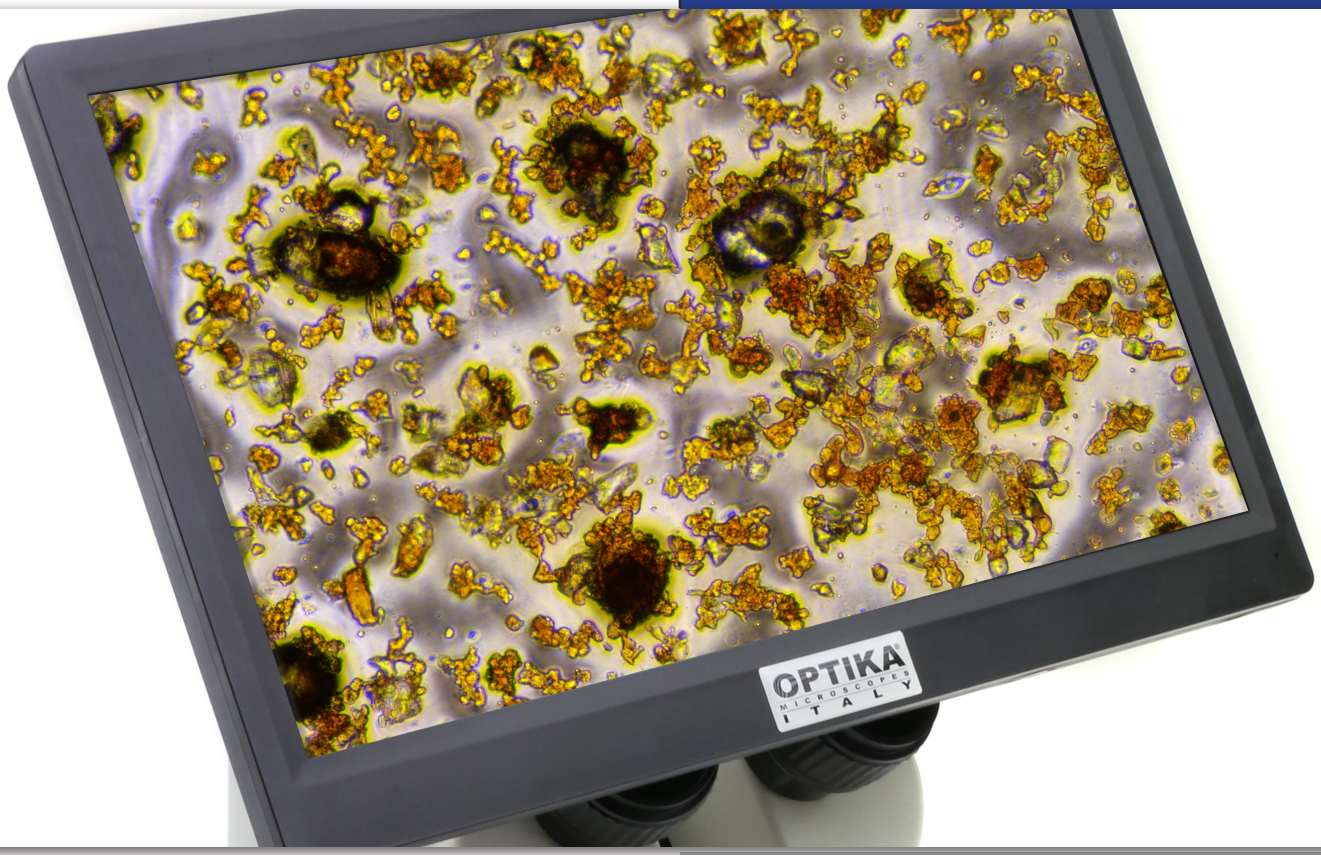
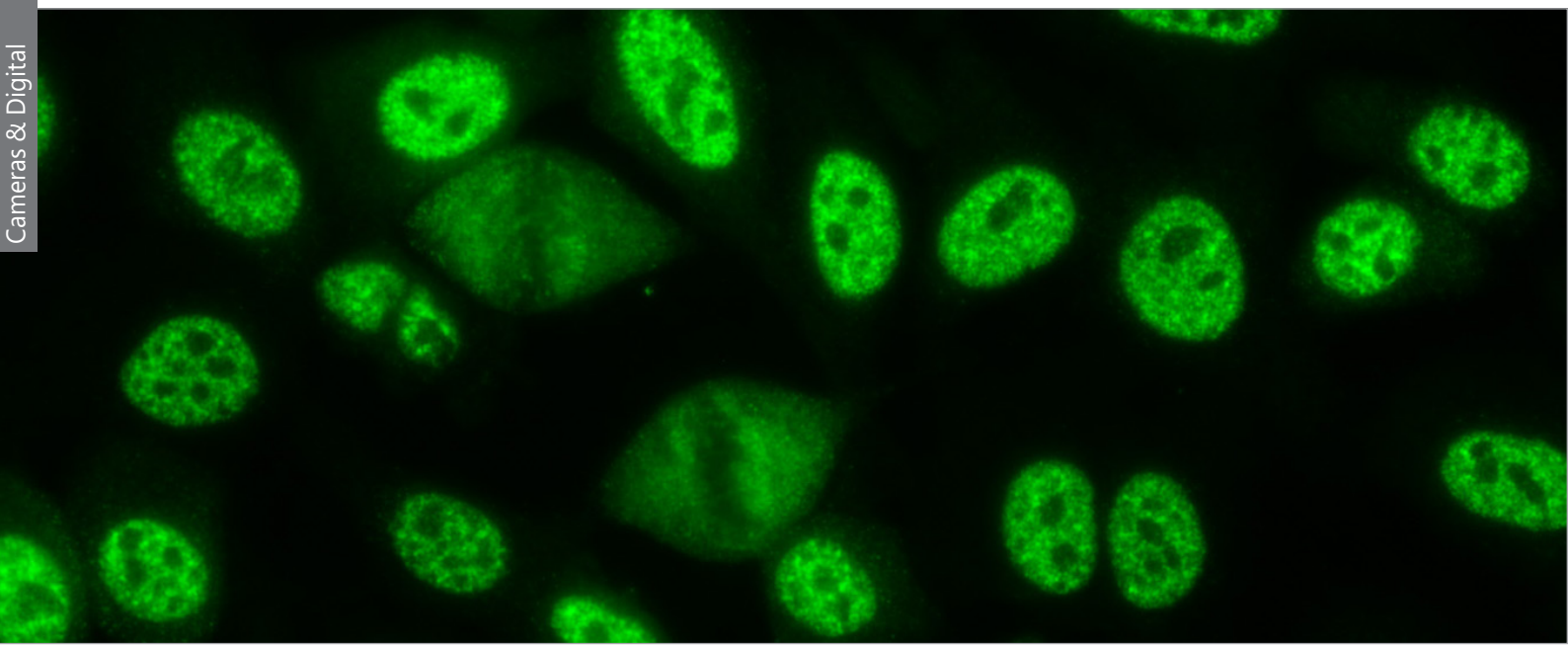
Professional Microscope Cameras



Professional Microscope Cameras
Comprehensive Range, Remarkable Performance

An impressive offering compatible with any microscope brand to ensure the highest performance available for routine applications in professional environments, with USB, HDMI, 4K, Wi-Fi connections.
Images and videos will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.
The compact and elegantly designed housing conceals the very latest in camera technology.

Professional Microscope Cameras



P as Professional

Recommended for professional use in laboratory and industrial field, the valuable yet affordable OPTIKA C-P cameras are equipped with top-class SONY EXMOR sensors and USB3.0 connection for premium features and faster transmission speed. Perfect for most of the brightfield, darkfield, phase contrast and metallographic applications when requiring PC/Laptop operation.

C-P3	P3 Pro camera, 3.1 MP CMOS, USB3.0
C-P6	P6 Pro camera, 6.3 MP CMOS, USB3.0
C-P8	P8 Pro camera, 8.3 MP CMOS, USB3.0
C-P20	P20 Pro camera, 20 MP CMOS, USB3.0

GS like Global Shutter

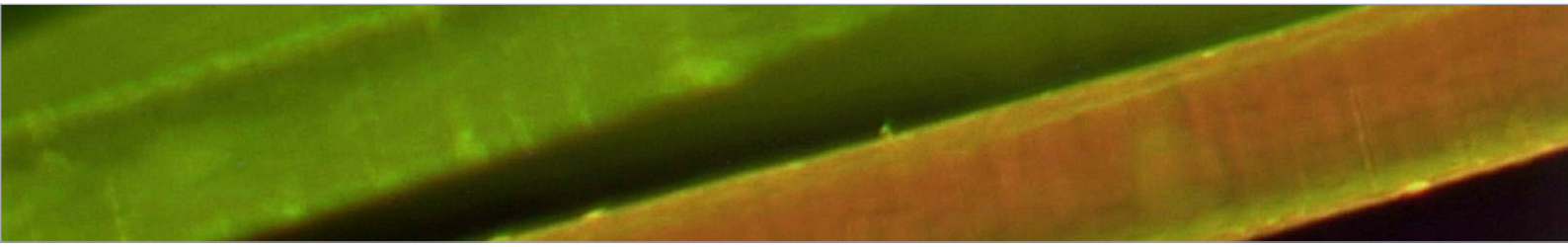
Global shutter camera are designed when particularly high-motion captures are needed, being perfect for enabling 'freeze frame' of fast changing events, exposing each and every pixel simultaneously on PC/Laptop.
Superb with moving specimens in brightfield, darkfield, phase contrast and even in polarized light observations thanks to the generous dynamic range which gives a great response to light and dark at the same time.

C-P5GS	P5GS Pro global shutter camera, 5 MP CMOS, USB3.0

WH like Wi-fi & HDMI

The most versatile cameras with endless possibilities perfect for most of the brightfield, darkfield, phase contrast and material science applications. Take benefit from the on-board imaging software to display live view directly on monitor and projector, with data storage on SD card; or download the professional imaging software for PC.

C-WH5	WH5 camera, 1080p, 5 MP CMOS, Wi-Fi/HDMI, multi-plug
C-WH5SC	WH5 camera, 1080p, 5 MP CMOS, Wi-Fi/HDMI, with screen, multi-plug



Professional Microscope Cameras

HA like HDMI Autofocus - C-HA

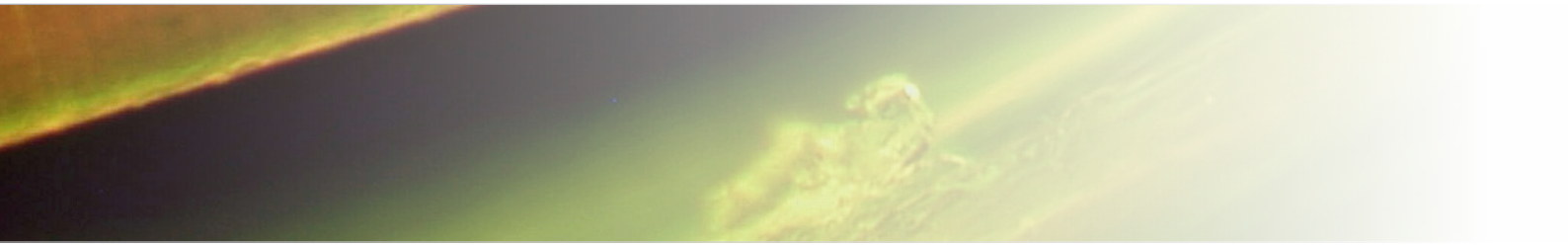
Providing precise and ultra-fast automatic focus adjustment in any condition and in real time, perfect to compensate the lack of parfocality of the microscope or poor sample preparation, without any user effort.
Ideal for every use in brightfield, darkfield, phase contrast, polarized light and material science applications for easy connection to any monitor and projector.

C-HA	HA autofocus camera, 2 MP CMOS, HDMI, multi-plug

4K like Ultra-HD - C-HP4 / C-HUB4K

This is much more detailed than anything you're likely to have seen before: an immersive experience is created, improving detail and general sharpness. Ideal for every use in brightfield, darkfield, phase contrast, polarized light and material science applications for easy connection to Ultra-HD monitors, providing more pixels, more details and colors.

C-HP4	HP4 camera, 4K/8MP CMOS, HDMI/USB
C-HUB4K	HUB4K Camera,8Mp CMOS, 4K/USB/ETHERNET/WIFI multi video output



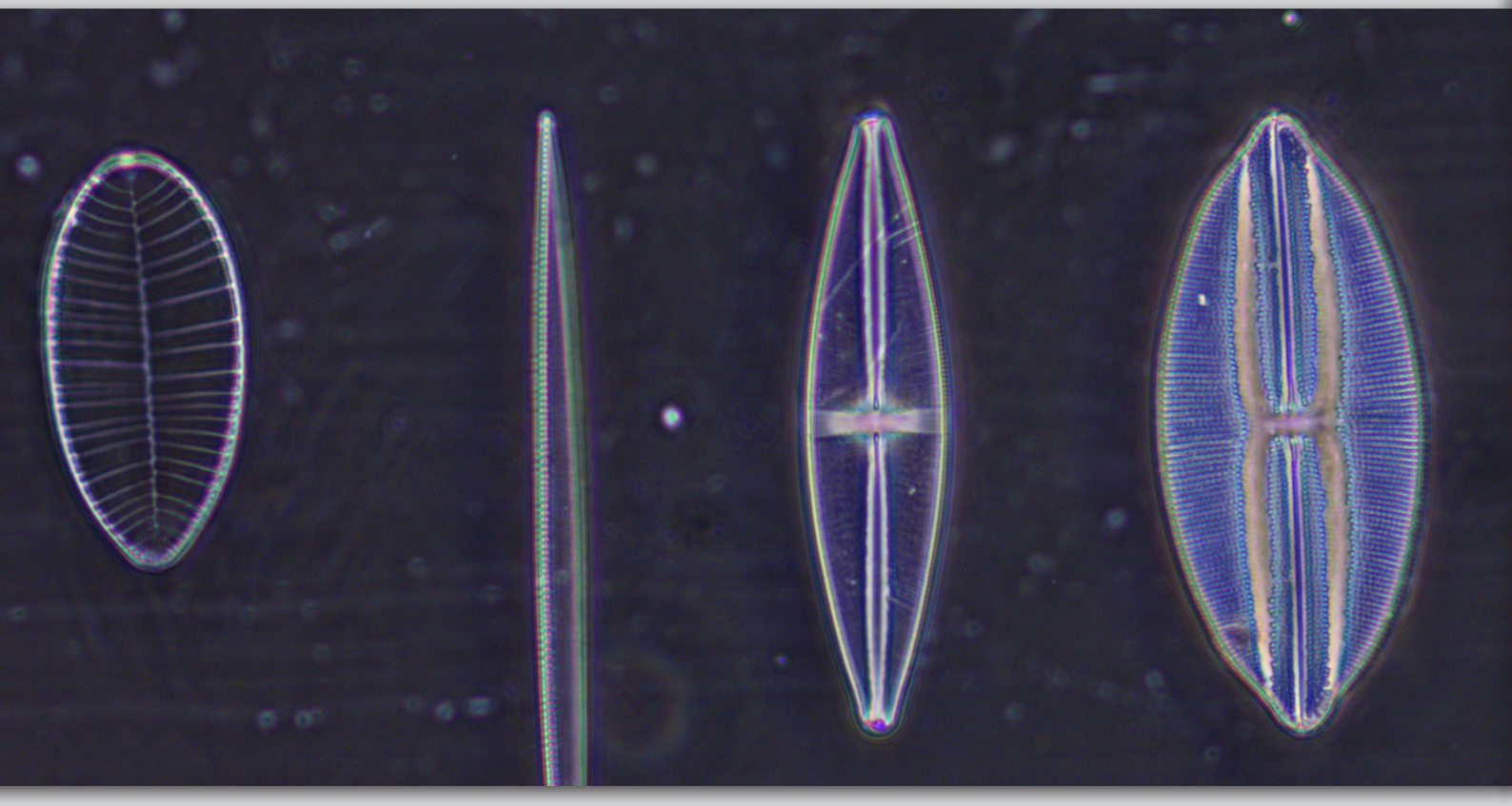
C-P Series

3.1/20 MP

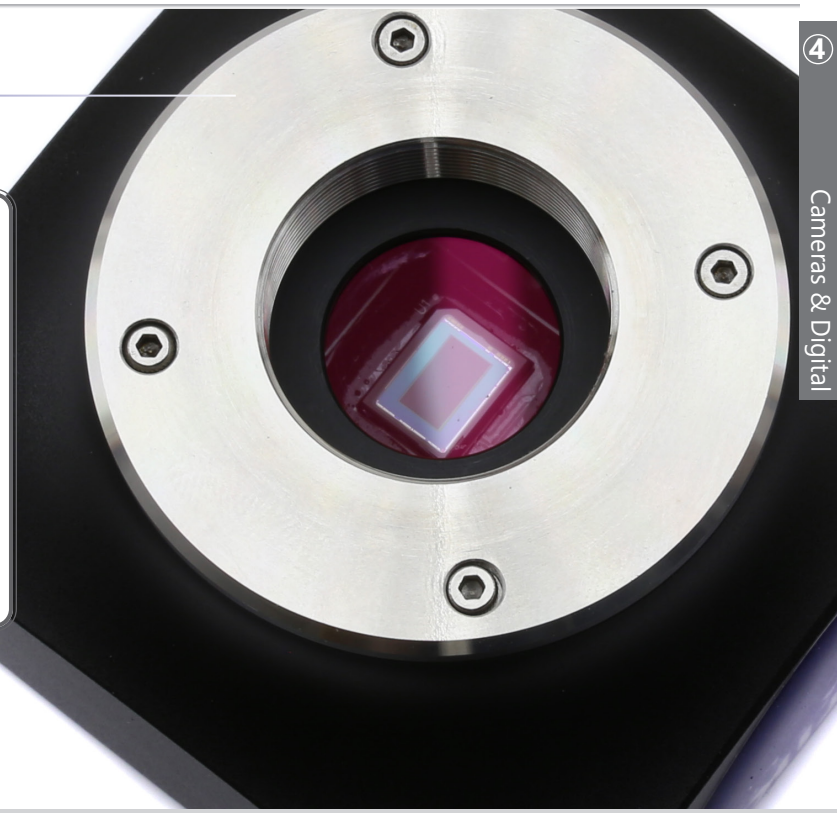
CMOS

USB-OUT

Professional yet very easy to use cameras with several resolutions (from 3.1 up to 20 MP), large SONY EXMOR CMOS sensor and USB3.0 connection, recommended for general scientific or industrial purposes requiring rapid speed transmission.
The compact and elegantly designed housing conceals the very latest in camera technology.
Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.
Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).
Downloadable, free of charge software (Windows, Mac OS or Linux) is always available to enable the latest updates.



C-P Series

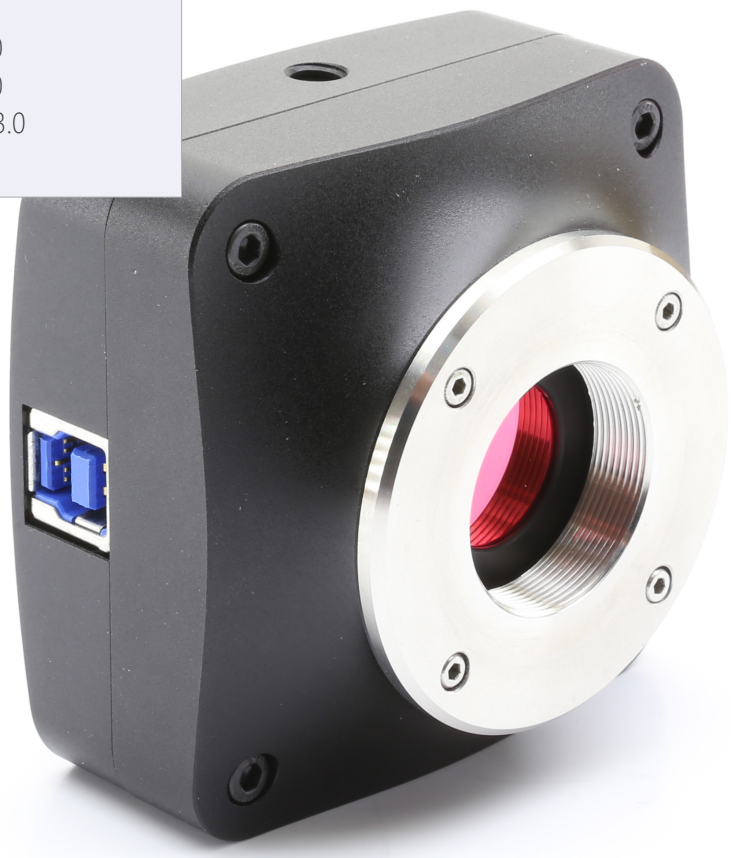


» Simple operation, driver-free
» Top-class SONY EXMOR sensor
» Universal connection to any microscope brand
» Crisp 3.1 to 20 MP images
» USB3.0 for impressive high frame rate
» Incredibly accurate colors
» USB cable and calibration slide included
» Downloadable, free of charge software
» OPTIKA ProView & LiteView for Windows
» OPTIKA LiteView for Mac OS or Linux"

C-P Series

C-P Models:

C-P3: P3 Pro camera, 3.1 MP CMOS, USB3.0
C-P6: P6 Pro camera, 6.3 MP CMOS, USB3.0
C-P8: P8 Pro camera, 8.3 MP CMOS, USB3.0
C-P20: P20 Pro camera, 20 MP CMOS, USB3.0



C-P Series - Specifications

	C-P3	C-P6	C-P8
Digital camera resolution	3.1 MP (2048 x 1536)	6.3 MP (3072 x 2048)	8.3 MP (3840 x 2160)
Signal output	USB 3.0	USB 3.0	USB 3.0
Sensor Size	1/2.8"	1/1.8"	1/2.5"
Sensor technology	CMOS	CMOS	CMOS
Sensor type	SONY EXMOR	SONY EXMOR	SONY EXMOR
Image format	4/3	3/2	16/9
Pixel size	2.5 x 2.5 µm	2.4 x 2.4 µm	1.62 x 1.62 µm
Frame rate full resolution	50 fps (2048 x 1536)	30 fps (3072 x 2048)	32 fps (3840 x 2160)
Frame rate other resolutions	50 fps (1920 x 1080)	38 fps (1536 x 1024)	65 fps (1920 x 1080)
G Sensitivity	600mV at 1/30s	425mV at 1/30s	236mV at 1/30s
Dark Signal	0.15mV at 1/30s	0.15mV at 1/30s	0.1mV at 1/30s
Dynamic range	66 dB	66.8 dB	65 dB
ADC conversion	8 Bit - 12Bit	8 Bit - 12Bit	8 Bit - 12Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit	1 Bit ; 4 Bit; 8 Bit; 24 Bit	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.1 msec - 15 sec	0.1 msec - 15 sec	0.244 msec - 15 sec
Binning	1x1	1x1; 2x2	1x1; 2x2
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Camera power	PC USB	PC USB	PC USB
C-mount	YES	YES	YES

C-P Series

C-P Contents:

USB camera
USB 3.0 cable
Micrometric slide

C-P20
20 MP (5440 x 3648)
USB 3.0
1"
CMOS
SONY EXMOR
3/2
2.4 x 2.4 µm
15 fps (5440 x 3648)
50 fps (2736 x 1824); 60 fps (1824 x 1216)
462mV at 1/30s
0.21mV at 1/30s
66.3 dB
8 Bit - 12Bit
1 Bit; 4 Bit; 8 Bit; 24 Bit
0.1 msec - 15 sec
1x1; 2x2; 3x3
380-650 nm (IR-cut filter)
PC USB
YES

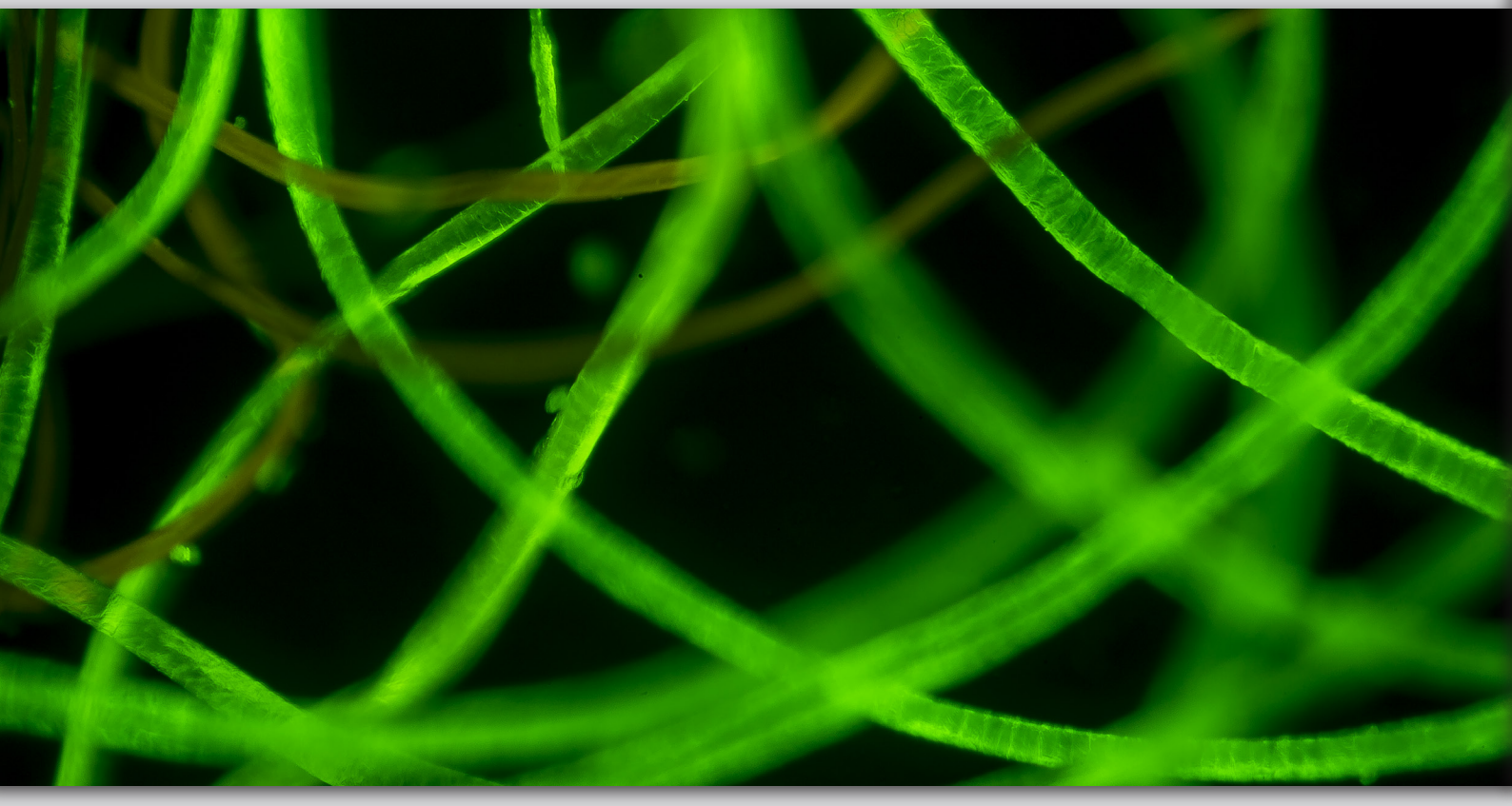
C-PGS Model

5 MP

CMOS

USB-OUT

Professional yet very easy to use cameras with several resolutions, large SONY EXMOR CMOS sensor, USB3.0 connection and Global Shutter mode. Global Shutter mode can be easily thought of as a 'Snapshot' exposure mode, perfect for capturing images of moving objects and enabling 'freeze frame' capture of fast changing events, exposing each and every pixel simultaneously.
In addition, the generous dynamic range gives a great response to light and dark simultaneously, being recommened for polarizing light applications.The compact and elegantly designed housing conceals the very latest in camera technology.
Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.
Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).
Downloadable, free of charge software (Windows, Mac OS or Linux) is always available to enable the latest updates.



C-PGS Model

» Simple operation, driver-free
» Top-class SONY EXMOR sensor
» Universal connection to any microscope brand
» Crisp 5MP images
» Global Shutter technology for ""freeze frame"" capture
» Generous dynamic range, recommened for polarizing light
» USB3.0 for impressive high frame rate
» Crystal-clear images, even for very short exposures
» Outstanding noise characteristics, even in low lighting conditions
» Incredibly accurate colors
» USB cable and calibration slide included
» Downloadable, free of charge software
» OPTIKA ProView & LiteView for Windows
» OPTIKA LiteView for Mac OS or Linux"

C-PGS Model

C-PGS Model:
C-P5GS: P5GS Pro global shutter camera, 5 MP CMOS, USB3.0

C-PGS Model - Specifications

	C-P5GS
Digital camera resolution	5 MP (2448 x 2048)
Signal output	USB 3.0
Sensor Size	2/3"
Sensor technology	CMOS
Sensor type	SONY EXMOR
Image format	5/4
Pixel size	3.45 x 3.45 µm
Frame rate full resolution	35 fps (2448 x 2048)
Frame rate other resolutions	50 fps (1224 x 1024)
G Sensitivity	1146mV at 1/30s
Dark Signal	0.15mV at 1/30s
Dynamic range	70.60 dB
ADC conversion	8 Bit - 12 Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.1 msec - 15 sec
Binning	1x1;
IR filter	380-650 nm (IR-cut filter)
Camera power	PC USB
C-mount	YES

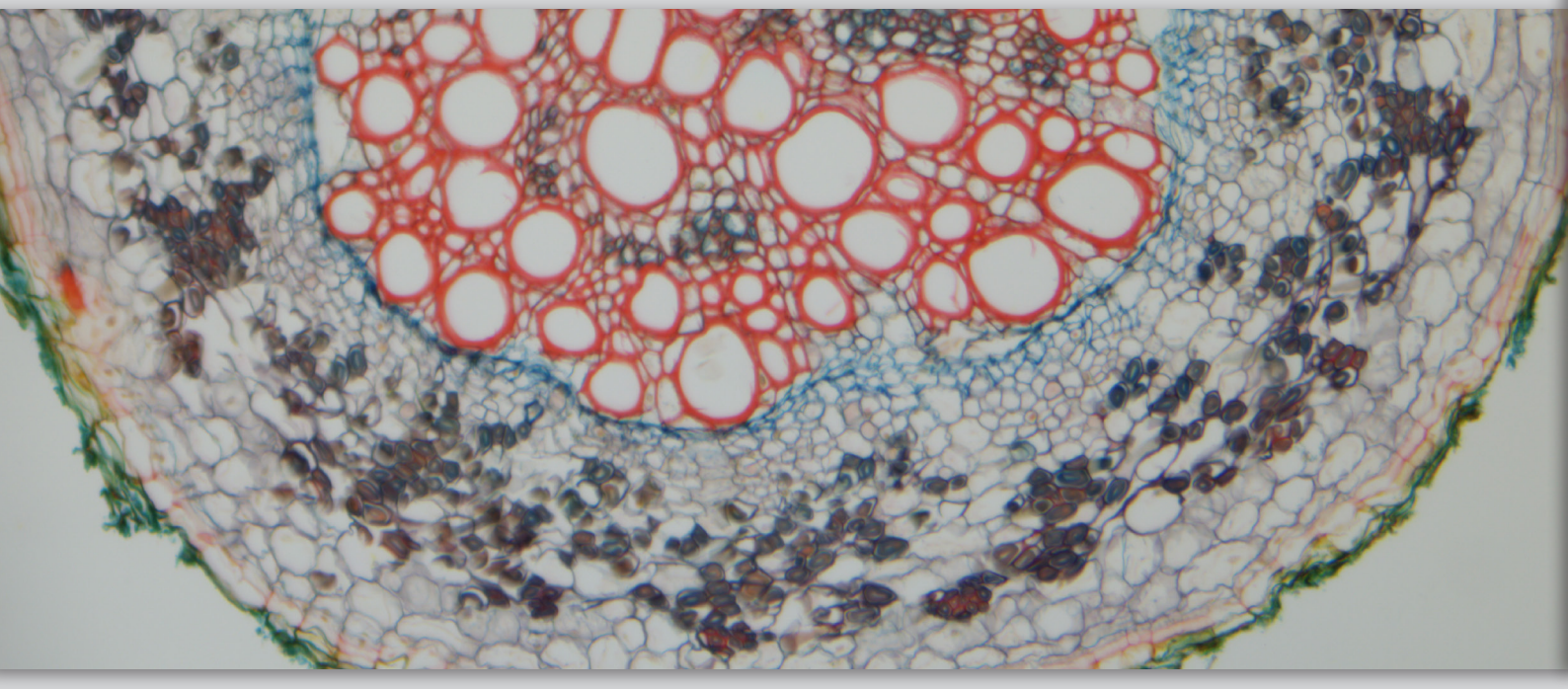
C-PGS Model

C-PGS Contents:
USB camera
USB 3.0 cable
Micrometric slide

C-WH5 & C-WH5SC

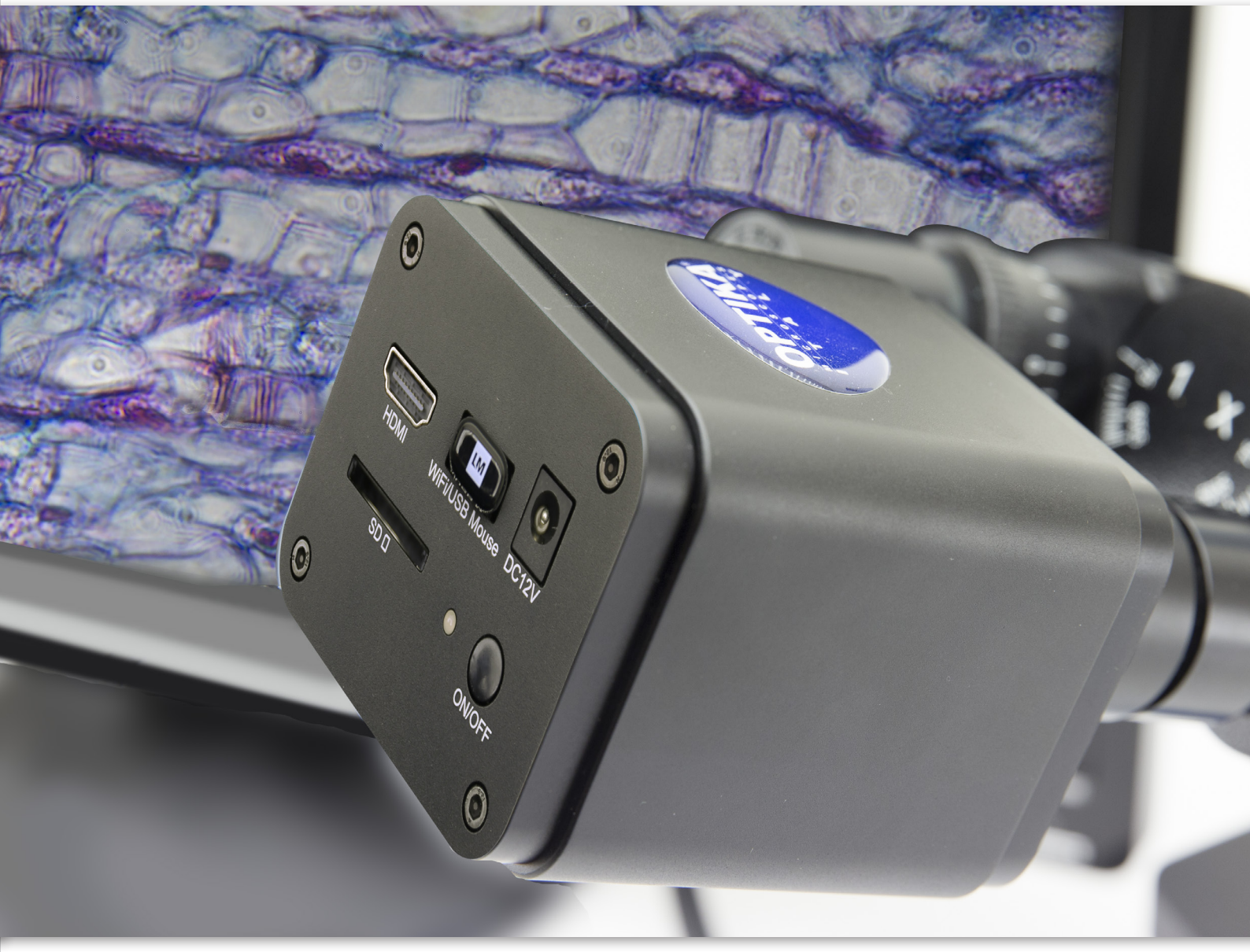
Smart and user-friendly dual output (HDMI & Wi-Fi) camera with good resolution (up to 5 MP), high-grade SONY CMOS sensor and HDMI/Wi-Fi connection, recommended for routine operations and whenever measurements are required. No software installation is required with image and video capturing on SD card when in HDMI mode. No router or external applications are required thanks to the quick and simple camera connection. At any time, it can be connected to PC and used via the downloadable, free of charge software (Windows), which is always available to enable the latest updates. The compact and elegantly designed housing conceals the very latest in camera technology. Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).

Connection into the eyepiece tube or to the trinocular tube of any microscope brand via dedicated adapter (to be purchased separately). Available also as an all-in-one, space saving package including a 11.5"" full HD monitor with compact footprint, enabling screen adjustment to ensure correct posture and eliminate fatigue during observation connectable to trinocular tube only via dedicated adapter (to be purchased separately). Wireless mouse, SD card and built-in software included.



C-WH5 & C-WH5SC

» Simple operation, built-in software
» Universal connection to any microscope brand
» Crisp 1080p images and videos
» Live measurements function
» Dual output mode (HDMI/WiFi)
» High frame rate
» Reliable color fidelity
» C-mount connection (via dedicated adapter, on any microscope)
» HDMI cable, Wireless adapter, mouse and SD card included
» Downloadable, free of charge software
» OPTIKA ProView for Windows



C-WH5 & C-WH5SC

Models:

C-WH5: WH5 camera, 1080p, 5 MP CMOS, Wi-Fi/HDMI, multi-plug

C-WH5SC: WH5 camera, 1080p, 5 MP CMOS, Wi-Fi/HDMI, with screen, multi-plug

C-WH5 & C-WH5SC - Specifications

	C-WH5 & C-WH5SC
PC Camera resolution (MP)	5 MP
HDMI Camera resolution (MP)	2 MP
Digital camera resolution	1920 x 1080
HDMI Signal output	Yes
Sensor Size	1/1.8"
Sensor technology	CMOS
Sensor type	SONY
Image format	16/9
Pixel size	2.4x2.4 µm
Frame rate (HDMI)	60 fps (1920 x 1080 HDMI); 25fps (1920x1080) (WiFi)
Dynamic range	66 dB
Sensitivity	1120mV at 1/30s
Dark Signal	0.15mV at 1/30s
ADC conversion	8 Bit - 12Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.03 msec - 918 msec
Binning	1x1
IR filter	380-650 nm (IR-cut filter)
Camera power	DC 12V 1A
C-mount	YES

C-WH5 & C-WH5SC

C-WH5 Contents:
HDMI camera
HDMI cable
WiFi adapter
SD card
Wireless mouse
Multi-plug external power supply

C-WH5SC Contents:
HDMI camera
HDMI monitor
HDMI cable
WiFi adapter
SD card
Wireless mouse
Multi-plug external power supply (2 pcs.)

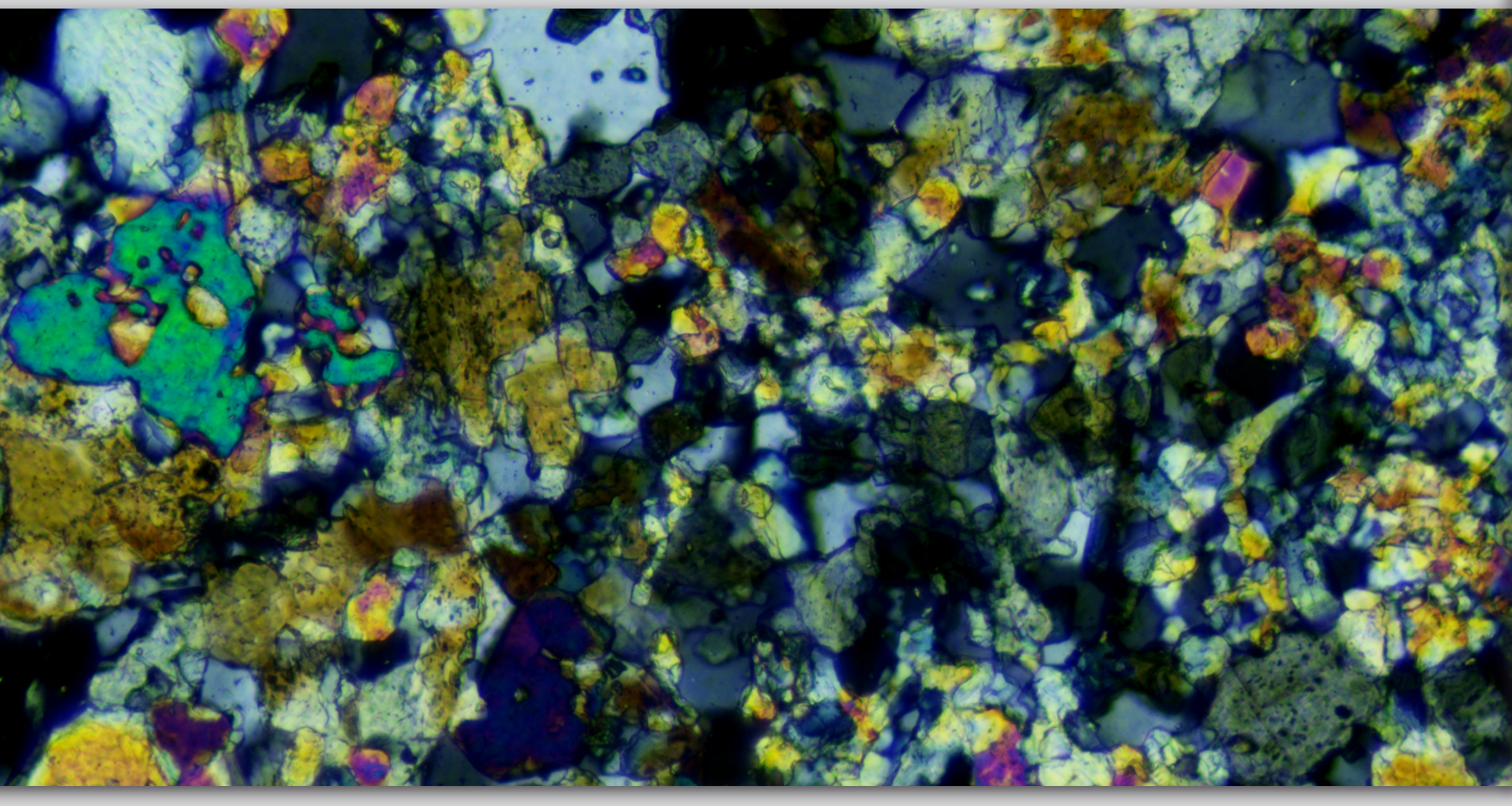
C-WH5SC - Monitor Specifications

MONITOR TECHNICAL SPECIFICATIONS (C-WH5SC)	
Size	11,5"
Power supply	12V / 2,5A
HDMI cable	50 cm

C-HA

2 MP
CMOS
HDMI

Impressive autofocusing FULL HD camera with 1080p, 2 MP resolution, CMOS sensor and HDMI connection, ensuring precise and ultra-fast automatic focus adjustment in any condition and in real time. Recommended for routine operations and perfect to compensate the lack of parfocality of the microscope without any user effort.
No software installation is required with image and video capturing on SD card.
Camera control panel shows exposure, white balance, color adjustment and sharpness when using mouse control.
Connection to the trinocular tube of any microscope brand via dedicated adapter (to be purchased separately).
Wireless mouse, SD card and built-in software included.



C-HA

» Simple operation, built-in software
» Universal connection to any microscope brand
» Rapid autofocusing system
» Crisp 1080p images and videos
» High frame rate
» Reliable color fidelity
» C-mount connection (via dedicated adapter, on any microscope)
» HDMI cable, mouse and SD card included

C-HA

Model:
C-HA: HA autofocus camera, 2 MP CMOS, HDMI, multi-plug

C-HA Series - Specifications

	C-HA
HDMI camera resolution	2 MP (1920 x 1080)
HDMI Signal output	Yes
Sensor Size	1/2.8"
Sensor technology	CMOS
Sensor type	Aptina CMOS
Image format	16/9
Pixel size	2.9 x 2.9 µm
Frame rate full resolution	50 fps (1920 x 1080)
G Sensitivity	510mV at 1/30sec
Dark Signal	0.15mV at 1/30sec
ADC conversion	8 Bit
Color Depth	8 Bit
Exposure Time	Auto
Binning	1x1
Cooling Temperature	None
Camera Power	5V 2A
IR filter	380-650 nm (IR-cut filter)
CS-mount	YES
C-mount	YES

C-HA

C-PGS Contents:

USB camera
USB 2.0 cable
30 & 30.5 mm rings
C-mount projection lens
Micrometric slide
Wireless mouse
SD card

C-HP4

8 MP

CMOS

USB-OUT

HDMI

Professional ultra-high definition yet very easy to use 4K camera with 2160p, 8 MP resolution, large SONY CMOS sensor and HDMI connection to clearly reveal the sample's finest details on-screen and perform measurements.
No software installation is required with image and video capturing on SD card when in HDMI mode.
At any time, it can be connected to PC and used via the downloadable, free of charge software (Windows), which is always available to enable the latest updates. The compact and elegantly designed housing conceals the very latest in camera technology.
Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.
Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).
Wireless mouse, SD card and built-in software included.

C-HP4

C-H4K Contents:
4k Camera
USB Cable 180cm
HDMI Cable 150cm
Wireless Mouse
16gb SD Card
Calibration slide

» Simple operation, built-in software
» Universal connection to any microscope brand
» Ultra HD 4K 2160p images and videos
» Dual output mode (HDMI/USB)
» High frame rate
» Reliable color fidelity
» C-mount connection (via dedicated adapter, on any microscope)
» HDMI cable, mouse and SD card included
» Downloadable, free of charge software
» OPTIKA ProView for Windows

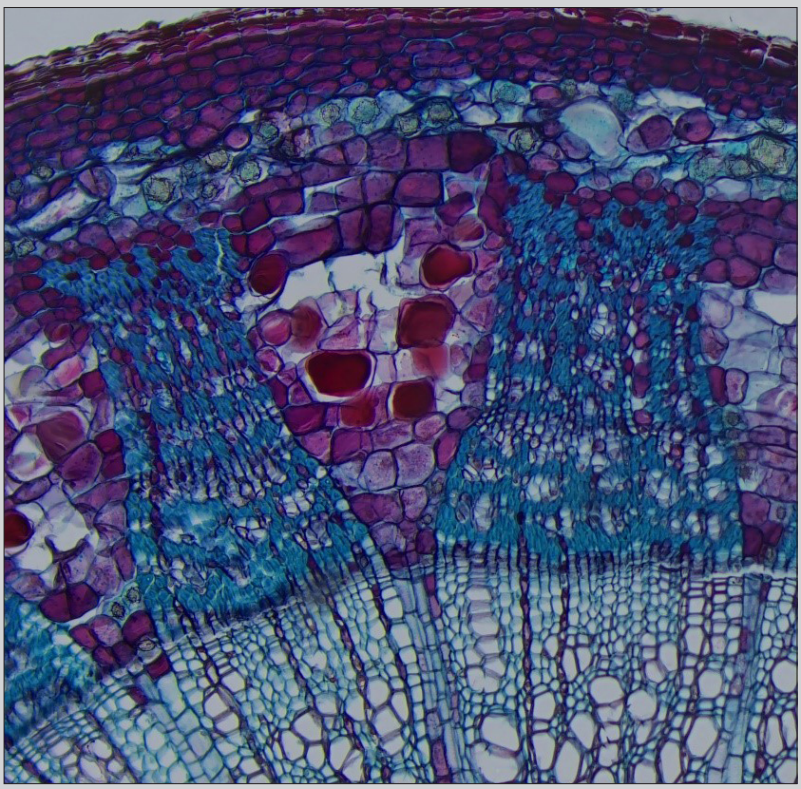
Model:
C-HP4: HP4 camera, 8 MP CMOS, USB/HDMI/4K, multi-plug

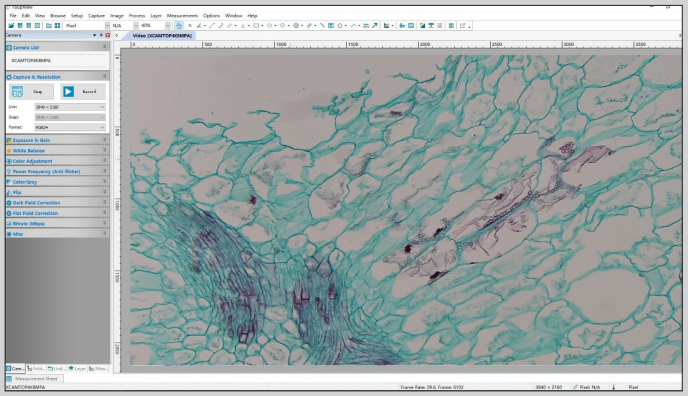
C-HP4 - Specifications

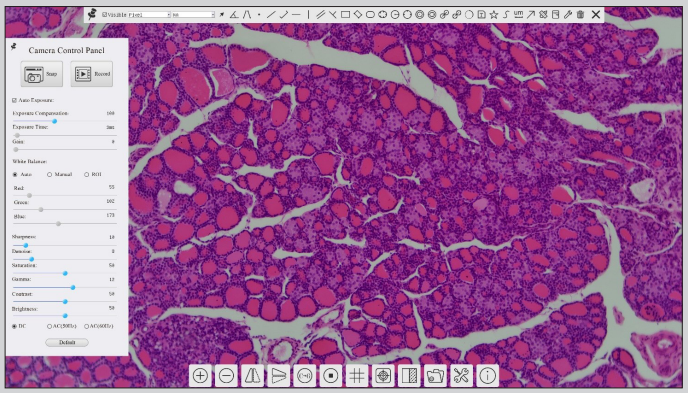
	C-HP4
PC Camera resolution (MP)	8 MP
HDMI Camera resolution (MP)	8 MP
Camera resolution (n° of pixels: W x H)	3840x2160
Color / Monochrome	Color
Sensor Size	1/1.8"
Sensor technology	CMOS
Sensor type	SONY
Image format	16/9
Pixel size	2.0 x 2.0 µm
Frame rate full resolution	30@ 3840x2160
G Sensitivity	505mV at 1/30s
Dark Signal	0.13mV at 1/30s
ADC conversion	8 Bit - 12 Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.04 msec- 2 sec
Binning	1x1
IR filter	380-650 nm (IR-cut filter)
Camera power	12V 1A
C-mount	YES

C-HUB4K

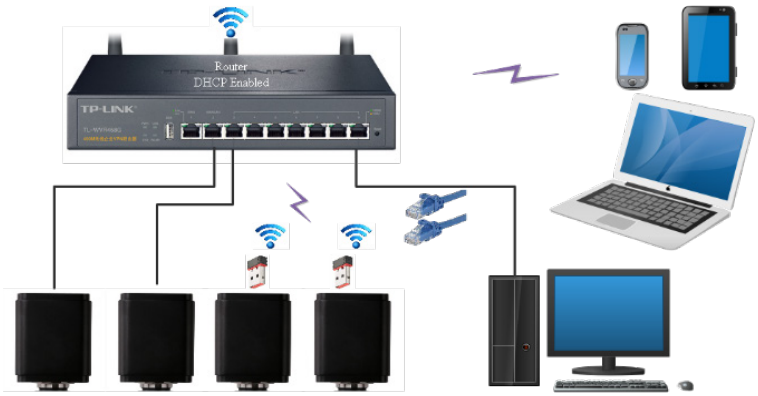
Professional ultra-high definition yet very easy to use 4K camera with 2160p, 8 MP resolution, large SONY CMOS sensor and HDMI connection to clearly reveal the sample's finest details on-screen and perform measurements.
No software installation is required with image and video capturing on SD card when in HDMI mode.
At any time, it can be connected to PC and used via the downloadable, free of charge software (Windows), which is always available to enable the latest updates.
The compact and elegantly designed housing conceals the very latest in camera technology.
Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.
Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).
Wireless mouse, SD card and built-in software included.







C-HUB4K



C-HUB4K Contents:

4k Camera
USB Cable 180cm
HDMI Cable 150cm
Wireless Mouse
16gb SD Card
Calibration slide

» Simple operation, built-in software
» Universal connection to any microscope brand
» Ultra HD 4K 2160p images and videos
» Dual output mode (HDMI/Ethernet)
» High frame rate
» Reliable color fidelity
» C-mount connection (via dedicated adapter, on any microscope)
» HDMI cable, mouse and SD card included
» Downloadable, free of charge software
» OPTIKA ProView for Windows

Model:

C-HUB4K: HUB4K Camera,8Mp CMOS, 4K/USB/ETHERNET/WIFI multi video output

C-HUB4K - Specifications

	C-HUB4K
PC Camera resolution (MP)	8 MP
HDMI Camera resolution (MP)	8 MP
Camera resolution (n° of pixels: W x H)	3840x2160
Color / Monochrome	Color
Sensor Size	1/1.8"
Sensor technology	CMOS
Sensor type	SONY
Image format	16/9
Pixel size	2.0 x 2.0 µm
Frame rate full resolution	30@ 3840x2160
G Sensitivity	505mV at 1/30s
Dark Signal	0.13mV at 1/30s
ADC conversion	8 Bit - 12 Bit
Color Depth	1 Bit; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.04 msec- 2 sec
Binning	1x1
IR filter	380-650 nm (IR-cut filter)
Camera power	12V 1A
C-mount	YES

Camera Adapters Charts

		Upright			
		Monocular Binocular (Ø 23 mm)	Trinocular (Ø 23 mm)	Binocular (Ø 30 mm)	Trinocular
Camera model	Sensor size	Ecovision / B-60 / B-150 B-190-290 / B-380 (ALC)	B-190 / B-290 B-380 (with M-699)	B-510 / B-810 / B-1000	B-380 / B-510 B-810 / B-1000
C-P3	1/2.8"	M-115	M-115	M-115 + M-113.1	M-620
C-P6	1/1.8"	M-114	M-114	M-114 + M-113.1	M-620.1
C-P8	1/2.5"	M-115	M-115	M-115 + M-113.1	M-620.1
C-P20	1"	-	-	-	M-620.3
C-P5GS	2/3"	M-118	M-118	M-118 + M-113.1	M-620.2
C-HP	1/1.9"	M-114	M-114	M-114 + M-113.1	M-620.1
C-HPSC	1/1.9"	M-114	M-114	M-114 + M-113.1	M-620.1
C-WH5	1/1.8"	M-114	M-114	M-114 + M-113.1	M-620.1
C-WH5SC	1/1.8"	M-114	M-114	M-114 + M-113.1	M-620.1
C-HA	1/2.8"	M-115	M-115	M-115 + M-113.1	M-620
C-HP4	1/1.8"	M-114	M-114	M-114 + M-113.1	M-620.1
C-HUB4K	1/1.8"	M-114	M-114	M-114 + M-113.1	M-620.1

M-114 / M-115

M-113.1 / M-113.2

M-118

M-620

M-620.1

M-620.2

M-620.3

Camera Adapters Charts

Inverted	Stereo		
Trinocular	Binocular (Ø 30.5 mm)	Binocular (Ø 30 mm)	Trinocular
IM-3 / IM-5	SFX	SLX / SZ / SZP	SLX / SZ / SZP
M-620	M-115 + M-113.2	M-115 + M-113.1	M-620
M-620.1	M-114 + M-113.2	M-114 + M-113.1	M-620.1
M-620.1	M-115 + M-113.2	M-115 + M-113.1	M-620.1
M-620.3	-	-	M-620.3
M-620.2	M-118 + M-113.2	M-118 + M-113.1	M-620.2
M-620.1	M-114 + M-113.2	M-114 + M-113.1	M-620.1
M-620.1	M-114 + M-113.2	M-114 + M-113.1	M-620.1
M-620.1	M-114 + M-113.2	M-114 + M-113.1	M-620.1
M-620.1	M-114 + M-113.2	M-114 + M-113.1	M-620.1
M-620	M-115 + M-113.2	M-115 + M-113.1	M-620.1
M-620.1	M-114 + M-113.2	M-114 + M-113.1	M-620
M-620.1	M-114 + M-113.2	M-114 + M-113.1	M-620

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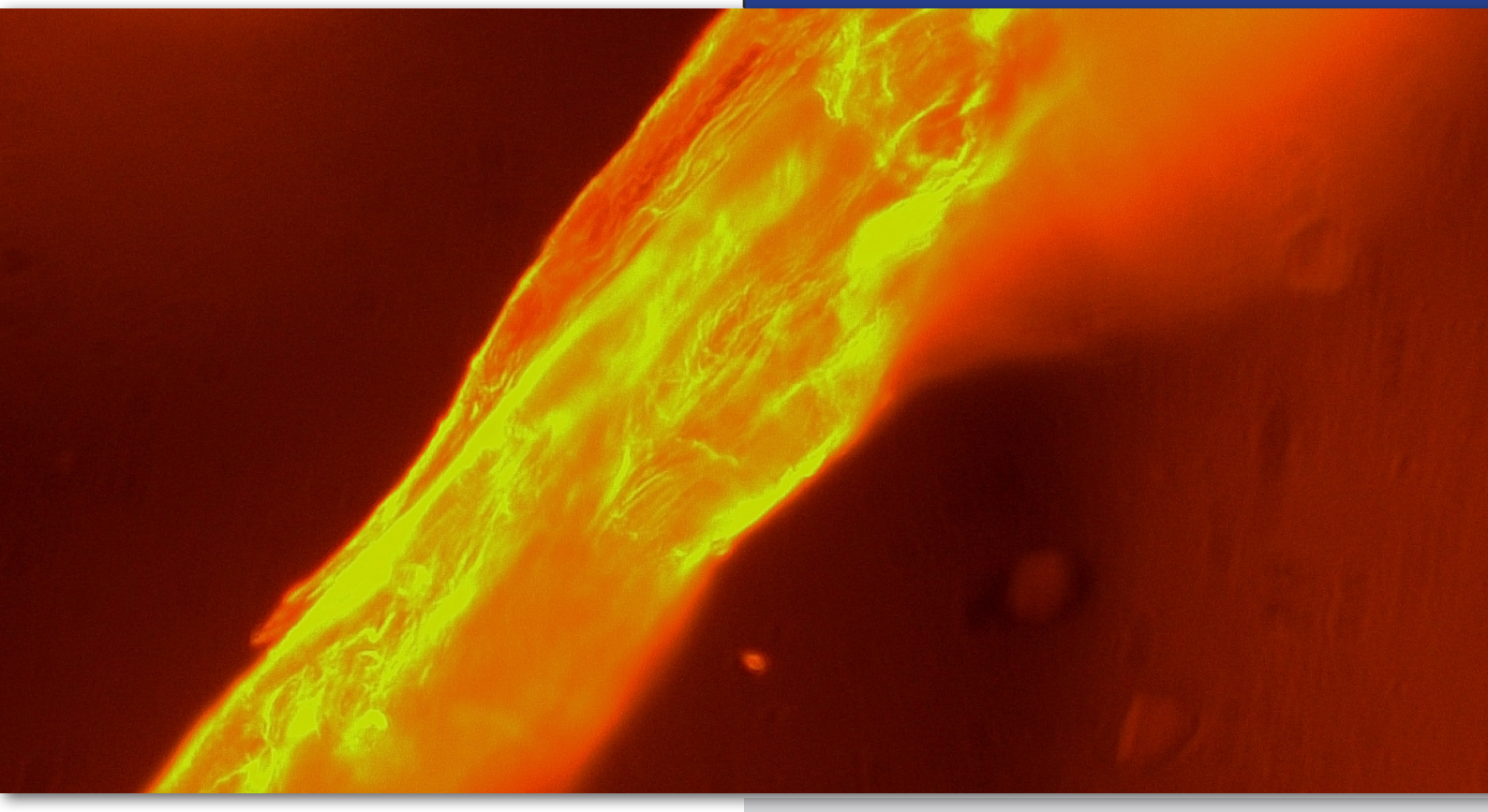
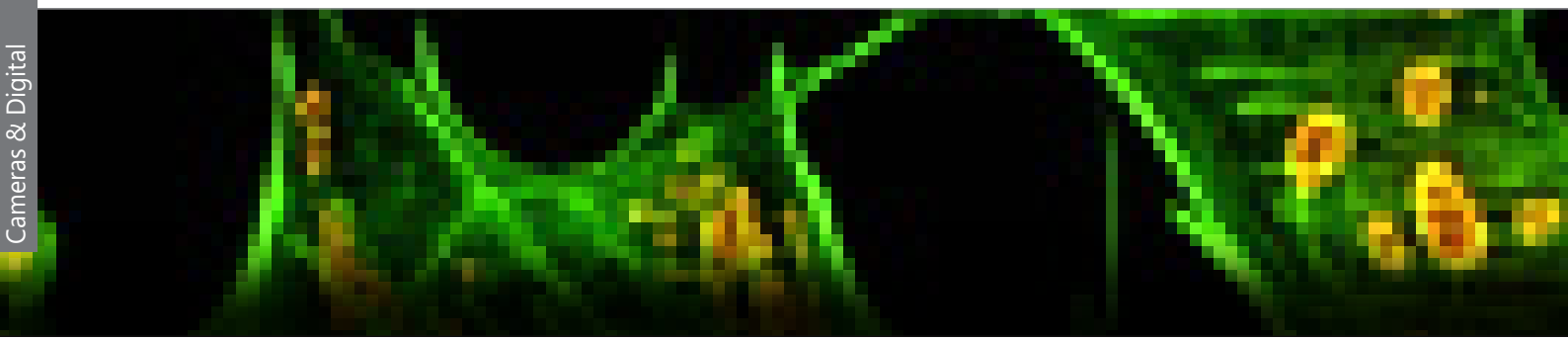
High-End Microscope Cameras for Fluorescence Microscopy



Large Selection of Best-in-class High Sensitivity Fluorescence Cameras

In order to detect the often low levels of fluorescence emitted by specimess, cameras used in fluorescence microscopy must have particular features, including high sensitivity and low noise, in order to capture as many photons as possible.
These cameras are typically equipped with CCD sensor, although nowadays there is always a larger selection of scientific-grade CMOS.
Monochrome cameras are usually more suited to fluorescence imaging as they do not have a colour filter array, and enable more photons to reach the sensor, increasing their sensitivity very significantly compared to the color sensors.
The most indicated camera depends case by case, as it is of fundamental importance to consider the sample being imaged, the fluorochromes used, the required frame-rate, field of view, resolution and sensitivity.
All these elements drive to the selection of the right camera for a specific use.

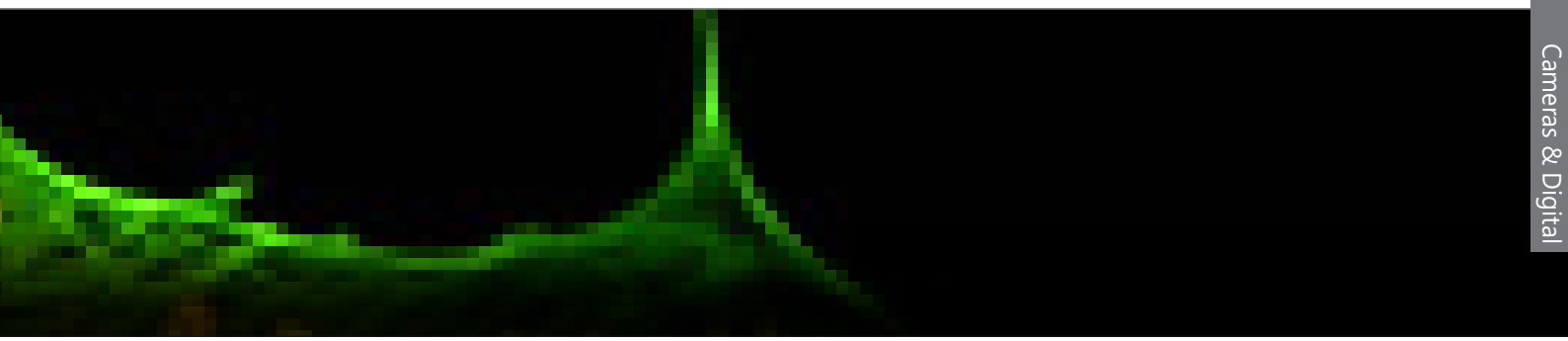
High-Level Microscope Cameras

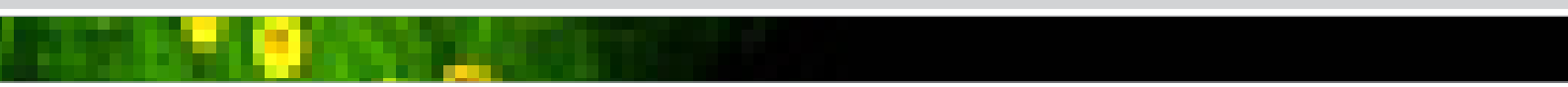


Cooled Scientific-grade CMOS Sensor, Rolling Shutter - C-P20CC & C-P20CM
Cooled Scientific-grade CMOS Sensor, Global Shutter - C-P1CCGS & C-P1CMGS
CCD Sensor, Rolling Shutter - C-P6FL

Model	C-P20CC	C-P20CM	C-P1CCGS	C-P1CMGS	C-P6FL
Sensor technology	Scientific-grade CMOS	Scientific-grade CMOS	Scientific-grade CMOS	Scientific-grade CMOS	CCD
Color / Monochrome	Color	Monochrome	Color	Monochrome	Color
Global / Rolling shutter	Rolling shutter	Rolling shutter	Global shutter	Global shutter	Rolling shutter
Resolution	20MP (5440 x 3648)	20MP (5440 x 3648)	1.7MP (1600 x 1100)	1.7MP (1600 x 1100)	6MP (2748 x 2200)
Frame rate	5 fps/10 fps/15 fps 30 fps	17.8 fps/41 fps/51 fps/64 fps	33 fps	94 fps	7.5 fps/14 fps
Sensitivity	426 mV at 1/30s	388 mV at 1/30s	4910 mV at 1/30s	8100 mV at 1/30s	1000 mV at 1/30s
Cooling system	Yes	Yes	Yes	Yes	No

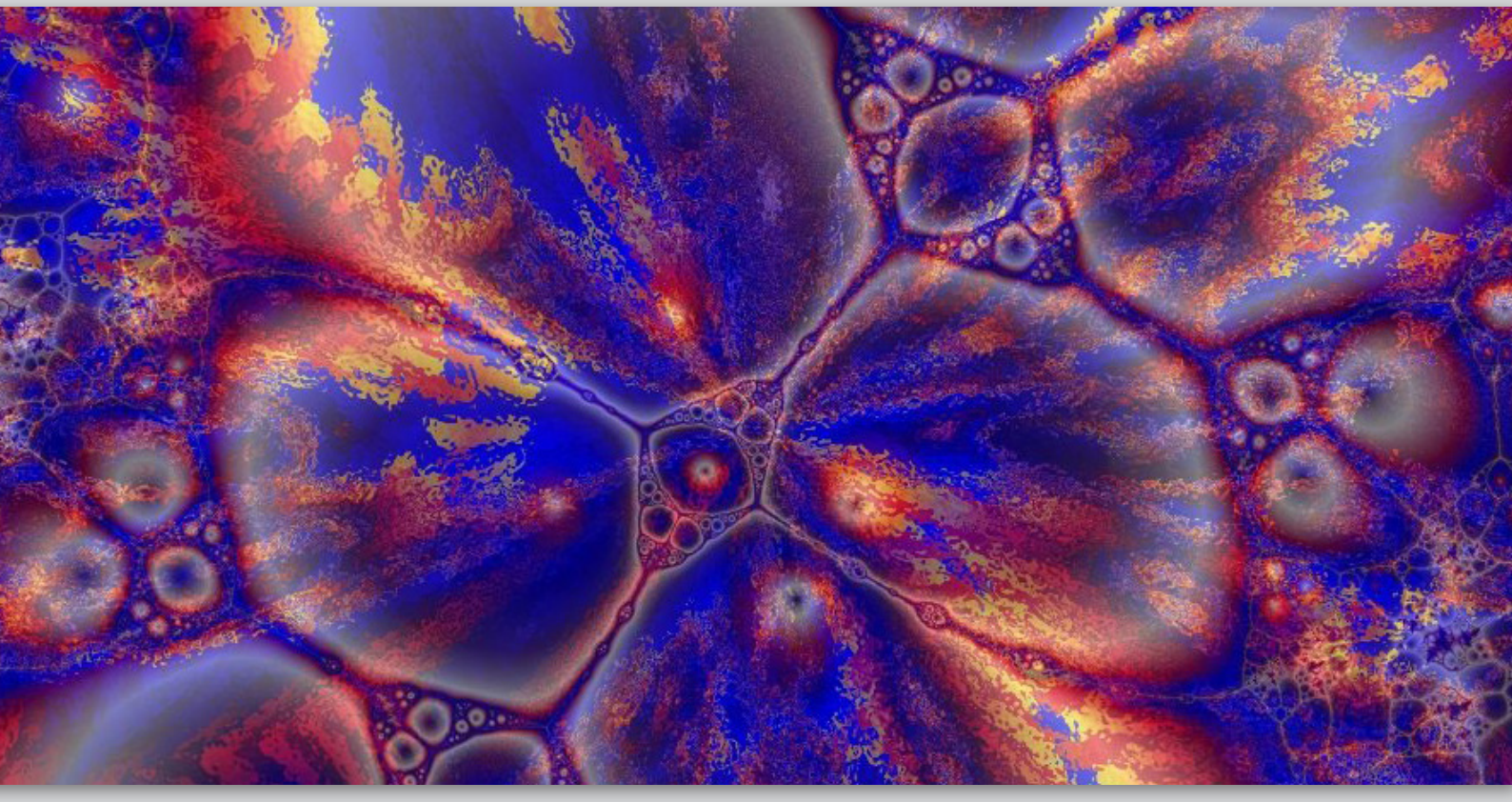
High-Level Microscope Cameras





C-P1CCGS & C-P1CMGS

Superb, stunning global shutter SONY EXMOR CMOS cameras with low resolution (1.7 MP), cooled large sensor and USB3.0 connection, recommended for specific scientific applications especially connected to fluorescence microscopy. Main key-ponits are the global shutter featuring its sensitivity, which makes this series impressive both with fast-moving specimens and in low-light fluorescence, especially thanks to the cooling function. Choose the monochrome version for superb sensitivity, being perfect for fluorescence imaging.
The compact and elegantly designed housing conceals the very latest in camera technology. Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them. Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).
Downloadable, free of charge software (Windows, Mac OS or Linux) is always available to enable the latest updates.



C-P1CCGS & C-P1CMGS

C-P1CCGS

» Recommended for special applications, including fluorescence
» Simple operation, driver-free
» Top-class, large SONY EXMOR sensor
» Cooling system for enhanced sensitivity
» Global shutter for impressive performance on moving samples
» Universal connection to any microscope brand
» Crisp 1.7 MP images
» USB3.0 for impressive high frame rate
» Incredibly accurate colors
» USB cable and calibration slide included
» Downloadable, free of charge software
» OPTIKA ProView & LiteView for Windows
» OPTIKA LiteView for Mac OS or Linux

C-P1CCGS & C-P1CMGS

Models:

C-P1CCGS: High Performance USB 3.0 C-mount Cooled Color Microscope Camera

C-P1CMGS: High Performance USB 3.0 C-mount Cooled Monochrome Microscope Camera

C-P1CCGS & C-P1CMGS - Specifications

CAMERA TECHNICAL SPECIFICATIONS	C-P1CCGS	C-P1CMGS
Digital camera resolution	1.7 MP (1600 x 1100)	1.7 MP (1600 x 1100)
Signal output	USB 3.0	USB 3.0
Color / Monochrome	Color	Monochrome
Sensor Size	1.1"	1.1"
Sensor technology	CMOS	CMOS
Sensor type	SONY EXMOR	SONY EXMOR
Image format	3/2	3/2
Pixel size	9.0 x 9.0 µm	9.0 x 9.0 µm
Frame rate full resolution	33 fps (1600 x 1100)	94 fps (1600 x 1100)
G Sensitivity	4910mV at 1/30s	8100mV at 1/30s
Dark Signal	0.3mV at 1/30s	0.3mV at 1/30s
ADC conversion	8 Bit - 12 Bit	14 Bit
Color Depth	1 Bit ; 4 Bit; 8 Bit; 24 Bit	-
Exposure Time	0.1 msec - 3600 sec	0.1 msec - 3600 sec
Binning	1x1	1x1
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Cooling Temperature	-45°C	-45°C
Cooling power	12V 3A	12V 3A
Camera power	PC USB	PC USB
C-mount	YES	YES

C-P1CCGS & C-P1CMGS

C-P1CCGS & C-P1CMGS Contents:

USB camera
USB 3.0 cable
Calibration slide
External power supply

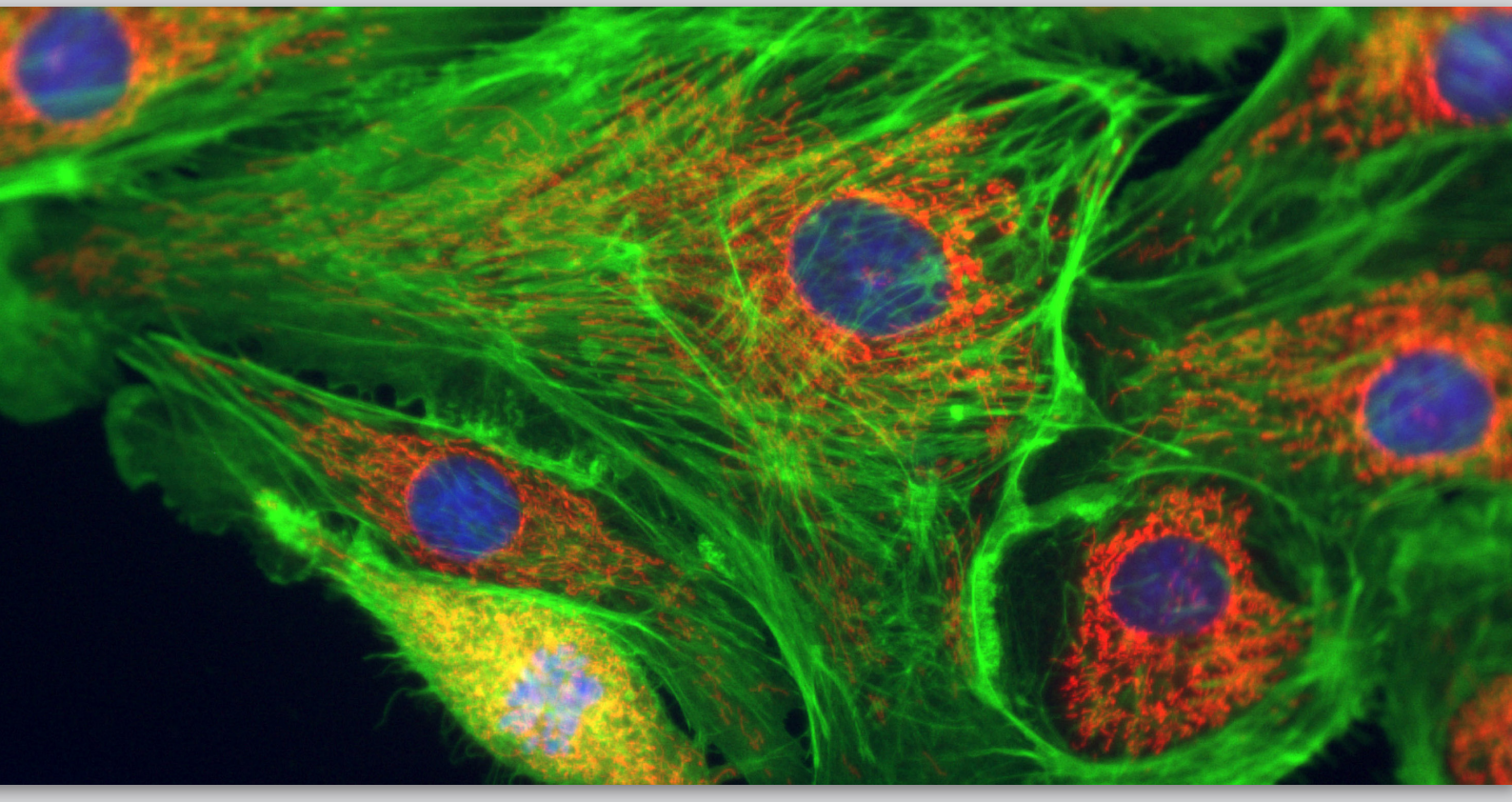
C-P6FL

1.7 MP

CMOS

USB-OUT

Top-class, easy to operate SONY EXVIEW CCD camera with high resolution (6 MP), large sensor and USB3.0 connection, recommended for specific scientific applications especially connected to fluorescence microscopy. Its particular sensitivity is relevantly important in low-light fluorescence, and if small changes in fluorescence need to be detected, determining how clear the image produced is. The compact and elegantly designed housing conceals the very latest in camera technology.
Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.
Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).
Downloadable, free of charge software (Windows, Mac OS or Linux) is always available to enable the latest updates.



C-P6FL

» Recommended for special applications, including fluorescence
» Simple operation, driver-free
» Top-class, large SONY EXVIEW CCD sensor
» Significant sensitivity for a non-cooled camera
» Universal connection to any microscope brand
» Crisp 6 MP images
» USB3.0 for impressive high frame rate
» Incredibly accurate colors
» USB cable and calibration slide included
» Downloadable, free of charge software
» OPTIKA ProView & LiteView for Windows
» OPTIKA LiteView for Mac OS or Linux
» C-mount connection (via dedicated adapter, on any microscope)

C-P6FL

Model:

C-P6FL: High Performance USB 3.0 C-mount Microscope Camera

C-P6FL - Specifications

CAMERA TECHNICAL SPECIFICATIONS	C-P6FL
Digital camera resolution	6 MP (2748 x 2200)
Signal output	USB 3.0
Color / Monochrome	Color
Sensor Size	1"
Sensor technology	CCD
Sensor type	SONY EXVIEW
Image format	5/4
Pixel size	4.54 x 4.54 µm
Frame rate full resolution	7.5 fps (2748 x 2200)
Frame rate other resolution	14 fps (2748 x 1092)
Dynamic range (DB)	62
G Sensitivity	1000mV at 1/30s
Dark Signal	8mV at 1/30s
ADC conversion	8 Bit - 12 Bit
Color Depth	1 Bit ; 4 Bit; 8 Bit; 24 Bit
Exposure Time	0.06 msec - 1000 sec
Binning	1x1
IR filter	380-650 nm (IR-cut filter)
Camera power	PC USB
C-mount	YES

C-P6FL

C-P6FL Contents:

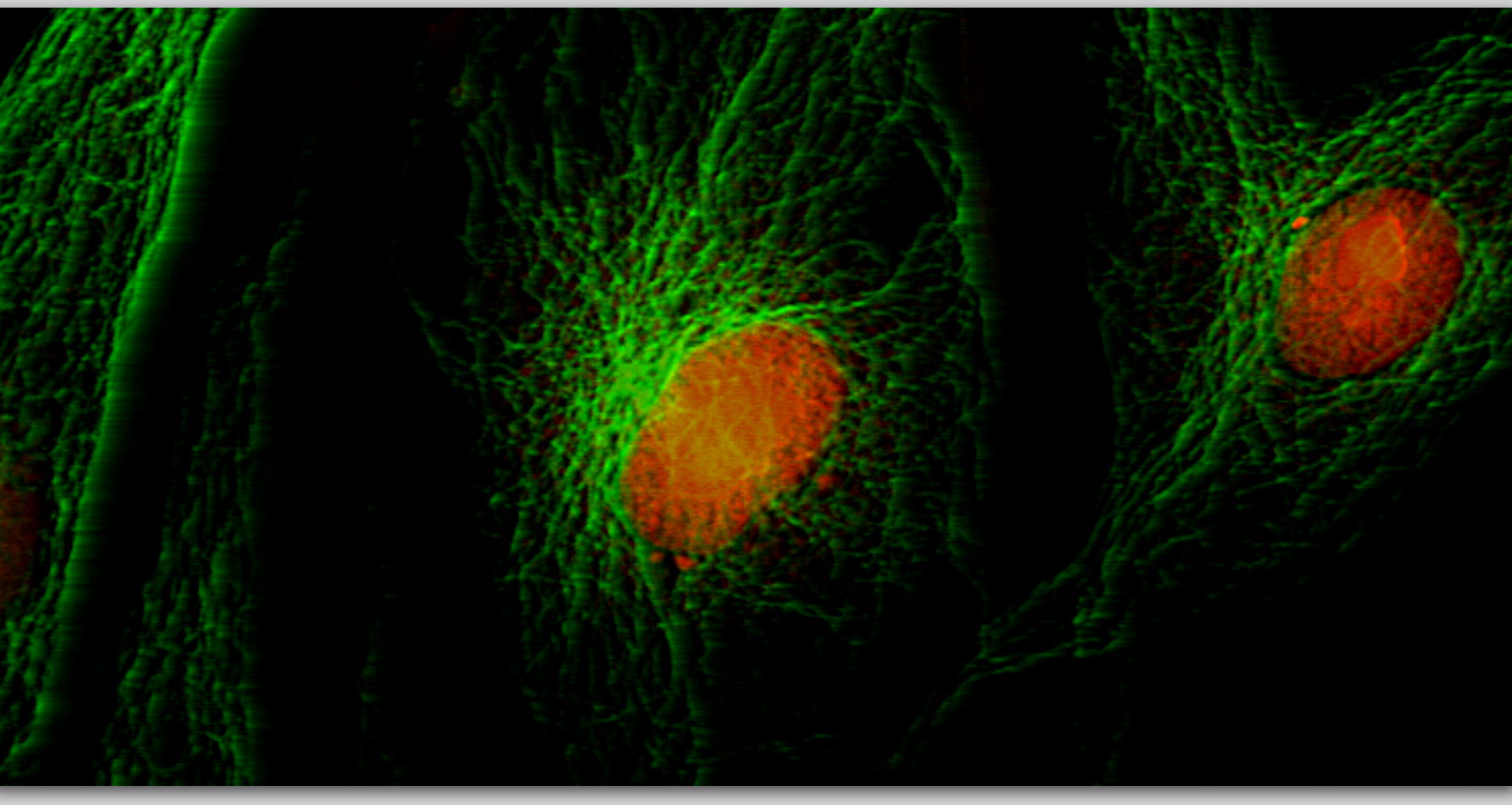
USB camera
USB 1.8 cable
Calibration slide

C-P20CC & C-P20CM

C-P20CC

C-P20CM

Ultra-professional yet intuitive cameras with incredibly high resolution (20 MP), cooled large SONY EXMOR CMOS sensor and USB3.0 connection, recommended for specific scientific applications especially connected to fluorescence microscopy. The cooling system affects sensitivity and therefore image clarity. Choose the monochrome version for superb sensitivity, being perfect for fluorescence imaging.
The high resolution makes these models interesting also for morphological imaging, patch clamping and network studies.
The compact and elegantly designed housing conceals the very latest in camera technology.
Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.
Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).
Downloadable, free of charge software (Windows, Mac OS or Linux) is always available to enable the latest updates.



C-P20CC & C-P20CM

C-P20CC

» Recommended for special applications, including fluorescence
» Simple operation, driver-free
» Top-class, large SONY EXMOR sensor
» Cooling system for enhanced sensitivity
» Universal connection to any microscope brand
» Crisp 20 MP images
» USB3.0 for impressive high frame rate
» Incredibly accurate colors
» USB cable and calibration slide included
» Downloadable, free of charge software
» OPTIKA ProView & LiteView for Windows
» OPTIKA LiteView for Mac OS or Linux

C-P20CC & C-P20CM

Models:

C-P20CC: Pro Cooled Color camera, 20 MP CMOS, USB3.0

C-P20CM: Pro Cooled Monochromatic camera, 20 MP CMOS, USB3.0

C-P20CC & C-P20CM - Specifications

CAMERA TECHNICAL SPECIFICATIONS	C-P20CC	C-P20CM
Digital camera resolution	20 MP (5440 x 3648)	20 MP (5440 x 3648)
Signal output	USB 3.0	USB 3.0
Color / Monochrome	Color	Monochrome
Sensor Size	1"	1"
Sensor technology	CMOS	CMOS
Sensor type	SONY EXMOR	SONY EXMOR
Image format	3/2	3/2
Pixel size	2.4 x 2.4 µm	2.4 x 2.4 µm
Frame rate full resolution	5 fps (5440 x 3648)	17.8 fps (5440 x 3648)
Frame rate other resolution	10 fps (4096x2160); 15 fps (2736x1824); 30fps (1824x1216)	41 fps (4096 x 2160); 51 fps (2736x1824); 64 fps (1824x1216)
G Sensitivity	426mV at 1/30s	388mV at 1/30s
Dark Signal	0.21mV at 1/30s	0.21mV at 1/30s
ADC conversion	8 Bit - 12 Bit	14 Bit
Color Depth	1 Bit ; 4 Bit; 8 Bit; 24 Bit	-
Exposure Time	0.1 msec - 3600 sec	0.1 msec - 3600 sec
Binning	1x1; 2x2; 3x3	1x1; 2x2; 3x3
IR filter	380-650 nm (IR-cut filter)	380-650 nm (IR-cut filter)
Cooling Temperature	-45°C	-45°C
Cooling power	12V 3A	12V 3A
Camera power	PC USB	PC USB
C-mount	YES	YES

C-P20CC & C-P20CM

C-P20CC & C-P20CM Contents:

USB camera
USB 3.0 cable
Calibration slide
External power supply

Camera Adapters Charts

		Upright			
		Monocular Binocular (O 23 mm)	Trinocular (O 23 mm)	Binocular (O 30 mm)	Trinocular
Camera model	Sensor size	Ecovision / B-60 / B-150 B-190-290 / B-380 (ALC)	B-190 / B-290 B-380 (with M-699)	B-510 / B-810 / B-1000	B-380 / B-510 B-810 / B-1000
C-P20CC	1"	-	-	-	M-620.3
C-P20CM	1"	-	-	-	M-620.3
C-P1CCGS	1,1"	-	-	-	M-620.3
C-P1CMGS	1,1"	-	-	-	M-620.3
C-P6FL	1"	-	-	-	M-620.3

M-620.3

Camera Adapters Charts

Inverted	Stereo		
Trinocular	Binocular (O 30.5 mm)	Binocular (O 30 mm)	Trinocular
IM-3 / IM-5	SFX	SLX / SZM / SZ / SZP	SLX / SZM / SZ / SZP
M-620.3	-	-	M-620.3
M-620.3	-	-	M-620.3
M-620.3	-	-	M-620.3
M-620.3	-	-	M-620.3
M-620.3	-	-	M-620.3

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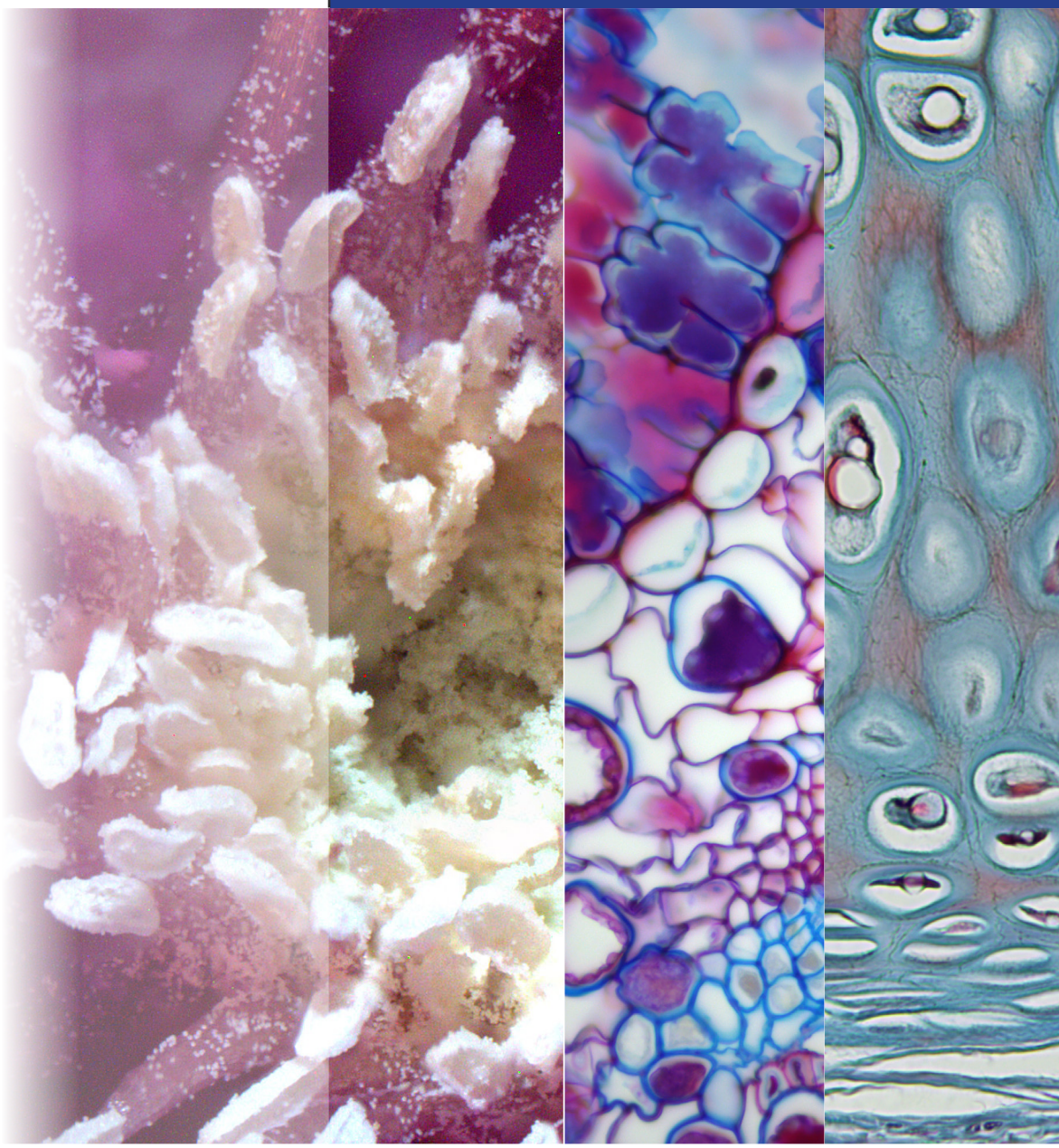
OPTIKA SOFTWARE

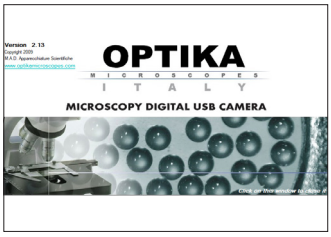


OPTIKA SOFTWARE SUITES

OPTIKA SOFTWARE - Comparison chart

Software

• Before proceeding with the SW installation, please check the table below "Software Function list" to identify the most suitable software.



SOFTWARE FUNCTION LIST

	FUNCTION		OPTIKA PRO VIEW	OPTIKA LITE VIEW	OPTIKA VISION LITE
GENERAL	Simultaneous management of several cameras		X	X	X
	GUI (Graphical User Interface)		X		
	Report generator		X		X
	Archiving		X	X	X
	Language	Catalan	X	X	
		Chinese (simpl.)	X	X	
		Chinese (trad.)	X	X	
		Korean	X	X	
		English	X	X	X
		French	X	X	X
		German	X	X	X
		Indonesian	X	X	
		Italian	X	X	X
		Japanese	X	X	
		Polish	X	X	X
		Russian	X	X	
		Spanish	X	X	X
		Swedish			X
		Thai	X	X	
		Turkish	X	X	

	FUNCTION		OPTIKA PRO VIEW	OPTIKA LITE VIEW	OPTIKA VISION LITE
MEASUREMENTS	Measurements on "live"		X		
	Measurements on "captured"		X		X
	2D Measurements	Line	X		X
		Angle	X		
		Parallel lines	X		
		Rectangle	X		
		Ellipse	X		
		Circle	X		
		Annulus	X		
		Arc	X		
		Curve	X		
		Polygon	X		
	Particle count		X		
	Export to Excel		X		X

OPTIKA SOFTWARE - Comparison chart

SOFTWARE FUNCTION LIST

	FUNCTION		OPTIKA PRO VIEW	OPTIKA LITE VIEW	OPTIKA VISION LITE
IMAGE ACQUISITION	Simultaneous management of several cameras		X	X	
	IMAGE acquisition		X	X	X
	Image formats	tiff	X	X	X
		jpg	X	X	X
		bmp	X	X	X
		png	X	X	
		pcx	X	X	
		jp2	X	X	
		dcm	X	X	
	IMAGE acquisition		X	X	X
	VIDEO formats	avi	X	X	X
		wmv	X	X	X
		mp4	X	X	X
		asf	X	X	X
		3gp	X	X	X
		mov	X	X	X
		h264	X	X	X
		h265	X	X	X
	Continuous automatic exposure		X	X	X
	Manual Exposure		X	X	X
	Mobile spot for exposure		X	X	X
	Resizable spot for exposure		X	X	X
	Colour acquisition		X	X	X
	Grey-scale acquisition		X	X	X
	Manual Time-Lapse		X		X
	Automatic Time-Lapse		X		
	Fast Image Acquisition		X	X	X
	Focus Indicator		X		
	White Balance		X	X	X
	Black balance		X		
	Background correction		X		
	Dark Field Correction		X	X	
	Image Enhancement		X	X	X
	Live Histogram		X	X	X
	Flip	Horizontal	X	X	X
		Vertical	X	X	X
	Rotate		X		

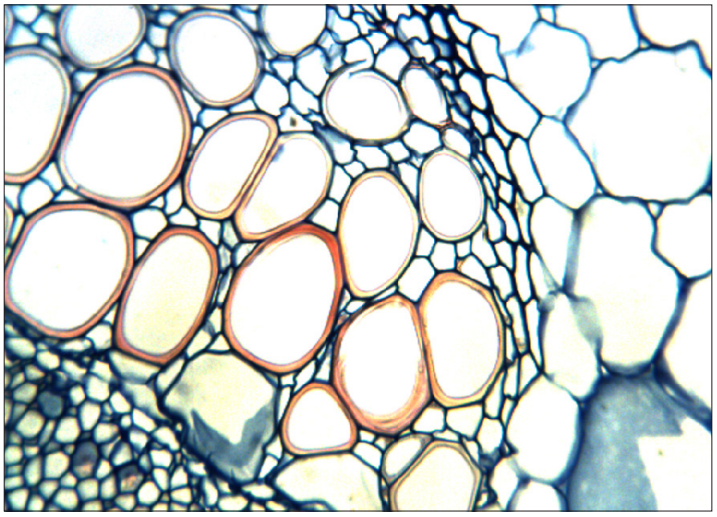
	FUNCTION	OPTIKA PRO VIEW	OPTIKA LITE VIEW	OPTIKA VISION LITE
PROCESSING	Several function of image processing (filters)	X		
	Multiple image combining	X		
	EDF (Extended Depth of Focus)	X		
	Colour Combine (Multi-Fluorescence Imaging)	X		
	Shift Correction	X		
	HDR (High Dynamic Range)	X		
	Layer Management	X		X
	Text Overlay	X		
	Ruler Overlay	X		
	Measurement Overlay	X		
	Grids	X		X

4083.Wifi, 4083.4 and 4083.EC2 work with Vision Lite only. Cameras with HDMI connection only, do not require any software.

OPTIKA Vision Lite - Extremely Intuitive Software

Optika Vision Lite has been designed and developed to be incredibly intuitive, simple and easy to use for customers needing a convenient solution to be combined with OPTIKAM cameras.

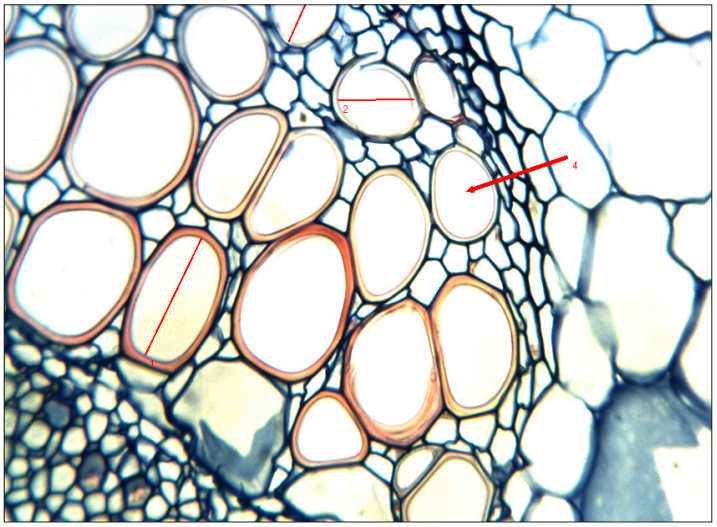
» Friendly interface, multilanguage
» Capture still images & stream live videos
» Perform linear measurements
» Export comprehensive reports



Friendly interface, multilanguage

Engineered for easy user interaction and optimized image acquisition, the main purpose of OPTIKA Vision Lite is ensure clear communication.

•An efficient means to efficiently completing your jobs
•Pleasant, easy-to-navigate menus
•Eight languages pre-installed, others upgreadable



Capture still images & stream live videos

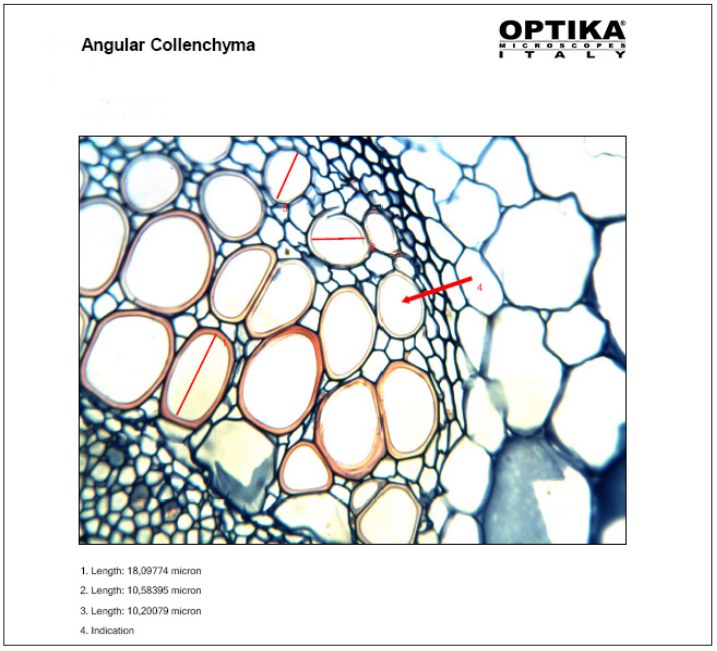
Use the live preview to accurately focus your image and change parameters to obtain the perfect final result you are looking for. Images can be saved in different formats and even as test reports, including personal comments.

Additional features:
• Image stack acquisition
• Grid addition for rapid considerations
• Image flipping option available

Perform linear measurements

Perform linear measurements in an extremely way just by drawing a line after creating your preferred calibration based on the magnification.

• Accurate measurements through simple calibration
• Comprehensive data export (notes & measures included)
• Indicate particular objects in the image to add persona comments



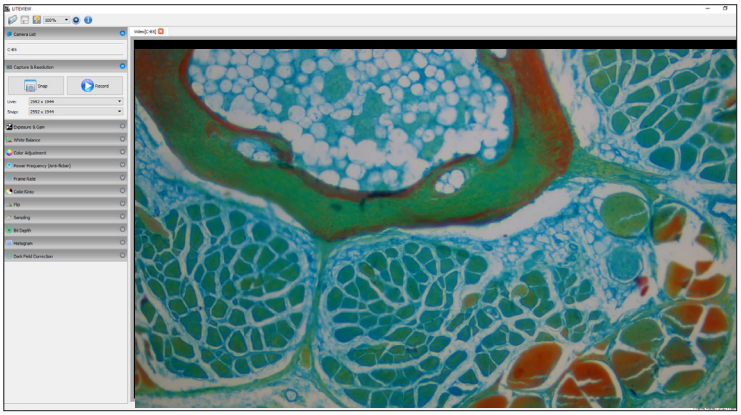
Export comprehensive reports

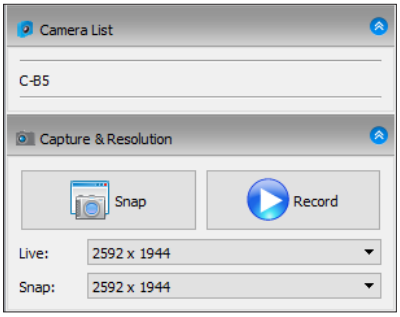
Detailed test reports can be generated, printed and saved. Reports can be also customized with company logos.

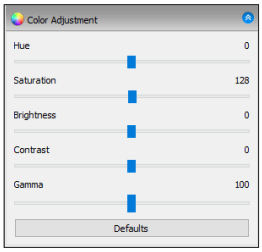
OPTIKA LITEView - Life is Easier

OPTIKA LITEView is a basic image acquisition software. The user who simply wants acquire a still image or a video, with no no need to perform measurements, has, with this powerful and intuitive software, the perfect solution.

-) Simple management of «live» image
-) Acquisition of still images or video
-) Basic imaging functions
-) Background correction



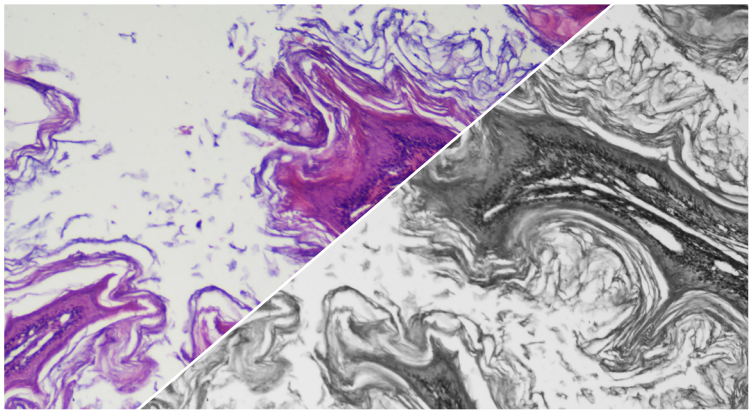




Simple management of «live» image

Image preview is freely customizable by the user. A simple White Balance function with a mobile spot allows to perform the balance even on very small areas, once the specimen has been framed and focused.

Basic functions:
- Automatic or manual acquisition
- Possibility to have «live» and «capture» at different resolutions
- White Balance with mobile spot
- Background correction for the acquisition of perfectly illuminated images.



Color / Grey scales

Capturing still images or video

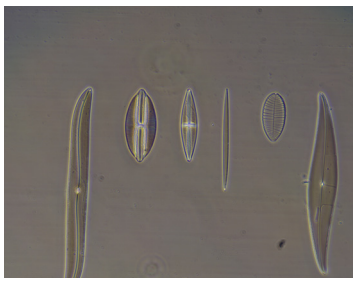
Just select the option and the software performs: acquiring still images or videos is simply and intuitive.

Basic imaging functions

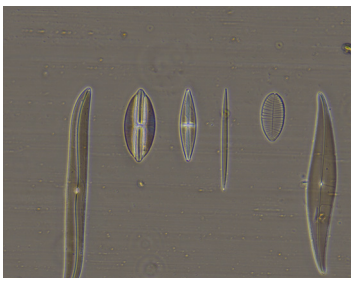
Image parameters can be modified according user's needs. Color, Contrast and Gamma can be chaned in real time.
More, it is possible to use a color camera in «SGrey Scales» modo in order to increase the camera sensitivity.

Background Correction

Any inhomogeneity of illumination of the microscope can be corrected by using the background correction function.
This allows to obtain a faithful reproduction of the image without annoying inhomogeneity due to a not perfect illumination.



No Background correction

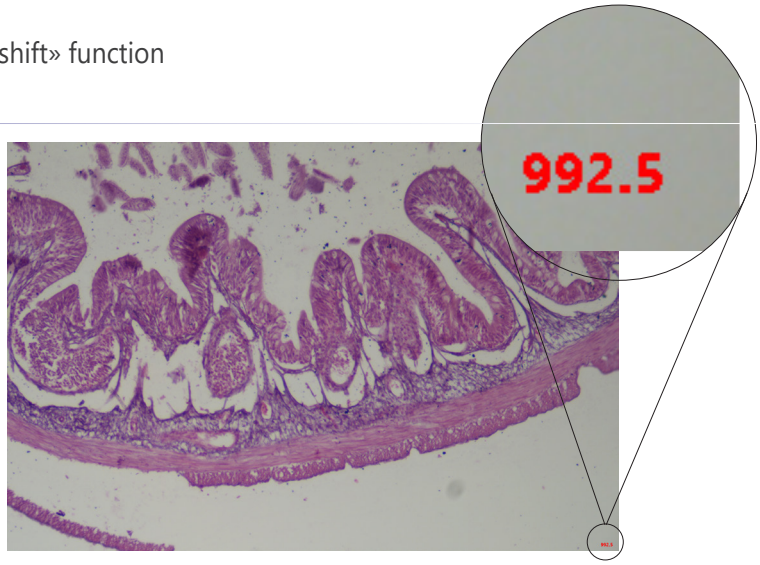


With Background correction

OPTIKA PROView - Professional Image Analysis

OPTIKA PROView is a professional image analysis software. The user who needs to acquire an image or video and to perform a series of processings or measurements, can easily achieve incredible results thanks to this software. PROView incorporates all the functions of the LITEView package, but in addition allows:

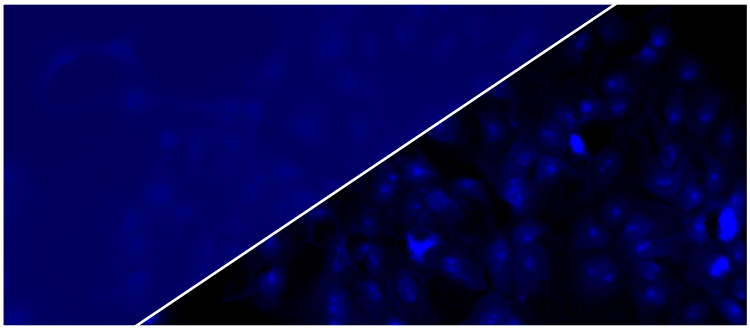
- White Balance and Black Balance
- Simultaneous management of several cameras
- Graphical User Interface fully customizable
- Imaging of Multichannel Fluorescence Images with «pixel shift» function
- Multilanguage Software



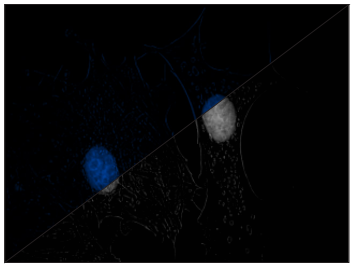
Beginners? Experts?
An «On-line» manual will help any user (no matter on how expert he can be) to get the best from the software

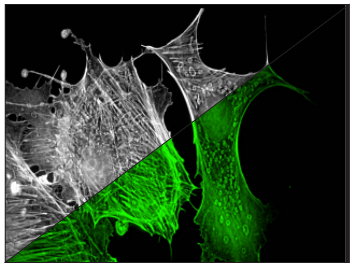
Images always perfect
The management of the acquisition parameters allows to get always the best from your camera. White balance, black balance, background correction, «live» management of Colors, Contrast, Gamma, Gain and Exposure Time ensure to obtain a faithful image. A numerical focus indicator will ensure an optimal focusing, also on specimaens with different focal planes.

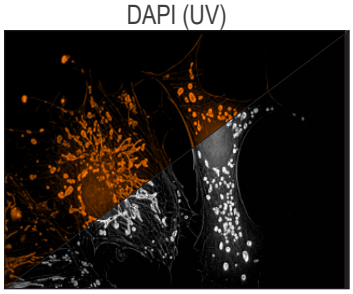
White Balance and Black Balance
It is possible to obtain the balance either on the whole frame or on a small ROI (Region Of Interest) of the image simply resizing and moving the spot in one part of the specimen

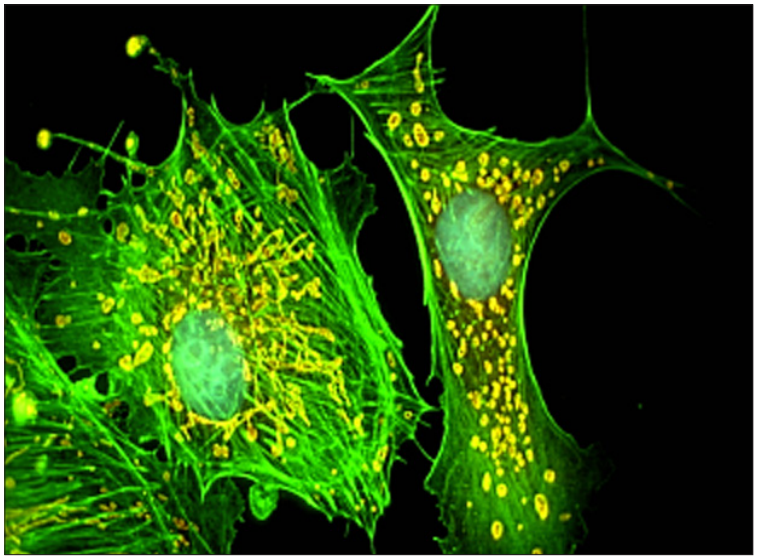

No black correction / Black correction

Multichannel Fluorescence Image processing
Acquire fluorescence images with a specific filtercube, use a false color for the used fluorochrome, get a single multichannel image is simply and intuitive.


DAPI (UV)


FITC (B)

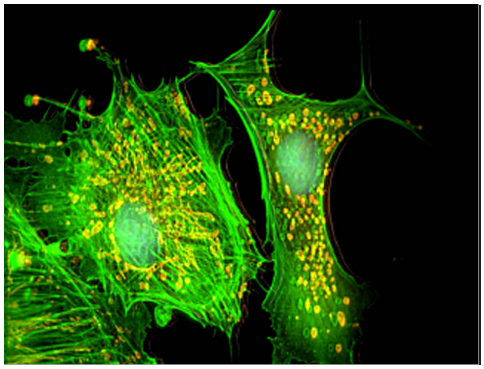

TEXAS RED (G)


Combined multichannel image

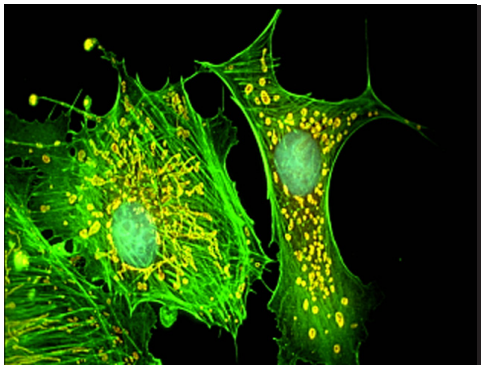
OPTIKA PROView - Professional Image Analysis

«Pixel Shift» function

Fluorescence ilter cubes, sometimes, are not perfectly aligned.
During acquisition of multichannel luorescence images, this can cause a non perfect overlapping of the different signals, making the colocalization calculation almost impossible.
«Pixel Shift» function allows to correct these small misalignments:



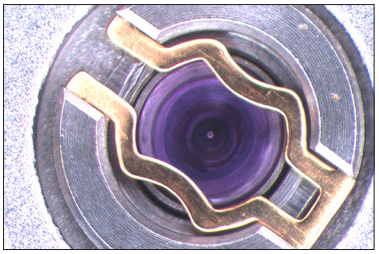
Orignal image



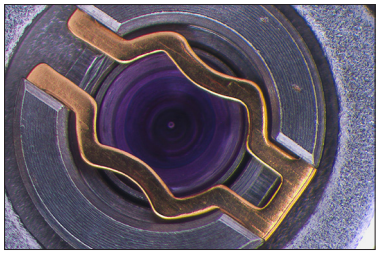
Corrected image

HDR (High Dynamic Range) acquisition

Acquisition of different images with different exposure times allows this function to create a final image where bright and dark zones of the specimen are perfectly displayed.



Standard Dynamic Range



High Dynamic Range

Extended Depth of Focus (EDF)

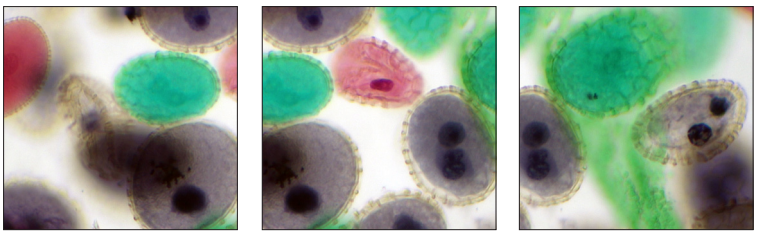
Acquire images with different focal planes, specially on specimens observed under a stereomicroscope, and to obtain a focused final image with a theoretical infinite focus. **EDF** function (also known as «Z-stack») allows a very refined image processing.

Single Focal Plane Images

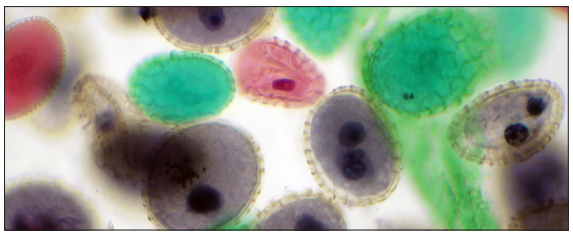
EDF Image

Stitching & Tiling

Get an image with high resolution but, at the same time, have a wide view of the specimen under observation.
Impossible? No. The multiple image alignment function allows to get a singe image starting from adjacent images of the specimen.



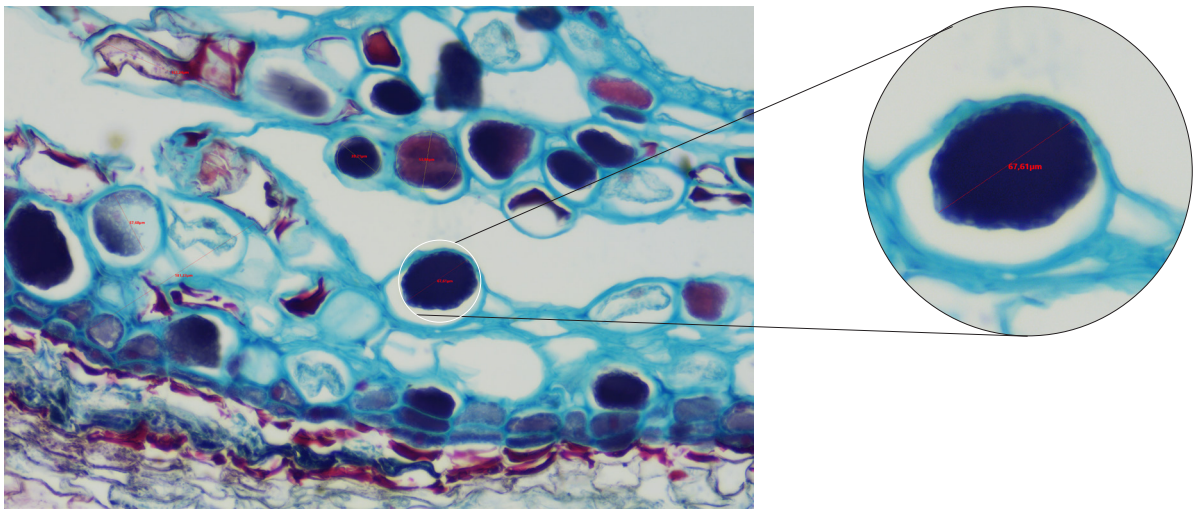
Separate Images



Stitched image

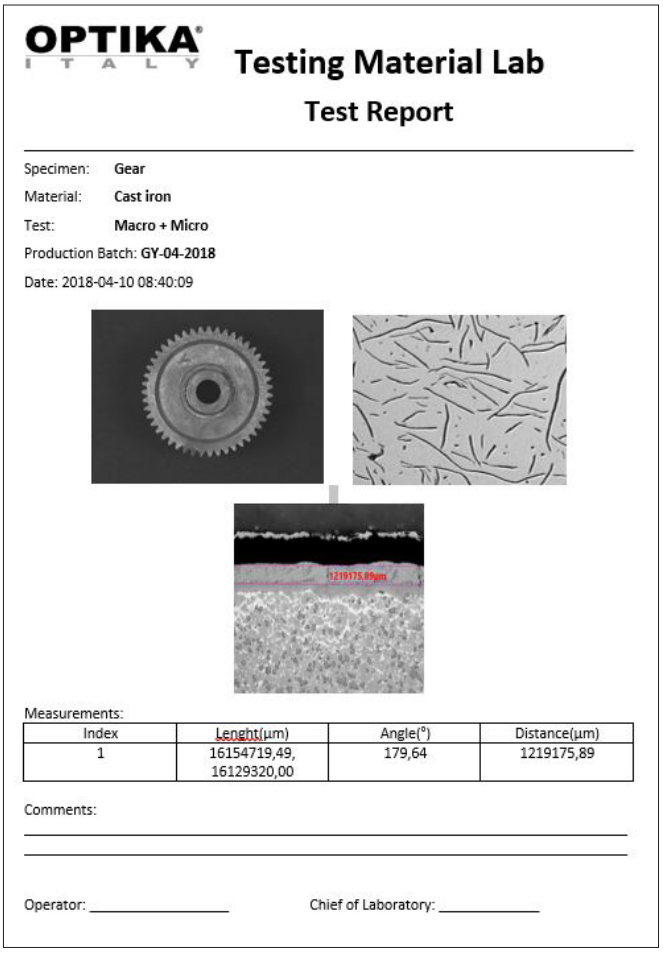
OPTIKA PROView - Professional Image Analysis

Measurements
User can perform measurements on the «live» image (no need to capture an image) and on captured images.



From Beginners To Experts
Measurements available:
- linear measurements
- angles
- circles
- annuli
- poligons
- touch count

Report Generator
At the end of the analysis it is possible to export images and measurement results either on a Excel sheet and on a Report Generator in MS Word format.
The template is freely configurable and can be modified according to laboratory standards.



OPTIKA ITALY

Testing Material Lab

Test Report

Specimen: **Gear**
Material: **Cast iron**
Test: **Macro + Micro**
Production Batch: **GY-04-2018**
Date: 2018-04-10 08:40:09

Measurements:

Index	Lenght(µm)	Angle(°)	Distance(µm)
1	16154719,49, 16129320,00	179,64	1219175,89

Comments:

Operator: _____ Chief of Laboratory: _____

Headquarters and Manufacturing Facilities

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MICROSCOPES
ITALY

OPTISCAN

OPTISCAN10
Digital scanner

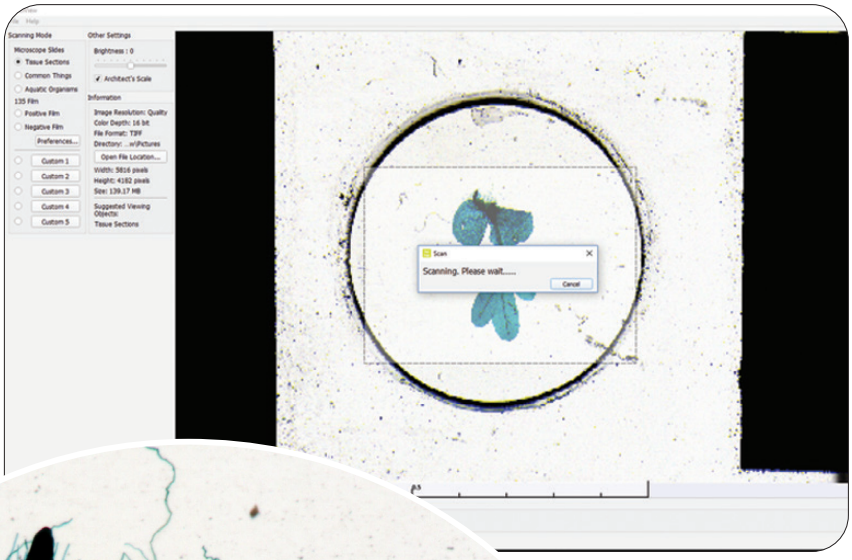
OPTISCAN10 - 4083.SC10

CONVERT YOUR GLASS SLIDES INTO DIGITAL DATA !

Rapid and high resolution scanner to convert your slides into digital slides. The digital slide can be easily manipulated to see any location at any magnifications. Digitizing slides opens up a variety of new possibilities, like:

- Creating a database to be incorporated into a laboratory information system
- Networking slide libraries to be consulted from distant facilities and research institutes
- Sharing expertise for evaluation processes and discussing
- Information storing (digital data does not deteriorate, are secure from damages and losses)

Main application fields are quality control & research, education, veterinary, histology / pathology, entomology / insectology, etc.



Main Features:

- High Resolution (up to 10.000 dpi)
- True & Neutral Color Fidelity
- White Balance & Distortion-free Images
- Dedicated Illumination (LED Transmitted Light)
- Efficient Scanning Area, Wide Field of View
- Impressive Scanning Speed (from 40 sec. to few minutes)
- High Sensitivity CCD Sensor
- Largest Field Of View, Better Than Any Camera

Ideal for:

- building up a comprehensive database of images for routine operations
- sharing expertise for evaluation processes
- archiving confidential patient information

OPTISCAN10 - Technical Specifications

OPTISCAN10 is an extremely convenient scanner for professionals, labs & teaching purposes, offering unmatchable price/performance ratio and coming along with a comprehensive but user-friendly software.
A ultra efficient, compact scanning device carrying high resolution features for spot detection with easy operation figure.
It is equipped with a dedicated LED transmitted light system and high resolution CCD sensor, ensuring high sensitivity with low background noise.

Signal output	USB 2.0
Illumination	LED
Resolution	5'000 dpi (Normal), 10'000 dpi (Quality)
Allowed slide	Standard 24 x 75 mm
Scan view size	Any size, Max 24 x 36mm
Prescan function time	25 seconds
Scanning time (Normal)	1min 30sec (24 x 36mm); 40 sec (standard 15x15mm cover slide)
Scanning time (Quality)	2min 10sec (24 x 36mm); 1min (standard 15x15mm cover slide)
Always included	1.5 m USB cable, power supply, CD rom
System requirements	Windows XP service pack 2, Vista / win7 / win8 / win10 / 32-64 bit / USB 2.0
Supplied software	Multilanguage software for image scan
Capture features	Prescan, slide scan 24x36mm, crop scan, brightness, contrast, saturation, image flip

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