



CAMERAS & DIGITAL Solutions

Cameras for Microscopy & Digital Scanner

4 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



Camera resolution



Cooling system



USB 2.0 input (mouse)



USB 2.0 output



USB 3.0 output



Tablet screen size



Software included



ETHERNET output



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 be used for basic requirements in laboratories and 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

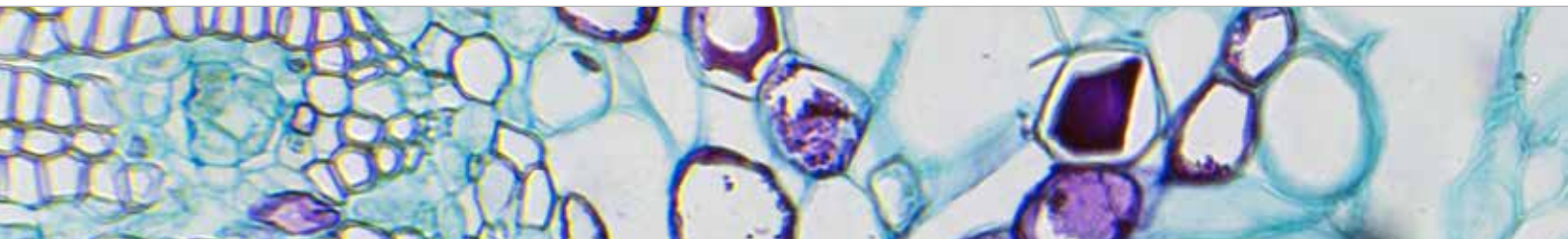
Simply the most essential eyepiece camera (C-E2). That's it!

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

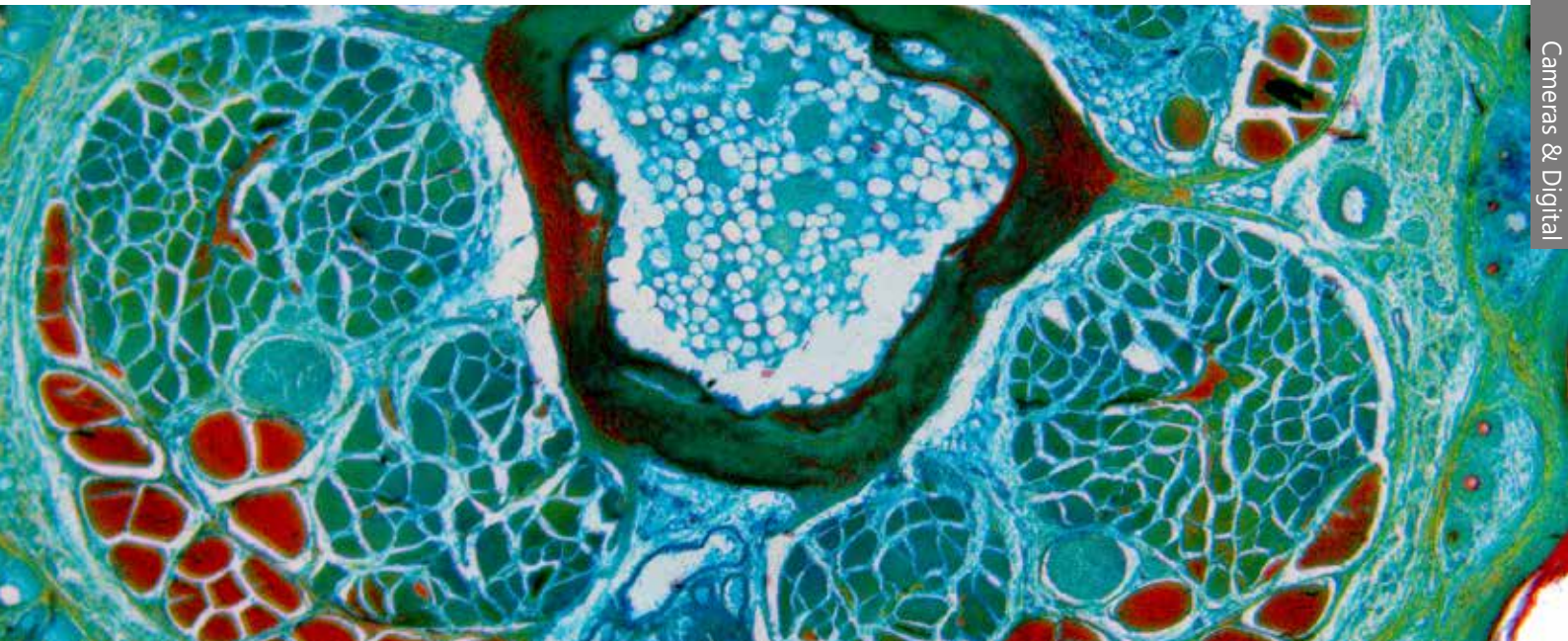
B like Basic - C-B Series

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

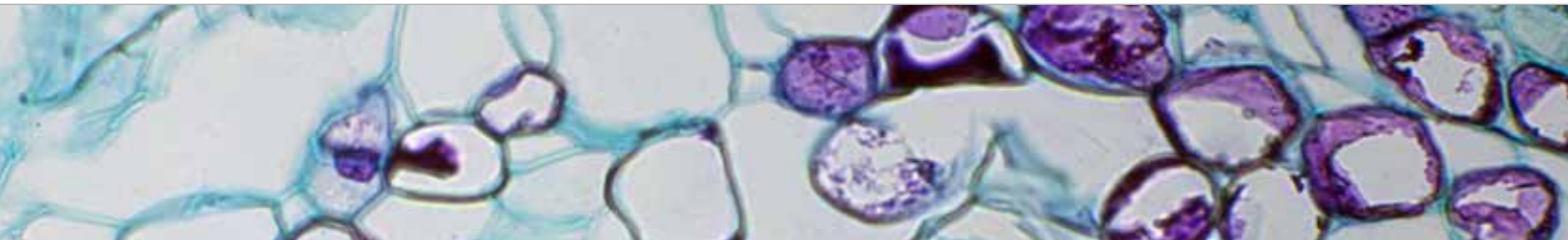
Recommended for its easy operation, no software installation is required with image captured on SD card. SC version includes a 11.5" Full HD screen for an all-in-one solution, with tilting features and saving space on the bench.

- 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

2.0 MP

CMOS

USB-OUT



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.



C-E2



- » Simple operation, driver-free
- » Universal connection to any microscope brand
- » Direct eyepiece & trinocular 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



④ C-B Series

1.3/18
MP

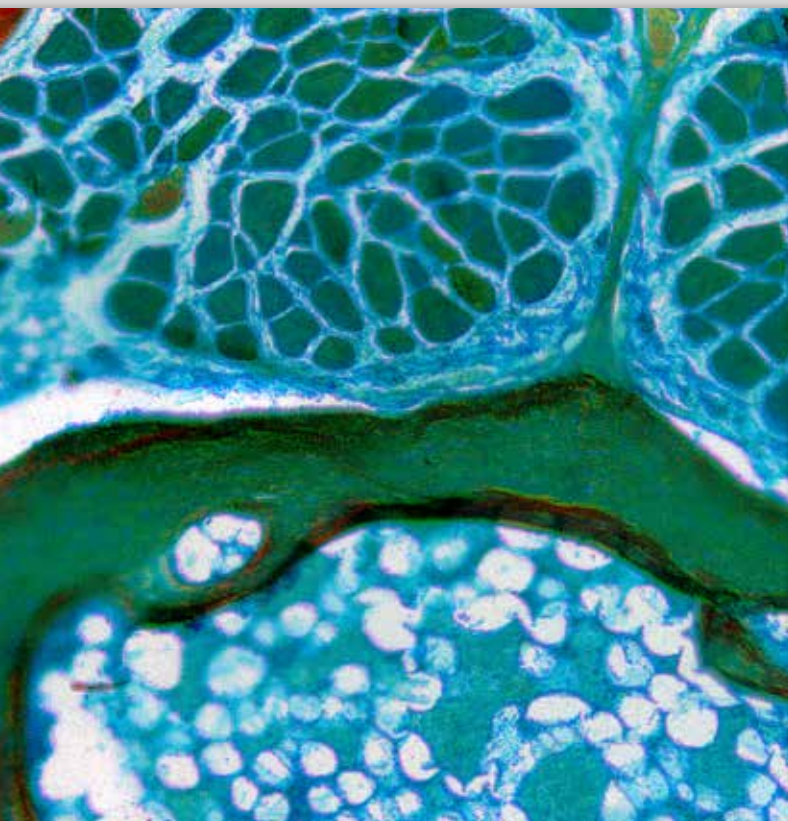
CMOS



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 & trinocular 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



4 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



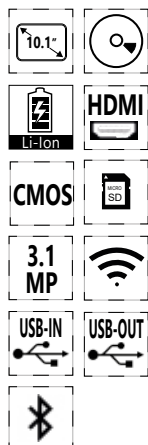
C-B+ Contents:

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

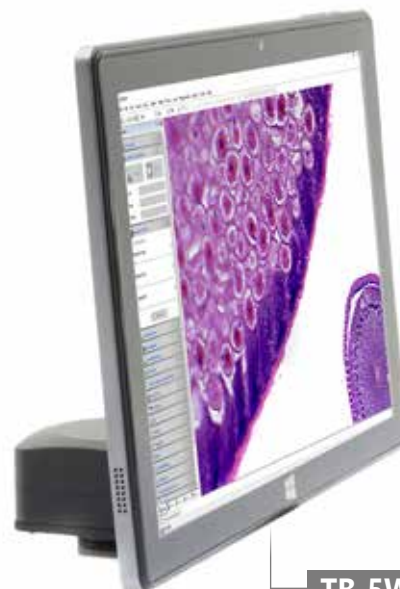
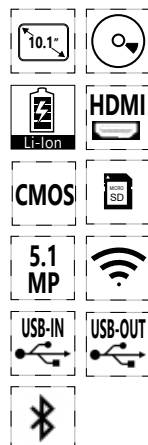


C-B16	C-B10+	C-B18+
16 MP (4632 x 3488)	10 MP (3584 x 2748)	18 MP (4912 x 3684)
USB 2.0	USB 3.0	USB 3.0
1/2.3"	1/2.3"	1/2.3"
CMOS	CMOS	CMOS
Aptina CMOS	Aptina CMOS	Aptina CMOS
4/3	4/3	4/3
1.335 x 1.335 µm	1.67 x 1.67 µm	1.25 x 1.25 µm
2 fps (4632 x 3488)	7.2 fps (3584 x 2746)	5.6 fps (4912 x 3684)
8 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

4 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.

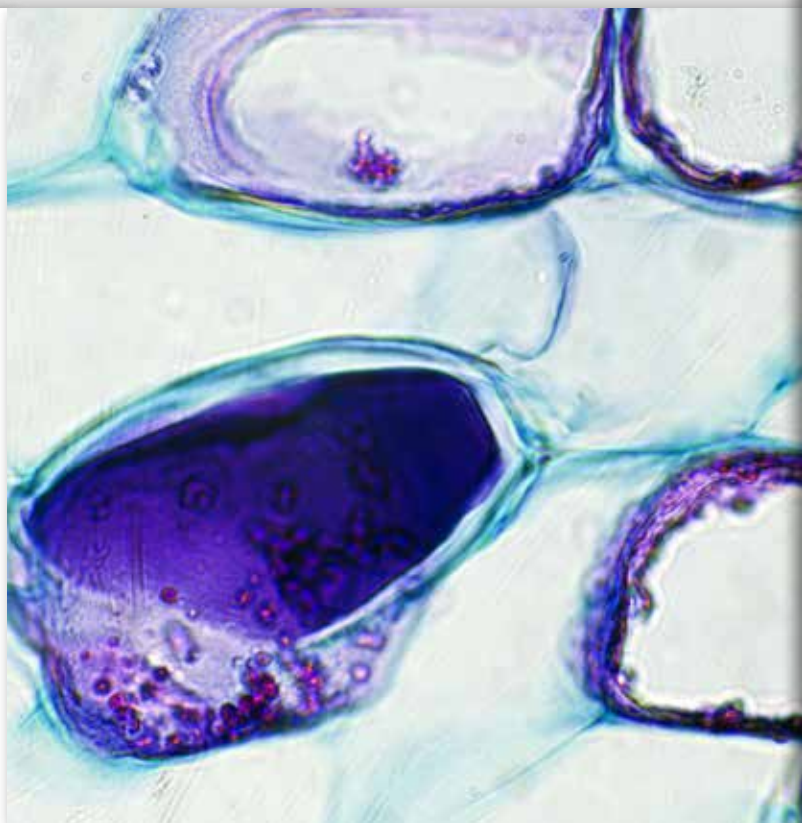
The unique holding solution for open discussion is 360° rotating and tilting for any adjustment, whilst the large touch screen provides fast, responsive and smooth control.

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
- SD
- 11.5"



C-HB

- 2.0 MP
- CMOS
- HDMI
- USB-IN
- SD
- 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

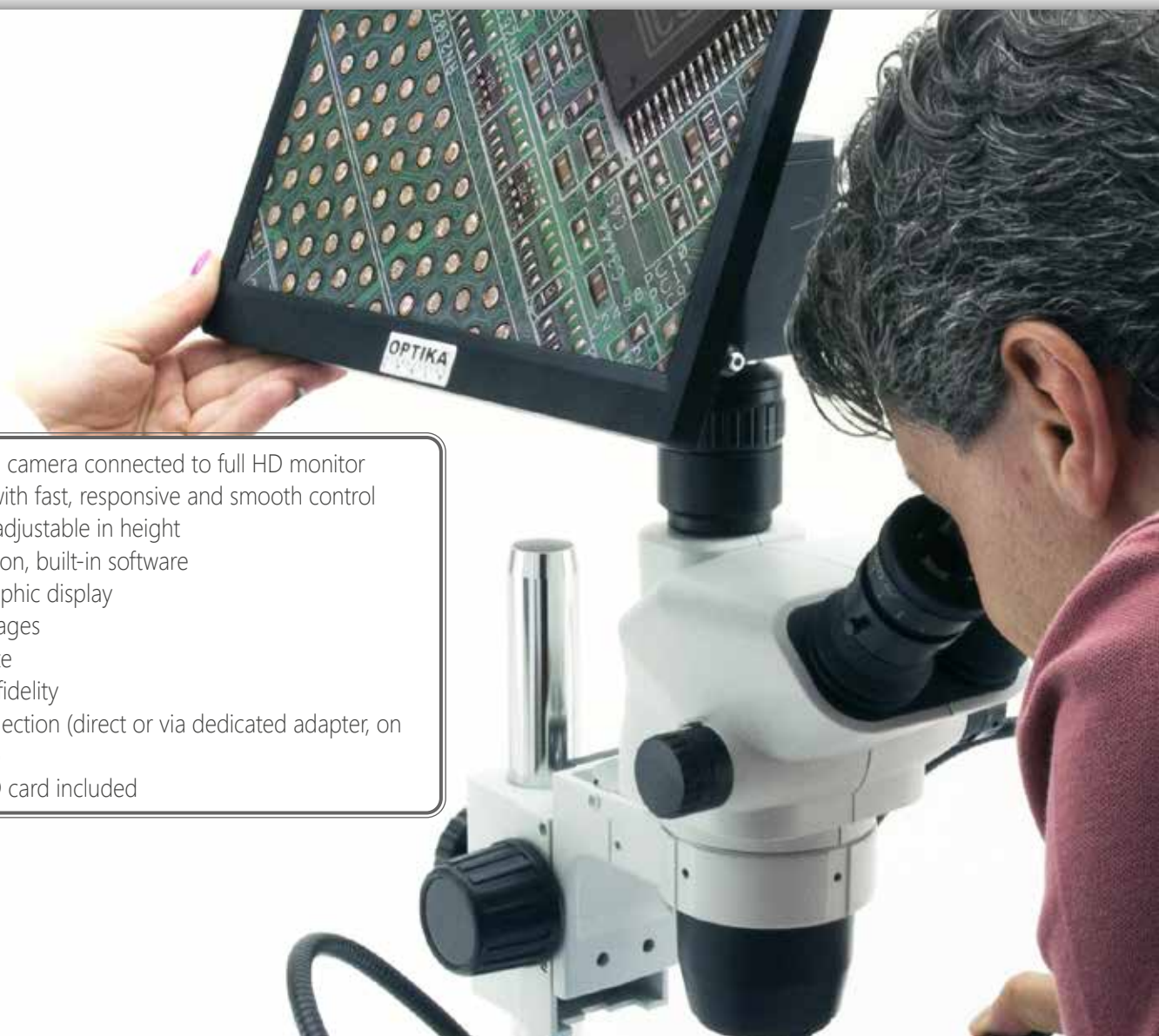


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Cameras & Digital

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



④ 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 μ m	2.9 x 2.9 μ m
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:

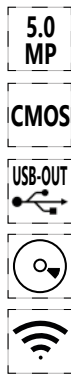
- HDMI camera
- HDMI monitor
- HDMI cable
- SD card
- Wireless mouse
- Multi-plug external power supply (2 pcs.)
- calibration slide

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



C-WF



C-WRF

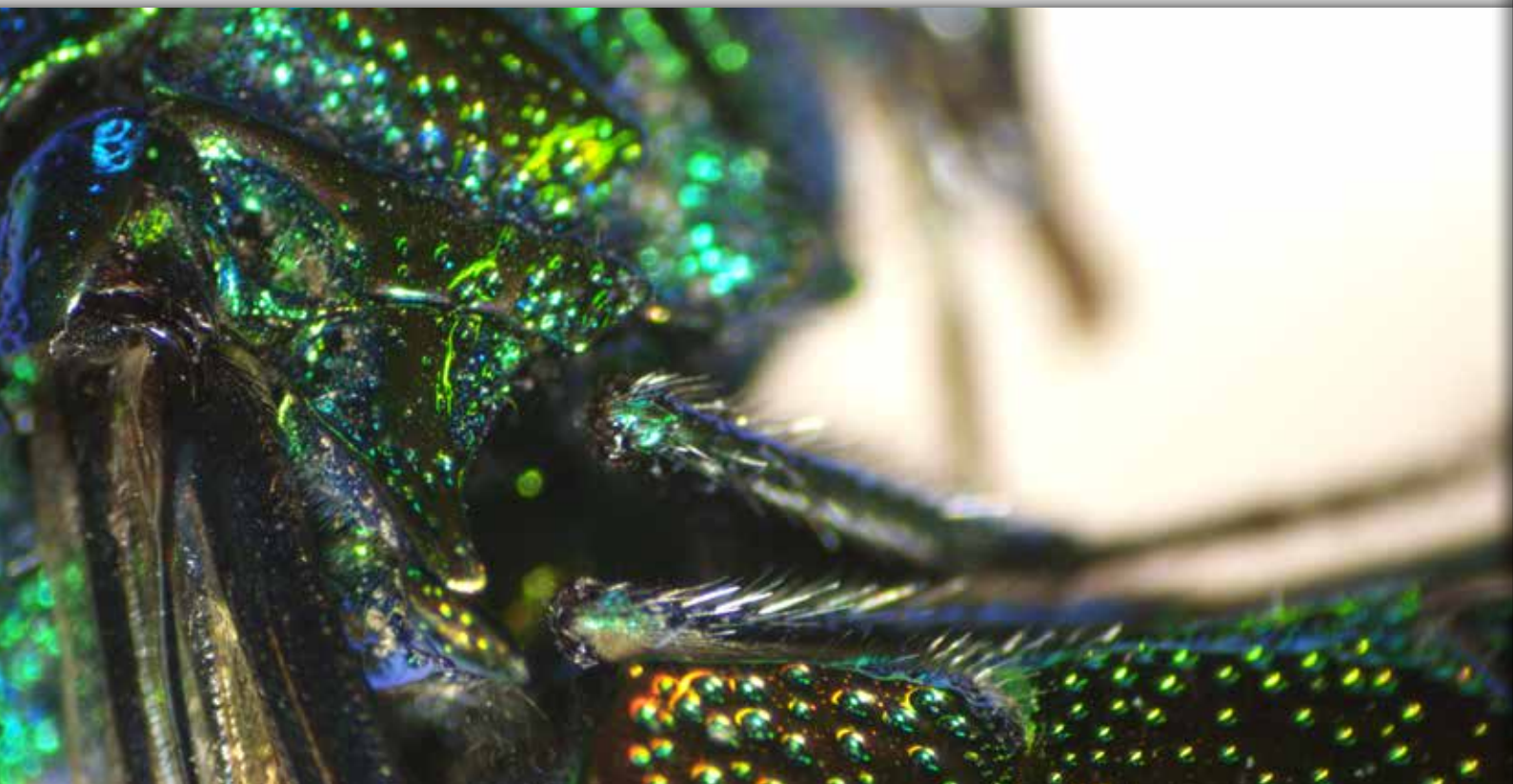
Cost-effective and user-friendly Wi-Fi camera with good resolution, CMOS sensor and Wi-Fi connection, recommended for basic/general applications in education and home use.

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

4

Cameras & Digital



- » Simple, intuitive operation with powerful software
- » Universal connection to any microscope brand
- » Direct eyepiece & trinocular 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



4 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 μ m
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



4 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



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

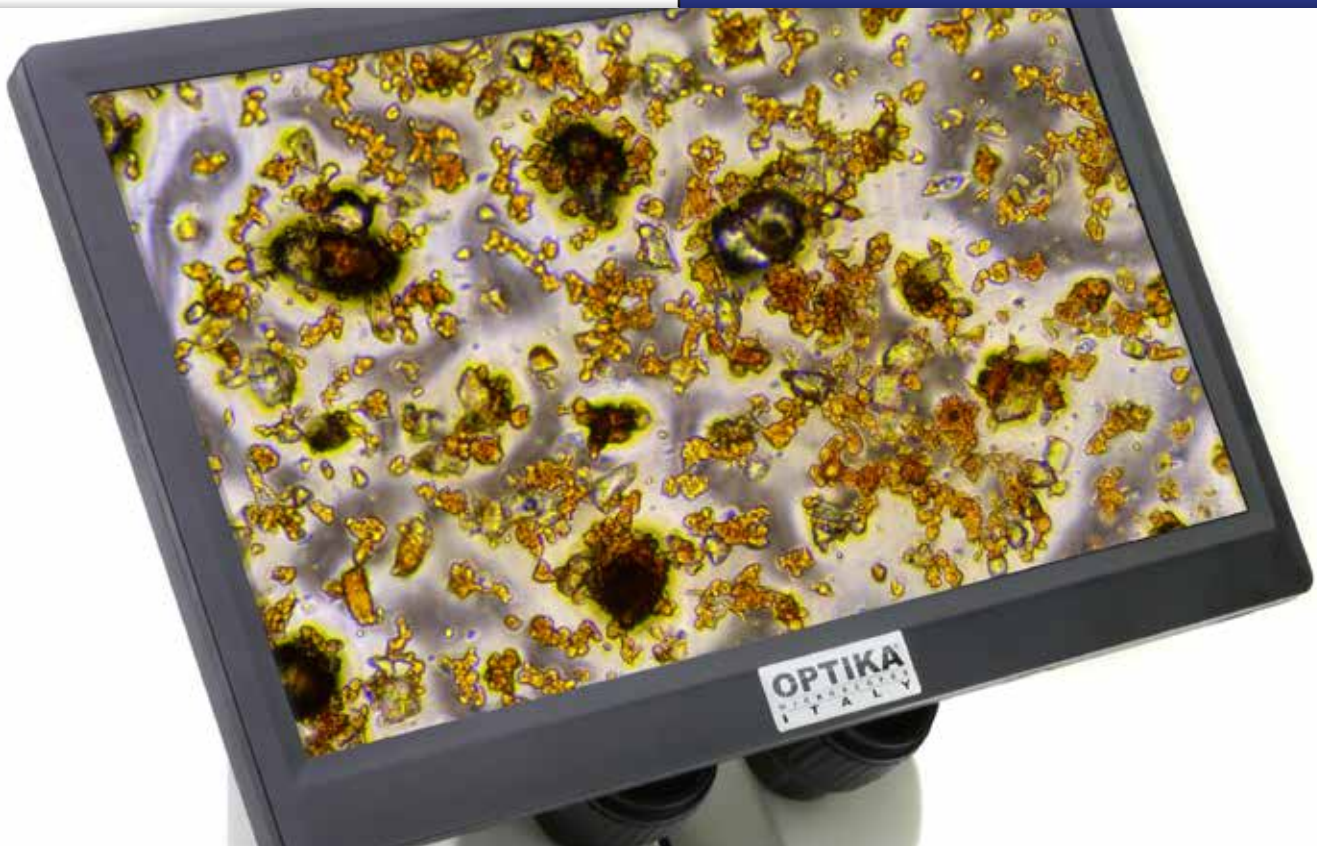
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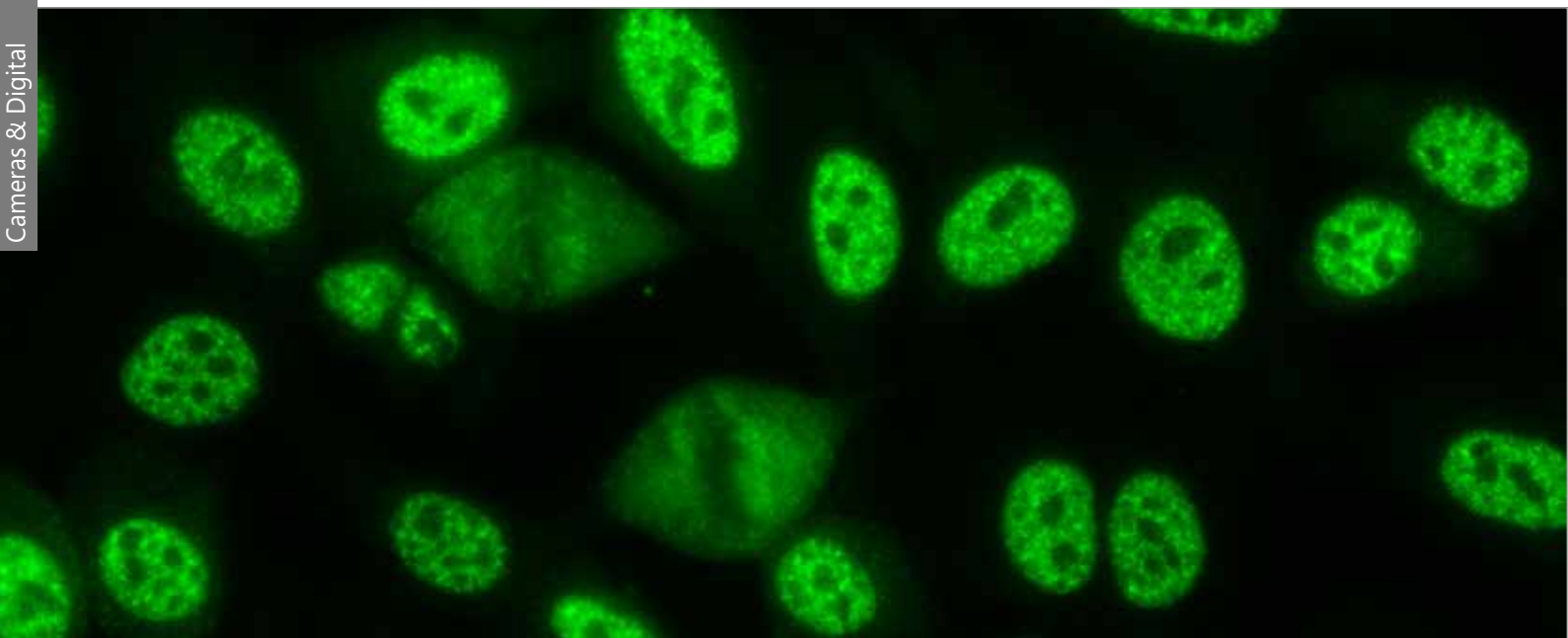
Professional Microscope Cameras



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.

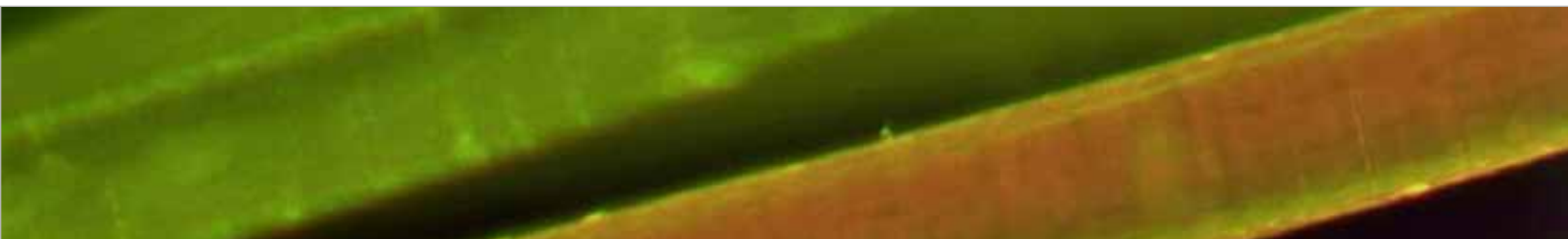
Superb with moving specimens in brightfield, darkfield, phase contrast and even in polarized light observations thanks to the generous dynamic range which gives a great response to light and dark at the same time.

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

4

Cameras & Digital



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



④ C-P Series

3.1/20
MP

CMOS



USB-OUT



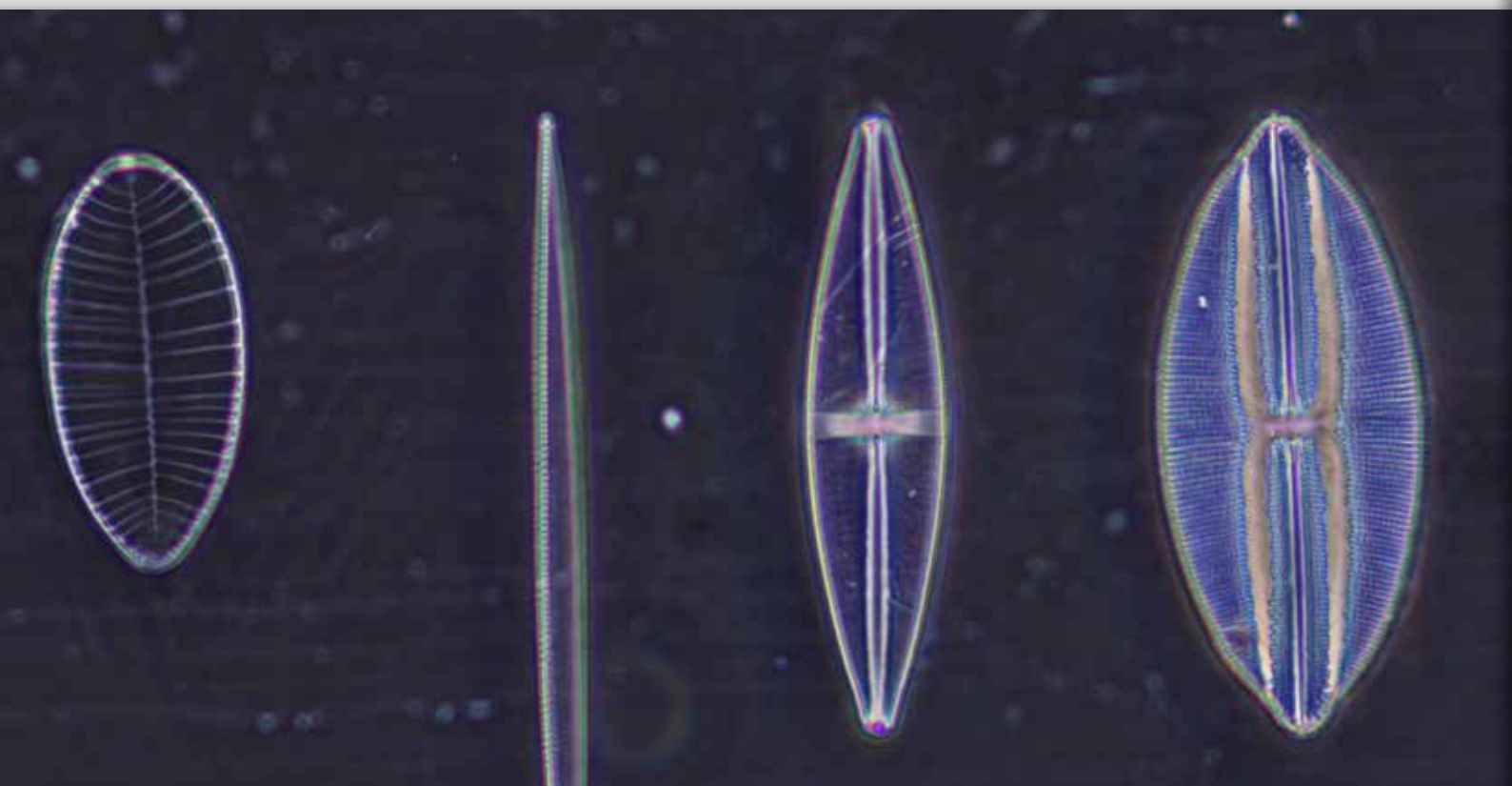
Professional yet very easy to use cameras with several resolutions (from 3.1 up to 20 MP), large SONY EXMOR CMOS sensor and USB3.0 connection, recommended for general scientific or industrial purposes requiring rapid speed transmission.

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.

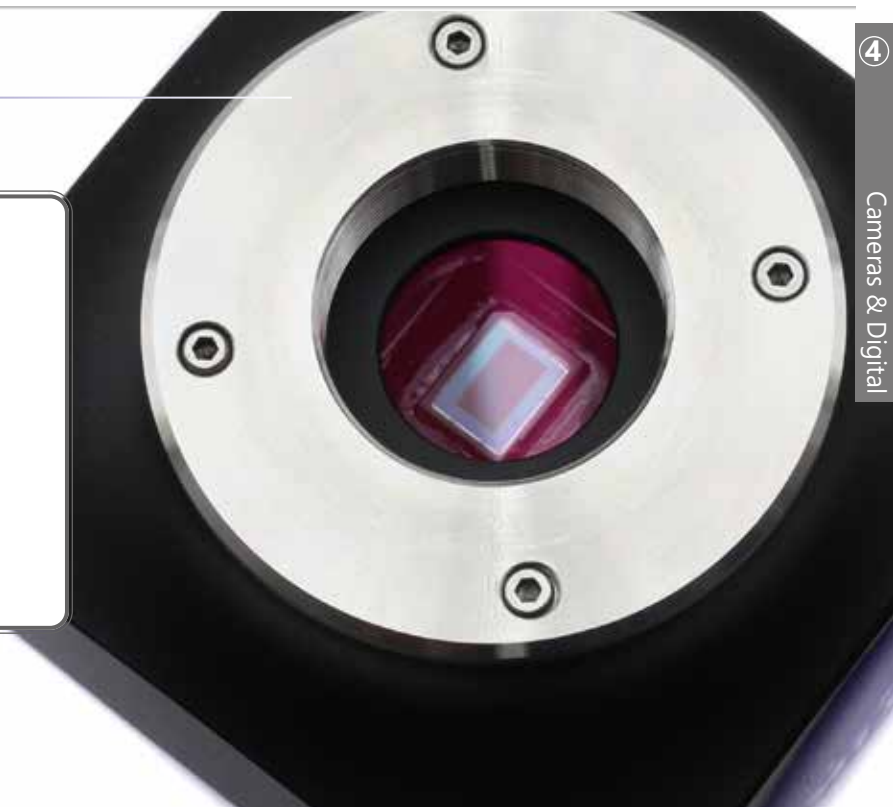
Ideal to be connected to all the trinocular tube of different brands using the focusable C-Mount adapter (to be purchased separately).

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"



4

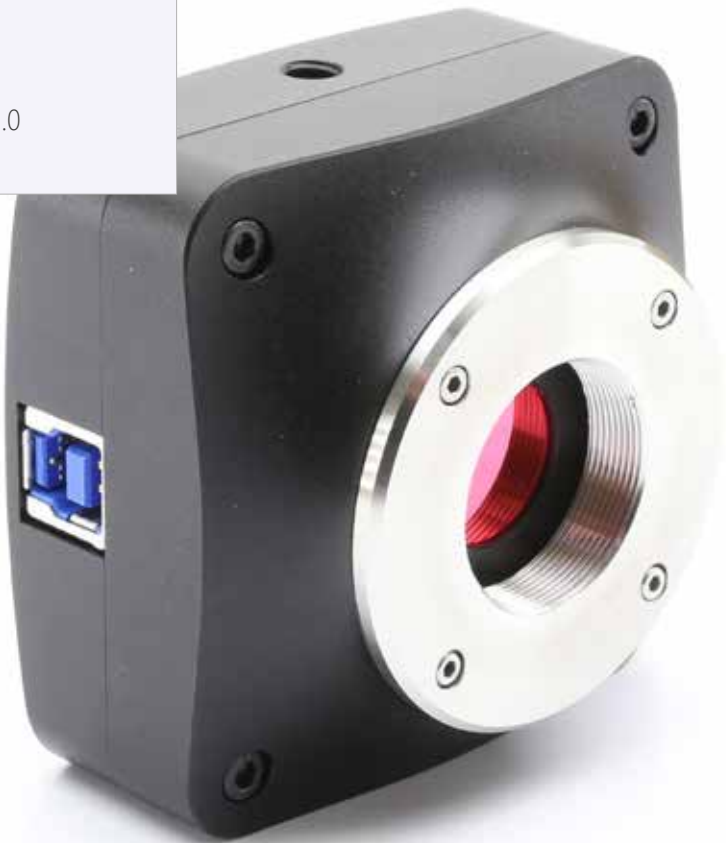
Cameras & Digital



4

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 μ m

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



④ C-PGS Model

5 MP

CMOS



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 recommended 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, recommended 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"



4

Cameras & Digital



④ 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 μ m
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

4

C-PGS Contents:

USB camera
USB 3.0 cable
Micrometric slide



C-WH5 & C-WH5SC



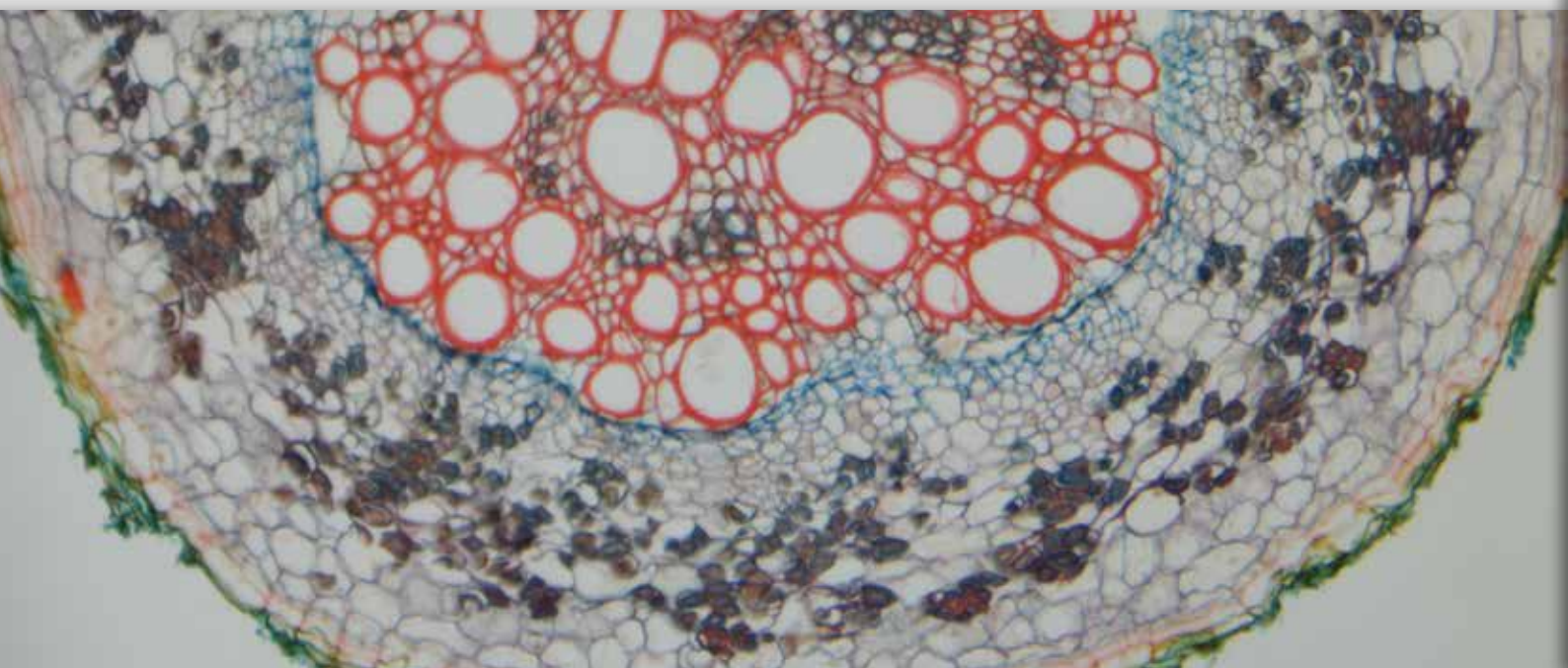
C-WH5



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



4 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



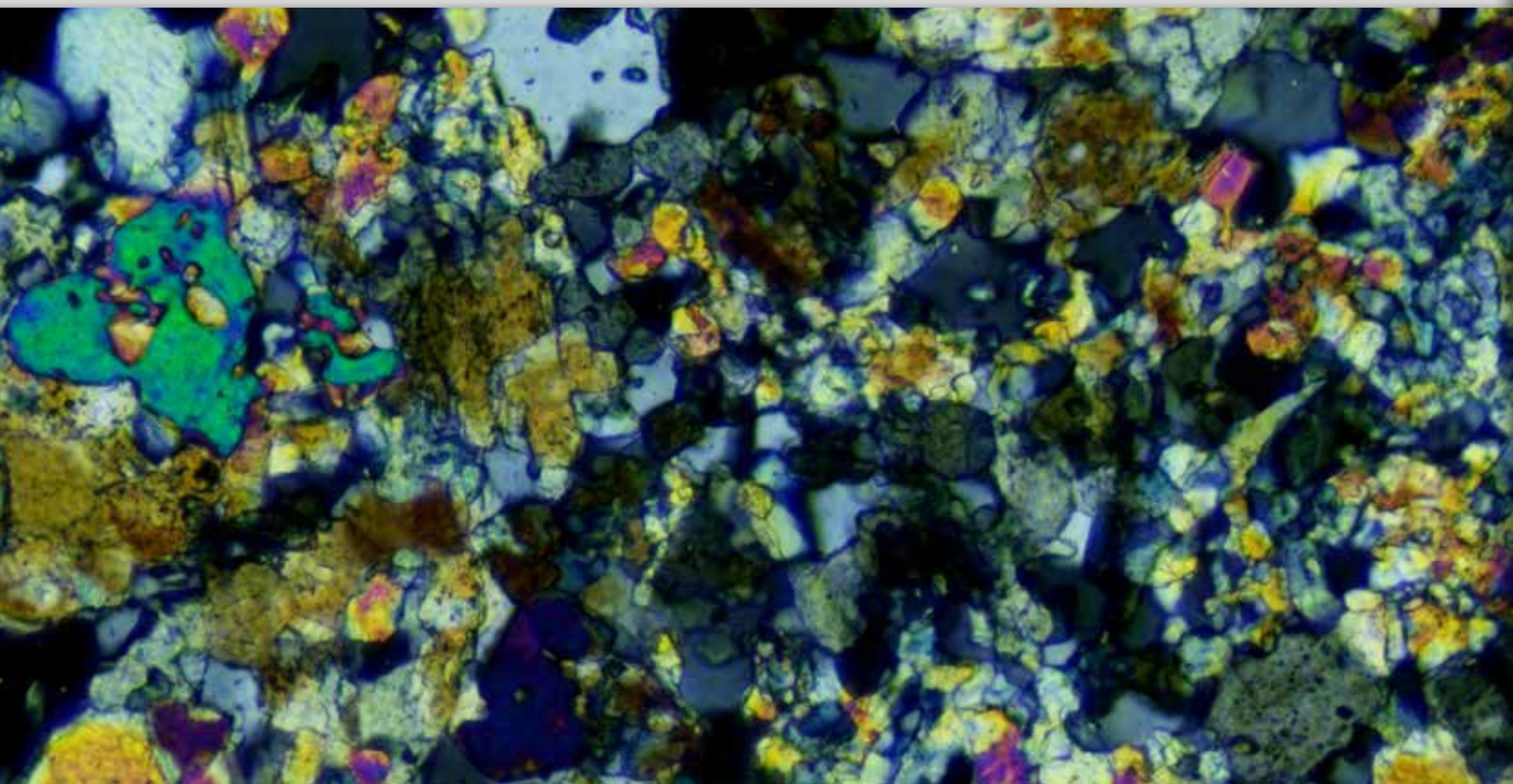
Impressive autofocusing FULL HD camera with 1080p, 2 MP resolution, CMOS sensor and HDMI connection, ensuring precise and ultra-fast automatic focus adjustment in any condition and in real time. Recommended for routine operations and perfect to compensate the lack of parfocality of the microscope without 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-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:

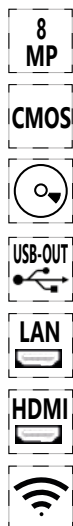
C-HP4: HP4 camera, 8 MP CMOS, USB/HDMI/4K, multi-plug

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

4 C-HUB4K

Cameras & Digital



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.

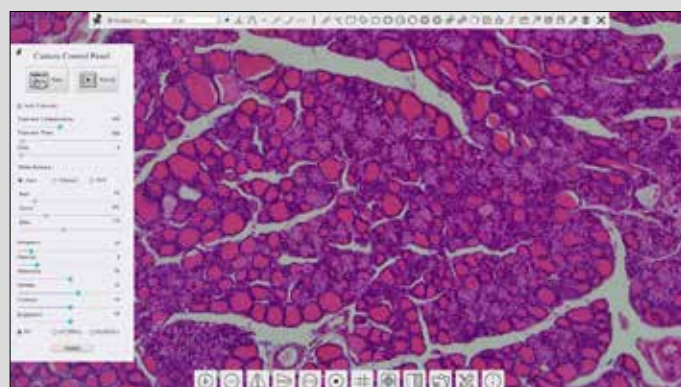
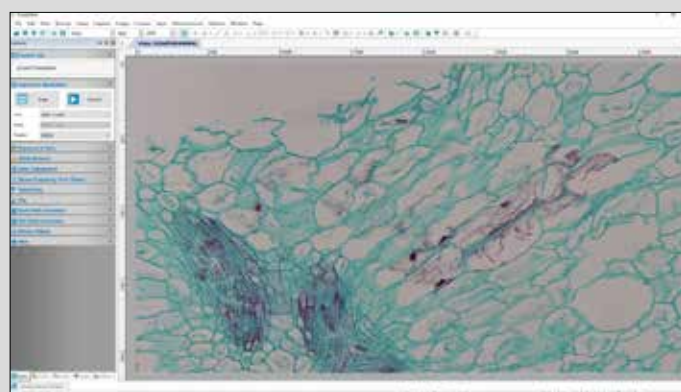
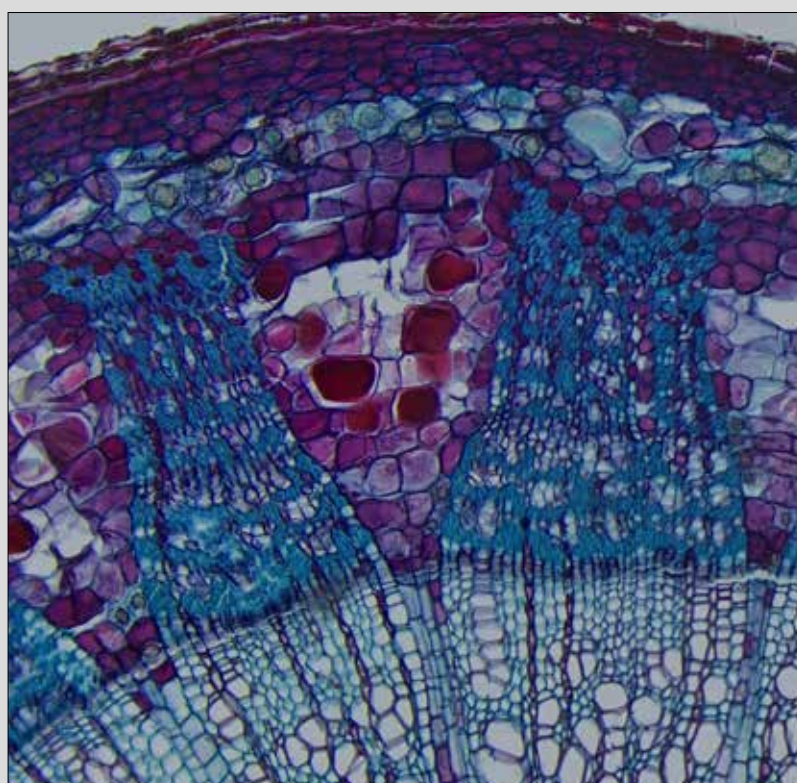
At any time, it can be connected to PC and used via the downloadable, free of charge software (Windows), which is always available to enable the latest updates.

The compact and elegantly designed housing conceals the very latest in camera technology.

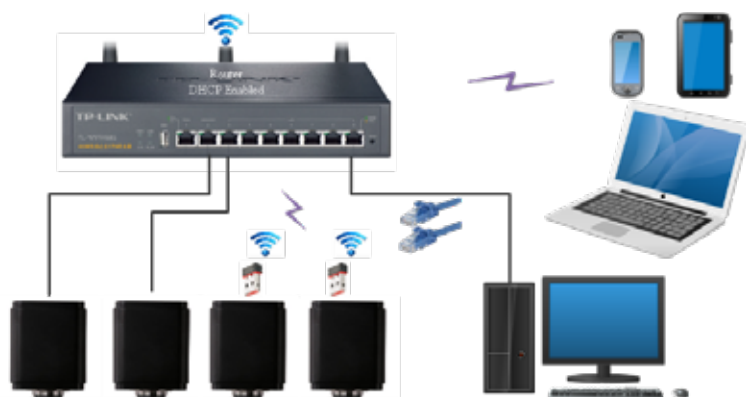
Images will be of the highest quality and rich in contrast and detail with the top-class SONY sensors, worldwide recognized, ensuring beautiful true-to-life color and delivering incredibly accurate colors just as you see them.

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

4 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



Camera Adapters Charts

4

Cameras & Digital

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



v 6.5 - OPTIKA reserves the right to make corrections, modifications, enhancements, improvements and other changes to its products at any time without notice.

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