

**DIGITAL**



## *Microscopes and Cameras*
































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| ○ DM SERIES - Digital microscopes                        | page 215 |
| ○ VIDEO AND PHOTO APPLICATIONS - Video and photo cameras | page 231 |
| ○ OPTIKA SOFTWARE - Optika software suite                | page 251 |



## Icons

	Monocular		Magnification 400X		X-LED <sup>2</sup> illuminator
	Binocular		Magnification 1000X		X-LED <sup>3</sup> illuminator
	Trinocular		Incident light		X-LED <sup>8</sup> illuminator
	Field number 16		Transmitted light		1W LED illuminator
	Field number 18		Polarized light		LED illuminator
	Field number 20		Halogen lamp		Automatic light control
	Field number 22		Incandescent lamp		Infinity-corrected optics
	Field number 24		Dichroic lamp		Rechargeable battery
	Rotating head 360°		USB connection		Anti-fungus treatment

## DM Series

Digital microscopes



## DM Series

The OPTIKA digital microscopes DM are equipped with a camera which is integrated in the head of the microscope, as well as the traditional characteristics of quality and robustness.

The entire DM series, from models dedicated to teaching to those intended for laboratory use, is equipped with "plug & play" software. This series is the ideal solution for capturing images and video and transfer them to a PC.

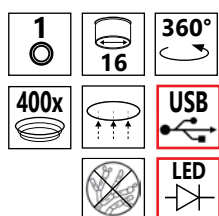
<b>DM-5</b>	Digital Monocular microscope 480Kpixels.
<b>DM-5UP</b>	Digital Monocular microscope 480Kpixels, USB powered.
<b>B-150DM</b>	Digital monocular microscope 400x, 1.3Mp, double layer stage.
<b>B-150DMR</b>	Digital monocular microscope 400x, 1.3Mp, double layer stage, with rechargeable batteries.
<b>B-150DB</b>	Digital binocular microscope 1000x, 3.2Mp, double layer stage.
<b>B-150DBR</b>	Digital binocular microscope 1000x, 3.2Mp, double layer stage, with rechargeable batteries
<b>B-190TB</b>	Upright digital microscope, achromatic objectives. With Tablet PC.
<b>B-290TB</b>	Upright digital microscope, E-PLAN objectives, belt-drive stage. With Tablet PC.
<b>SZM-D</b>	Digital stereozoom microscope 7x...45x, halogen incident & transmitted illumination, with 1.3Mpixels built-in camera



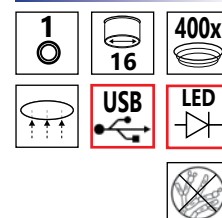
# DM Series - Models



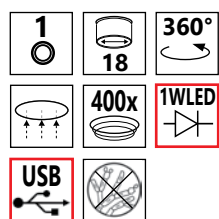
**DM-5**



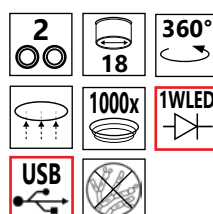
**DM-5UP**



**B-150DM**



**B-150DB**

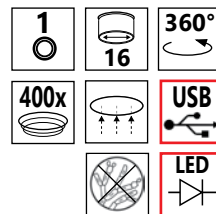




## DM Series - DM-5



### DM-5



The DM-5 is the "entry level" model of the DM series and it is ideal for primary schools.

Its ease of use combined with high quality construction and first choice optical system, make the study of biology a pleasant experience.

The DM-5 is supplied with everything needed for immediate use without the need for additional accessories.

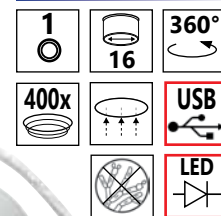


## DM Series - DM-5

<b>Head:</b>	Digital, monocular, 360° rotating, 45° inclined
<b>Eyepiece:</b>	WF10x/16mm
<b>Nosepiece:</b>	Triple, reversed
<b>Objectives:</b>	Achromatic 4x (0.10), 10x (0.25), 40x (0.65)
<b>Stage:</b>	Rotating round stage dia. 90mm; moving range: 5mm; slide clips
<b>Focusing:</b>	Coarse and fine with different axis
<b>Illumination:</b>	White LED, non-rechargeable, with brightness control
<b>Digital camera resolution:</b>	640x480
<b>Output:</b>	2.0 USB port
<b>Software:</b>	OPMIAS (Optika Micro Image Analysis Software), for Windows XP/Vista/Win7, Win8, Win10, 32-64 bit
<b>Packing:</b>	Carton box with inner foam



**DM-5**



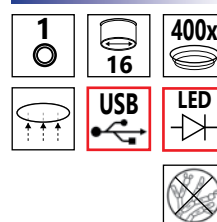
## DM Series - DM-5UP

### Monocular digital microscope

Same as DM-5, but with illuminator powered by your PC through USB connection.



**DM-5UP**



USB POWERED  
OR EXTERNALLY POWERED



# DM Series - B-150DM / B-150DMR

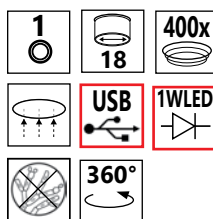
The microscopes B-150DM and B-150DB are built to meet the needs of secondary schools.

The integration of a digital camera, the quality of the optics and mechanics, and the rich equipment of these microscopes make them the best solution for the interactive training.

B-150DM and B-150BM are provided with everything necessary to allow immediate use without the need for additional accessories.



## B-150DM



<b>Head:</b>	Digital, Monocular, 360° rotating, 45° inclined
<b>Eyepiece:</b>	WF10X/18mm
<b>Nosepiece:</b>	Quadruple
<b>Objectives:</b>	Achromatic 4x (0.10), 10x (0.25), 40x (0.65).
<b>Working stage:</b>	Double layer with mechanical sliding stage, 125x115mm, moving range: 50x30mm
<b>Condenser:</b>	1.25 N.A. Abbe type
<b>Focusing system:</b>	Coaxial coarse and fine, with focusing stop mechanism
<b>Illumination:</b>	1W white LED, non-rechargeable, with brightness control
<b>Digital camera resolution:</b>	1280x1024 pixels (1.3Mp)
<b>Output:</b>	2.0 USB port
<b>Software:</b>	OPTIKA Vision Lite for Windows XP/Vista, Win7, Win8, Win10, 32-64 bit
<b>Packing:</b>	Carton box with inner foam

# DM Series - B-150DB / B-150DBR

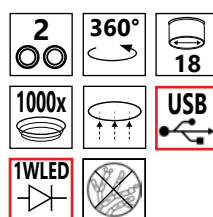
<b>Head:</b>	Digital, Binocular, 360° rotating, 30° inclined
<b>Eyepiece:</b>	WF10X/18mm
<b>Nosepiece:</b>	Quadruple
<b>Objectives:</b>	Achromatic 4x (0.10), 10x (0.25), 40x (0.65), 100x (1.25).
<b>Working stage:</b>	Double layer with mechanical sliding stage, 125x115mm, mov. range 50x30mm
<b>Condenser:</b>	1.25 N.A. Abbe type
<b>Focusing system:</b>	Coaxial coarse and fine, with focusing stop mechanism
<b>Illumination:</b>	1W white LED, non-rechargeable, with brightness control
<b>Digital camera resolution:</b>	2048x1536 pixels (3.14Mp)
<b>Output:</b>	2.0 USB port
<b>Software:</b>	OPTIKA Vision Lite for Windows XP/Vista, Win7, Win8, Win10, 32-64 bit
<b>Packing:</b>	Carton box with inner foam

## R - Rechargeable battery

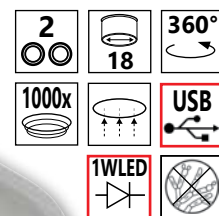
B-150DMR and B-150DBR comes with an internal rechargeable battery for use on field.



**B-150DB**



**B-150DBR**



# DM Series - Technical specifications

	DM-5	B-150DM	B-150DB
<b>Resolution</b>	640x480 pixels	1280x1024 pixels (1.3Mp)	2048x1536 pixels (3.14Mp)
<b>Sensor</b>	1/4"CMOS	1/3,2"CMOS	1/2,5"CMOS
<b>Pixel size</b>	7,9x7,9 µm	2,8x2,8 µm	2,2x2,2 µm
<b>Resolution &amp; Frame Rate</b>	640x480 - 25 fps	1280x1024 - 15 fps	2048x1536 - 4 fps
		640x480 - 30 fps	1280x1024 - 8 fps
			640x480 - 30 fps
<b>Sensitivity</b>	2.0 V/Lux-sec	1.0 V/Lux-sec	1.0 V/Lux-sec
<b>White Balance</b>	Auto / Manual	Auto / Manual	Auto / Manual
<b>S/N Ratio</b>	≥ 50 dB	≥ 42 dB	≥ 40 dB
<b>Dynamic Range</b>	≥ 60 dB	≥ 71 dB	≥ 66 dB
<b>Digital Port</b>	USB 2.0	USB 2.0	USB 2.0
<b>Imaging Software</b>	OPMIAS	OPTIKA Vision Lite	OPTIKA Vision Lite
<b>System Requirements</b>	Operating system: Windows XP, Vista, Win7, Win8, Win10, 32-64 bit		

# DM Series - Accessories

## DM-5 - DM5UP

M-044	Eyepiece WF10x/16mm.
M-727	Achromatic objective 4x/0,10.
M-728	Achromatic objective 10x /0,25.
M-729	Achromatic objective 40x/0,65.
M-030	Dust cover type 1.

## B-150DM - B-150DB - B-150DMR - B-150DBR

M-001	Eyepiece H5x.
M-002.1	Eyepiece WF10x/18mm.
M-003	Eyepiece WF16x/12mm.
M-004	Eyepiece with micrometer WF10x/18mm.
M-137	Objective Achromatic 4x/0,10.
M-138	Objective Achromatic 10x/0,25.
M-139	Objective Achromatic 20x/0,40.
M-141	Objective Achromatic 40x/0,65.
M-142	Objective Achromatic 60x/0,80.
M-143	Objective Achromatic 100x/1,25 (Oil).
M-114	C-Mount adapter for 1/2" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-031	Dust cover type 3.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.

## 15104 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



**How to connect the cameras to our microscopes.**  
Please refer to the Adapter reference list on Digital section.

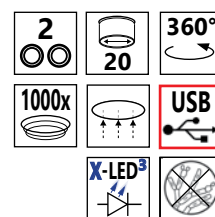


# DM Series - B-190TB - B-290TB - BEYOND DIGITAL

The latest Digital Microscopes with Tablet PC from Optika open new microscopy horizons. Our Microscopes combine high-end optics with innovative Digital Technology for microscopic imaging.



## B-290TB



### Optical system:

The optical system has been developed for demanding users; it consists of high quality components which guarantee a high image contrast and an excellent optical resolution. The optical components have been designed and treated with special techniques to prevent the formation of moulds and fungi.

### Head:

Binocular version available.

The heads are equipped with interpupillary distance control (48-75 mm) as well as with dioptic compensation. All heads are 360° rotatable and 30° inclined.

### Stand:

The stand has a modern and ergonomic design. It is easy to carry the microscope thanks to the large opening behind the revolving nosepiece, to be used as a handle. The opening allows the user to see clearly the objectives and the samples, as requested in discussion groups.

### Mechanics:

The moving parts are made by means of machine tools with computerized numerical control reducing manufacturing tolerance and increasing the reliability of the instrument. The strict controls on materials and production processes are optimized through the procedures established by ISO 9001:2008 quality system.

### Illumination:

#### B-190TB:

X-LED<sup>2</sup> type with white LED; light intensity control using a knob on left side of the frame.

LED power 3W, comparable to a 30-35W halogen bulb.

#### B-290TB:

X-LED<sup>3</sup> type with white LED; light intensity control using a knob on left side of the frame.

LED power 3.6W, comparable to a 50W halogen bulb.

### Camera:

Digital camera resolution: 3.14 MegaPixels

Signal output: USB 2.0 - Sensor size: 1/2.5"

Sensor technology: CMOS - Image format: 4/3

Full Image Size: 2048x1536. NO driver (microsoft driver).

Capture features: continuous auto exposure, image size, image capture, compressed video capture.

Control parameters: brightness, gain, exposure time, colors, color enhancement.

### Tablet PC:

Equipped with Windows 8.1 operating system.

Included: Image Analysis software Optika Vision Lite, full screen function is also included for a wider camera Live View.

2GB standard memory. 16+16GB capacity flash memory.

8.9" screen size. Tablet PC with OPTIKA detachable system.

## DM Series - B-190TB

The result of a perfect fusion between years of experience in the microscopy field and a refined design study.

**Quality, Reliability and Innovation:** this is **B-190TB**.

<b>Head:</b>	Binocular Digital observation head, inclined 30° and rotatable 360°.
<b>Eyepiece:</b>	Widefield eyepieces WF10X/18 with field number 18mm.
<b>Nosepiece:</b>	Quadruple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	Achromatic DIN 4x (0.10), 10x (0.25), 40x (0.65), 100X (1.25).
<b>Working stage:</b>	Double layer with mechanical sliding stage, size 125x115mm, X-Y movement range 70x30, specimen holder for one slide.
<b>Condenser:</b>	Abbe condenser, N.A. 1,25 precentered
<b>Focusing system:</b>	Coaxial coarse and fine, with focusing stop mechanism
<b>Illumination:</b>	Light source type X-LED <sup>2</sup> with white LED; light intensity control using a knob on left side of the frame. LED power 3W, comparable to a 30-35W halogen bulb.

**Easily detachable  
from the microscope**



***Simultaneous data and power feed***

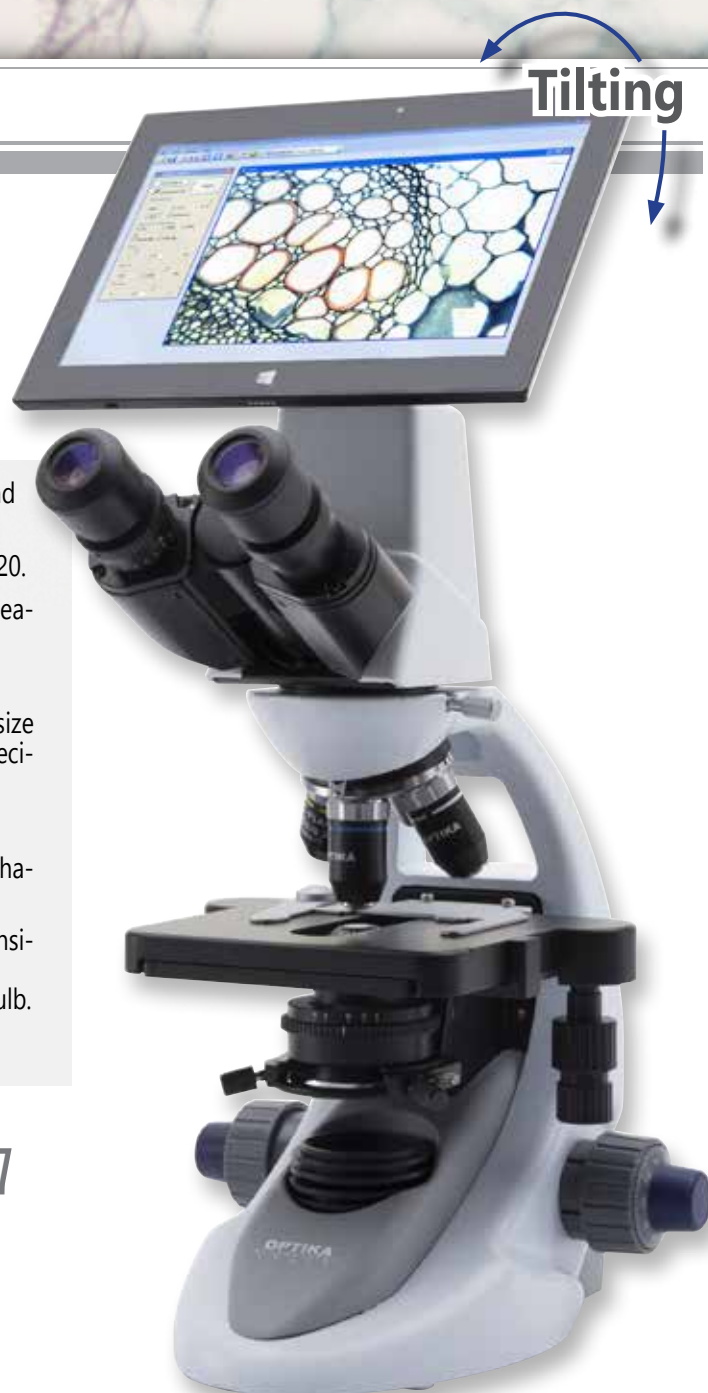


## DM Series - B-290TB

This series incorporates all the experience gathered by OPTIKA Microscopes in the field of light microscopy, adapted specifically for routine laboratory brightfield applications.

**B-290TB** is suitable for routine microscopy and has an ergonomic design for comfortable long-term use.

<b>Head:</b>	Binocular Digital observation head, inclined 30° and rotatable 360°.
<b>Eyepiece:</b>	Widefield eyepieces WF10X/20 with field number 20.
<b>Nosepiece:</b>	Quadruple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	E-Plan 4x (0.10), 10x (0.25), 40x (0.65), 100X (1.25).
<b>Working stage:</b>	Double layer with mechanical sliding stage, size 150x133mm, X-Y movement range 75x50mm, specimen holder for one slide. Belt drive in X direction.
<b>Condenser:</b>	Abbe condenser, N.A. 1,25 precentered
<b>Focusing system:</b>	Coaxial coarse and fine, with focusing stop mechanism
<b>Illumination:</b>	Light source X-LED <sup>3</sup> type with white LED; light intensity control using a knob on left side of the frame. LED power 3.6W, comparable to a 50W halogen bulb.



### *Simultaneous data and power feed*





# DM Series - B-190TB/B-290TB

## Tablet specifications

### **OPERATING SYSTEM**

OS Windows 8.1

### **PROCESSOR AND CHIPSET**

Processor manufacturer Intel  
Processor Type Bay Trail  
Model Z3735F  
Speed 1,83 GHz  
Processor Core Quad core

### **MEMORY**

Standard Memory 2 GB  
Memory Technology LPDDR3  
Memory Card Reader Yes  
Supported memory microSD

### **STORAGE**

Capacity flash memory 16+ 16 GB

### **DISPLAY AND GRAPHICS**

Screen Size 8.9"  
Screen Type LCD color TFT  
Screen Mode Full HD  
Screen Resolution 1920 x 1200  
Backlight technology LED  
Touchscreen Yes  
Multi-touch screen Yes  
Graphics Controller Manufacturer Intel  
Graphics Controller Model HD Graphics  
Graphics Memory Technology LPDDR3  
Graphics Memory Accessibility Shared

### **NETWORK & COMMUNICATION**

LAN wireless Yes  
Wireless LAN standard IEEE 802.11a/g/n  
Bluetooth Yes  
Standard Bluetooth Bluetooth 4.0

### **INTERFACES / PORTS**

HDMI Yes

### **INPUT DEVICES**

Keyboard Type Touchscreen

### **BUILT-IN DEVICES**

Microphone Yes

### **SOFTWARE**

Operating System Windows 8.1 32-bit  
Software Microsoft Office (1 year)  
Image Analysis software OPTIKA VISION LITE

### **BATTERY INFORMATION**

Number of Cells 2-cell  
Battery Chemistry Lithium ION  
Battery Capacity 6000 mAh

### **POWER DESCRIPTION**

Maximum Power Supply Wattage 10 W

### **WEIGHT AND DIMENSIONS**

Thickness 9,5 mm  
Width 220 mm  
Height 157 mm  
Weight (Approximate) 477 g

## DM Series - Accessories

### **B-190TB**

M-001	Eyepiece H5x.
M-002.1	Eyepiece WF10x/18mm.
M-003	Eyepiece WF16x/12mm.
M-004	Eyepiece with micrometer WF10x/18mm.
M-008	Eyepiece with pointer WF10x/18mm.
M-137	Objective Achromatic 4x/0,10.
M-138	Objective Achromatic 10x/0,25.
M-139	Objective Achromatic 20x/0,40.
M-141	Objective Achromatic 40x/0,65.
M-142	Objective Achromatic 60x/0,80.
M-143	Objective Achromatic 100x/1,25 (Oil).

M-190	Polarising set (filters only).
M-031	Dust cover type 3.
M-069	Solar battery pack.
M-974	Blue filter, 32 mm diameter.
M-976	Green filter, 32 mm diameter.
M-978	Yellow filter, 32 mm diameter.
M-988	Frosted glass filter, 32 mm diameter.
15008	OPTIKA immersion oil 10ml.

# DM Series - B-190TB/B-290TB

## Camera specifications

### CAMERA SPECIFICATIONS

Digital camera resolution	3.14 MegaPixels
Analog camera resolution	NO
Signal output	USB 2.0
Audio Signal	NO
Sensor Size	1/2.5"
Sensor technology	CMOS
Image format	4\3
Full Image size	2048 x 1536
Pixel size	2,2 x 2,2 micron
Frame rate full resolution	5 frames\sec
Frame rate other resolutions	8 FPS (1280x1024) 30FPS (640x480)
Sensitivity	0,53 V/Lux-second (550 nm)
Signal / noise ratio	40 dB
Dynamic range	66.5 dB
Max Exposure time	1,5 sec
ADC conversion	12 BIT
Color Depth	8 BIT
On camera IR Filter	680 nm
Automatic White Balance	Auto - Man
Automatic Gain Control	Auto - Man
Automatic Back light control	Auto - Man
Exposure control	Auto - Man

### ACCESSORIES

Calibration Slide	YES
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### SOFTWARE SPECIFICATIONS

#### Supplied Software:

Optika Vision Lite (full screen function is also included for a wider camera Live View)

#### Driver type:

No driver (microsoft driver) required

#### Capture features:

Continuous auto exposure, image size, image capture, compressed video capture.

#### Control parameters:

Brightness, gain, exposure time, colors, color enhancement.

### GENERAL SPECIFICATIONS

Working temperature	+0 up to +60°C
Storage temperature	-20 up to +70°C
Relative Humidity	45% up to 85%

## DM Series - Accessories

### **B-290TB**

M-160	Eyepiece WF10x/20mm.
M-161	Eyepiece EW15x/16mm.
M-162	Eyepiece WF20x/10mm.
M-163	Micrometer eyepiece WF10x/20mm.
M-164	Objective 4x/0,10 E-PLAN.
M-165	Objective 10x/0,25 E-PLAN.
M-166	Objective 20x/0,40 E-PLAN.
M-167	Objective 40x/0,65 E-PLAN.
M-168	Objective 60x/0,80 E-PLAN.
M-169	Objective 100x/1,25 E-PLAN (Oil).

M-174	Polarizing set, filters only (for B-290 series).
M-175	Rotating table for polarizing set.
M-069	Solar battery pack.
M-031	Dust cover type 3.
M-666.290 15008	Heating stage, with digital temperature controller B-290 series. OPTIKA immersion oil 10ml.

## DM Series - SZM-D

The stereomicroscopes of the SZM series are instruments specifically designed for laboratory and industry applications. Their optical and mechanical qualities place them at the top of that sought-after category of appliances and the price/quality ratio is exceptionally good.

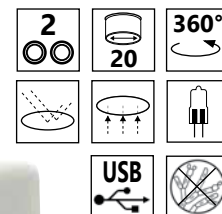
Sharing the same optical system consisting of binocular and trinocular heads with zoom objectives, the four models of the SZM series find their proper application wherever professional instruments are required at a particularly contained cost.

The numerous accessories provide an ample choice of possible configurations and extend the flexible use of the instruments.

SZM-D stereozoom microscope is our best option when an ease of use and a good quality for the image are required.

By using the built-in camera with its USB port the connection with the pc will be simple and quick.

### SZM-D



# DM Series - SZM-D Model Technical specifications

Model	Head	Objectives	Stand	Illumination
<b>SZM-D</b>	Binocular	0,7x.... 4,5x Zoom	Pillar stand	Incident and transmitted 12V/15W halogen with separated brightness controls

## Technical specifications of the built-in camera

<b>Resolution</b>	1280 x 1024 pixels (1,3 Mpixels)
<b>Sensor</b>	CMOS 1/3"
<b>Pixel Size</b>	3,6 µm x 3,6 µm
<b>Imaging Area</b>	6.67 mm x 5.33 mm
<b>Frame Rate at Full Resolution</b>	15 frames/sec
<b>Frame Rate at 640x480</b>	55 frames/sec
<b>Optical Format</b>	1/3"
<b>Aspect Ratio</b>	4:3
<b>S/N Ratio</b>	44 dB
<b>Dynamic Range</b>	71 dB
<b>ADC</b>	8 bit
<b>Data Output (Uncompressed Video)</b>	3x8 bit
<b>Exposure Range</b>	0-219 msec
<b>Sensitivity</b>	1,0V/Lux-second
<b>C-Mount Lens Adapter</b>	No
<b>System Requirements</b>	Windows XP/Vista, Win7, Win8, Win10, 32/64bit, USB 2.0
<b>Software</b>	Optika Vision Lite, Optika view, TWAIN interface, several freeware for image elaboration
<b>Capture Features</b>	Continuous auto white balance, continuous auto exposure
<b>Included with the camera</b>	Optika Vision Lite package, 1.5 m USB cable.





# DM Series - Accessories

## SZM-D

ST-081	Eyepieces (pair) WF10x/20 mm.
ST-082	Eyepieces (pair) WF15x/15 mm.
ST-083	Eyepieces (pair) WF20x/10 mm.
ST-084	Micrometric eyepiece WF10x/20 mm.
ST-085	Additional lens 0,5x (w.d. 165mm).
ST-091	Additional lens 0,75x (w.d. 117mm).
ST-086	Additional lens 1,5x (w.d. 47mm).
ST-087	Additional lens 2x (w.d. 26mm).
ST-088	Polarising set (filters and rotating stage).
ST-040	Darkfield condenser.
ST-041	Sample clip.
ST-100	Hand moving stage.
ST-036	Eye cups (pair) type 2.
ST-012	White/black object-plate, type 2 dia. 95 mm.
ST-014	Glass stage, type 2, dia. 95 mm.
ST-038	Halogen bulb, 12V/15W.
ST-037	Halogen bulb, 12V/15W, with dichroic mirror.
ST-033	Dust cover type 13.
M-114	C-Mount adapter for 1/2" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.
M-113.1	Ring adapter, 30mm (for monocular and binocular microscopes).

## 15104 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



### How to connect the cameras to our microscopes.

Please refer to the Adapter reference list on Digital section.



## VIDEO AND PHOTO APPLICATIONS

Video and photo cameras



# Video and photo applications

A wide range of instruments fulfilling any requirement in the photo/video field. It has never been so easy to get impressive images from your microscope. Thanks to different resolutions, all digital cameras (to be used with PC or TV set) can meet the demands of either a professional user or people who are looking for an economic but valuable product.

Several models (HDMI model, Pro LT and Pro Cool 5) are designed to be used on trinocular microscopes by using specific adapters (optional accessories). It will be easy to connect these instrument to any microscope, biological or stereo, by C-mount.

The models with optical eyepiece adapter are ready to be used (by means of one of the two eyepieces) on monocular and binocular microscopes too, both biological and stereo.

## **OPTIKAM Budget Series**

## **OPTIKAM Pro Series**

## **OPTIKAM HDMI Easy**

## **OPTIKAM HDMI**

## **OPTIKAM HDMI Pro**

## **OPTIKAM WiFi**

## **OPTIKAM Pro Cool**

## **TB Series**

## **EDUCAM Series**

## **VC Series**

USB cameras for general purpose.

USB cameras with premium performances and advanced software package.

USB and HDMI (720p) camera.

USB and HDMI (1080p) camera.

USB and HDMI (1080p) camera with premium performances.

USB and WiFi camera.

USB camera with very high sensitivity and cooled CCD.

Tablet PC with C-mount integrated camera.

Multimedia cameras.

Analog CCD videocameras for general purpose.

Optika cameras come with the "all-in-one-box" packaged with camera, accessories and software.

## **4083.13E**



## **4083.13WiFi**





# Video and photo applications - OPTIKAM Budget Series

<b>OPTIKAM B05 - 4083.B05</b>	<b>Eyepiece Camera</b>
Sensor	CMOS 1/4"
Resolution	640x480 pixels
Frame Rate	30 frames/sec
Optical Format	1/4"
Aspect Ratio	4:3
S/N Ratio	45 dB
Dynamic Range	60 dB
Sensitivity	1,9 V/Lux-second
C-Mount	No
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	None
System Requirements	Windows XP/Vista, Win7, Win8, Win10 32/64 bit, USB port 2.0
Software	Optika Vision Lite / OPTIKA MIPro
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.5 m USB cable, installation manual, CD-Rom

OPTIKAM B05



OPTIKAM B2



<b>OPTIKAM B1 - 4083.B1</b>	<b>C-mount and Eyepiece Camera</b>
Sensor	CMOS 1/2.5"
Resolution	1272 x 952 pixels (1,21 Mpixels)
Frame Rate at Full Resolution	19 frames/sec
Frame Rate 640x480	52 frames/sec
Optical Format	1/3"
Aspect Ratio	4:3
S/N Ratio	44 dB
Dynamic Range	60 dB
Sensitivity	1,0 V/Lux-second
C-Mount:	Yes
Optical adapter	0,45x (for 23mm eyepiece tube)
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista, Win7, Win8, Win10 32/64 bit, USB port 2.0
Software	Optika Vision Lite / OPTIKA IsView
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, installation manual, CD-Rom

OPTIKAM B1



OPTIKAM B5



Special model designed for trinocular microscopes only. This camera does not include any optical adapter for biological microscopes or stereomicroscopes. Especially designed for heavy applications, the Optikam B2 is very robust and does not need the installation of any driver in your computer.

<b>OPTIKAM B2 - 4083.B2</b>	<b>C-mount Camera</b>
Sensor	CMOS 1/3.2"
Resolution	1600 x 1200 pixels (2 Mpixels)
Frame Rate at Full Resolution	10 frames/sec
Frame Rate at 640x480	30 frames/sec
Optical Format	1/3,2"
Aspect Ratio	4:3
S/N Ratio	42,3 dB
Dynamic Range	71 dB
Sensitivity	1,0 V/Lux-second
C-Mount:	Yes
Optical adapter	None
Adapters for stereomicroscopes	None
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista, Win7, Win8, Win10 32/64 bit, USB port
Software	Optika Vision Lite / OPTIKA MIPro
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, installation manual, CD-Rom

# Video and photo applications - OPTIKAM Budget Series

## OPTIKAM B3 - 4083.B3

### C-mount and Eyepiece Camera

Sensor	CMOS 1/2"
Resolution	2048 x 1536 pixels (3,14 Mpixels)
Frame Rate at Full Resolution	6,5 frames/sec
Frame Rate at 640x480	55 frames/sec
Optical Format	1/2"
Aspect Ratio	4:3
S/N Ratio	43 dB
Dynamic Range	61 dB
Sensitivity	1,0 V/Lux-second
C-Mount	Yes
Optical adapter	0,5x (for eyepiece tube)
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista, Win7, Win8, Win10 32/64 bit, USB port 2.0
Software	Optika Vision Lite / OPTIKA IsView
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, installation manual, CD-Rom



## OPTIKAM B5 - 4083.B5

### C-mount and Eyepiece Camera

Sensor	CMOS 1/2,5"
Resolution	2592 x 1944 pixels (5 Mpixels)
Frame Rate at Full Resolution	7 frames/sec
Frame Rate at 640x480	46 frames/sec
Optical Format	1/2,5"
Aspect Ratio	4:3
S/N Ratio	38 dB
Dynamic Range	70,1 dB
Sensitivity	0,53 V/Lux-second
C-Mount	Yes
Optical adapter	0,45x (for eyepiece tube 23mm)
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista, Win7, Win8, Win10 32/64 bit, USB port 2.0
Software	Optika Vision Lite / OPTIKA IsView
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, installation manual, CD-Rom



## OPTIKAM B9 - 4083.B9

### C-mount and Eyepiece Camera

Sensor	CMOS 1/2,3"
Resolution	3664 x 2740 pixels (10 Mpixels)
Frame Rate at Full Resolution	3 frames/sec
Frame Rate at Middle Resolution(1,3Mp)	25 frames/sec
Frame Rate at 640x480	30 frames/sec
Optical Format	1/2,3"
Aspect Ratio	4:3
S/N Ratio	40,5 dB
Dynamic Range	63 dB
Sensitivity	0,44 V/Lux-second
C-Mount	Yes
Optical adapter	0,45x (for 23mm eyepiece tube)
Adapters for stereomicroscopes	30 and 30,5 mm diameter
Calibration slide	76x24mm micrometric calibration slide
System Requirements	Windows XP/Vista, Win7, Win8, Win10 32/64 bit, USB port 2.0
Software	Optika Vision Lite / OPTIKA IsView
Capture Features	Continuous auto white balance, continuous auto exposure
Accessories included	1.8 m USB cable, installation manual, CD-Rom



# Video and photo applications - OPTIKAM Pro Series

## High-Performance cameras with advanced software package

C-mount cameras for video and still-image capturing with high performances. These cameras are delivered with our complete OPTIKA VISION SOFTWARE PACKAGE.

Ideal for professional trinocular microscopes.

### B-800BF + 4083.11LT



	<b>OPTIKAM PRO 3LT 4083.11LT</b>	<b>OPTIKAM PRO 5LT 4083.12LT</b>
<b>Resolution</b>	2048 x 1536 pixels (3.2 Mpixel)	2560 x 1920 (5.0 Mpixel)
<b>Sensor</b>	CMOS 1/2"	CMOS 1/2,5"
<b>Pixel Size</b>	3.2 µm x 3.2 µm	2.2 µm x 2.2 µm
<b>Image Area</b>	6.55 mm x 4.92 mm	5.70 mm x 4.28 mm
<b>Frame Rate at Full Resolution</b>	12 frames/sec	3 frames/sec
<b>Frame Rate at Half Resolution</b>	24 frames/sec	12 frames/sec
<b>Optical Format</b>	1/2"	1/2"
<b>Aspect Ratio</b>	4:3	4:3
<b>S/N Ratio</b>	43 dB max	43 dB max
<b>ADC</b>	10 bit	10 bit
<b>Data Output (Uncompressed Video)</b>	3x8 bit	3x8 bit
<b>Sensitivity</b>	1.0 V/Lux-second	0.53 V/Lux-second
<b>System Requirements</b>	Windows XP, Vista, Win7, Win8, Win10 32/64bit, USB 2.0 port	Windows XP, Vista, Win7, Win8, Win10 32/64bit, USB 2.0 port
<b>Software</b>	OPTIKA Vision Pro Plus, TWAIN interface, SDK	OPTIKA Vision Pro Plus, TWAIN interface, SDK
<b>Capture Features</b>	Continuous auto white balance, continuous auto exposure, averaging, subsampling (decimation)	Continuous auto white balance, continuous auto exposure, averaging, subsampling (decimation)
<b>Optical adapter</b>	None	None
<b>Included with the camera</b>	3 m USB cable, 76x24mm micrometric calibration slide, C-mount cap, box	3 m USB cable, 76x24mm micrometric calibration slide, C-mount cap, box
<b>Max exposure</b>	1 sec	1 sec
<b>Max extended exposure</b>	26 sec	26 sec



# Video and photo applications - OPTIKAM HDMI Easy

## 4083.13E



**OPTIKAM HDMI Easy** offers 720P quality images through a simple connection to projector, TV monitor or PC monitor.

The camera allows live video 720P images, the ability to record photos and videos directly into the supplied microSD card, or to a PC through the Optika Vision lite software.

**OPTIKAM HDMI Easy** is a good solution for various applications: education field, industrial, quality control and in all laboratories.

### OPTIKAM HDMI Easy - USB and HDMI (720p) camera.

The years of experience in microscopy have allowed Optika to develop an easy to use 720P HDMI camera that meets and fulfills the different needs related to imaging.

OPTIKAM HDMI Easy is the solution.

Digital camera equipped with a 5Mpixels sensor, a removable micro SD-Card, a very easy to use keyboard to set the the parameters of the camera, C & C-short mount connections.



OPTIKAM HDMI Easy - 4083.13E		C and C-Short mount, Eyepieces Camera
Sensor	1\2.33"	
Resolution	5 Megapixels	
Key Features	On/Off, zoom, image capture, video capture, menu, AE Exposure	
External Ports	HDMI, USB, Micro SD-Card	
SD-Card	Images: 2976 x 1674 , Video: 1280 x 720	
HDMI Resolution	1280 x 720, 30 Fps	
USB Resolution	1280 x 720, 30 Fps	
USB Driver	Driver free	
System requirements	HDMI, Windows Vista, Win7, Win8, Win10 32/64 bit	
Software	Optika Vision Lite	
USB Capture features	Resolution and automatic exposure	
HDMI features	On/off, zoom, image capture, video capture, automatic exposure, cross , lines, language	
Power supply	5V-12V 1000mA	
C-mount	Yes	
C-short mount	Yes	
Optical Adapter	None	
Adapters for stereomicroscopes	None	
Calibration slide	76x24mm micrometric calibration slide.	
Accessories included	Micro SD-Card, HDMI cable, USB cable, CD-Rom.	

# Video and photo applications - OPTIKAM HDMI

## OPTIKAM HDMI - USB and HDMI (1080p) camera.

Your digital unmet needs find in **OPTIKAM HDMI** their solution. The years of experience in microscopy have allowed Optika to develop a video/digital camera that meets and fulfills the diverse needs related to imaging.

**OPTIKAM HDMI** is a digital camera equipped with a 5Mpixels sensor, an 8GB removable SD-card, an useful Mouse to draw the camera into the parameters set-up, C-Mount connections and dual USB / HDMI port.

**OPTIKAM HDMI** offers great quality images through a simple connection to projector, TV monitor or PC monitor. The user can view, select, modify the parameters of the camera with just one click, compare and remove the captured images.

This innovative system provides live video images in high definition (Full HD 1080p), the ability to record photos and videos directly into the supplied SD-card or connected to a PC, to exploit the full potential of the software OPTIKA IsView.

**OPTIKAM HDMI** is largely used in the education field, in industrial quality control and in all laboratories.

## 4083.13H



OPTIKAM HDMI - 4083.13H	C-mount, Eyepieces Camera
<b>Sensor</b>	1/2.5"
<b>Resolution</b>	2592 x 1944
<b>Image Acquisition details</b>	Two high-speed FPGA chipsets
<b>Key Features</b>	On/Off, all the rest of features are available through the ON-BOARD software.
<b>External Ports</b>	HDMI, USB, SD-Card
<b>SD-Card</b>	Images: 2592 x 1944, Video: 1920 x 1080
<b>HDMI Resolution</b>	1920 x 1080, 30fps
<b>USB Resolution</b>	1920 x 1080, 1280 x 720, 15fps
<b>USB Driver</b>	Driver free
<b>System requirements</b>	HDMI, Windows XP, Vista, Win7, Win8, Win10 32/64 bit
<b>Software</b>	Optika Vision Lite, Optika IsView
<b>USB Capture features</b>	<ul style="list-style-type: none"> <li>• Resolution. Brightness.</li> <li>• Contrast. Tonality.</li> <li>• Saturation. Gamma.</li> <li>• White Balance.</li> </ul>
<b>HDMI features</b>	<ul style="list-style-type: none"> <li>• Cross. Black/white.</li> <li>• Contrast. Sharpness.</li> <li>• Saturation. Brightness.</li> <li>• Gamma. Image mirror.</li> <li>• Image browse. Zoom.</li> <li>• Image compare. Image flip.</li> <li>• Image mask.</li> </ul>
<b>Power supply</b>	12V 2000mA
<b>C-mount</b>	Yes
<b>C-short mount</b>	None
<b>Optical Adapter</b>	None
<b>Adapters for stereomicroscopes</b>	None
<b>Calibration slide</b>	76x24mm micrometric calibration slide.
<b>Accessories included</b>	8GB SD-Card; Mouse; HDMI cable; USB cable; CD-Rom.



# Video and photo applications - OPTIKAM HDMI Pro

## OPTIKAM HDMI Pro - USB and HDMI (1080p) camera with premium performances.

Your digital unmet needs find in **OPTIKAM HDMI Pro** their solution.

The years of experience in microscopy have allowed Optika to develop a video/digital camera that meets and fulfills the diverse needs related to imaging.

**OPTIKAM HDMI Pro** is the solution. Digital camera equipped with a 6Mpixels sensor, an 8GB removable SD-card, an useful Mouse to draw the camera into the parameters set-up, C & C-short mount connections and dual USB / HDMI port.

**OPTIKAM HDMI Pro** offers the highest quality images through a simple connection to projector, TV monitor or PC monitor. The Onboard software and the mouse allow the user to view, select and modify the parameters of the camera with just one click, they also allows to show, compare and remove the captured images.

This innovative system provides live video images in high definition (Full HD 1080p), the ability to record photos and videos directly into the supplied SD-card or connected to a PC, to exploit the full potential of the software OPTIKA IsView.

**OPTIKAM HDMI Pro** is the best solution for various applications.

It's largely used in the education field, in industrial quality control and in all laboratories.

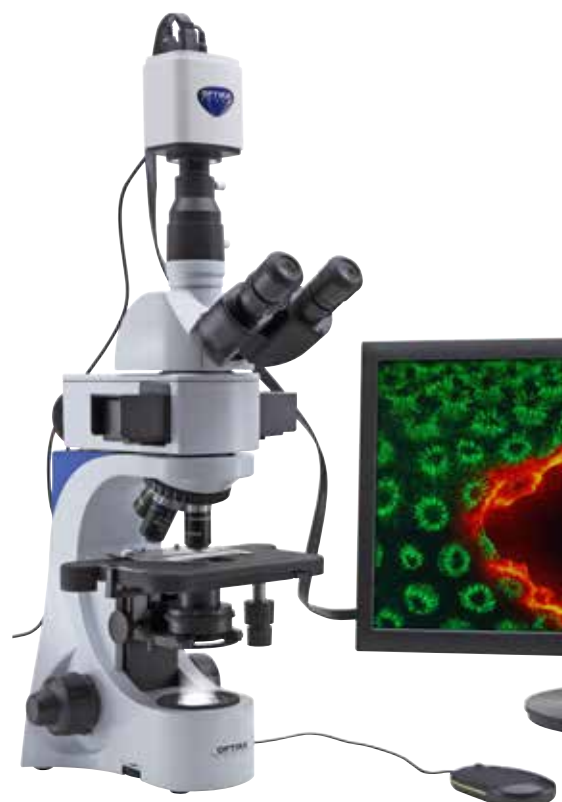
4083.13



HDMI™



TV monitor + 4083.13 - B-383LD



OPTIKAM HDMI Pro - 4083.13	C and C-Short mount, Eyepieces Camera
<b>Sensor</b>	1/2.8" Sony Cmos Sensor
<b>Resolution</b>	3264 x 1836 (6 megapixels)
<b>Image Acquisition details</b>	Truecolor, two high-speed FPGA chipsets
<b>Key Features</b>	On/Off, all the rest of features are available through the ON-BOARD software.
<b>External Ports</b>	HDMI, USB, SD-Card
<b>SD-Card</b>	Images: 3264 x 1836, Video: 1280 x 720
<b>HDMI Resolution</b>	1920 x 1080, 30fps
<b>USB Resolution</b>	1920 x 1080, 1280 x 720, 30fps
<b>USB Driver</b>	Driver free
<b>System requirements</b>	HDMI, Windows XP, Vista, Win7, Win8, Win10 32/64 bit
<b>Software</b>	Optika Vision Lite, Optika IsView
<b>USB Capture features</b>	<ul style="list-style-type: none"> <li>• Resolution. Brightness.</li> <li>• Contrast. Tonality.</li> <li>• Saturation. Gamma.</li> <li>• White Balance.</li> </ul>
<b>HDMI features</b>	<ul style="list-style-type: none"> <li>• Cross. Black/white.</li> <li>• Contrast. Sharpness.</li> <li>• Saturation. Brightness.</li> <li>• Gamma. Image mirror.</li> <li>• Image browse. Zoom.</li> <li>• Image compare. Image flip.</li> <li>• Image mask.</li> </ul>
<b>Power supply</b>	12V 2000mA
<b>C-mount</b>	Yes
<b>C-short mount</b>	Yes
<b>Optical Adapter</b>	None
<b>Adapters for stereomicroscopes</b>	None
<b>Calibration slide</b>	76x24mm micrometric calibration slide.
<b>Accessories included</b>	8GB SD-Card; Mouse; HDMI cable; USB cable; CD-Rom.



# Video and photo applications - OPTIKAM WiFi

## OPTIKAM WiFi – USB and WiFi camera.

Your digital unmet needs find in **OPTIKAM WiFi** their solution. The years of experience have allowed Optika to develop a WiFi camera that meets and fulfills the diverse needs related to imaging.

**OPTIKAM WiFi** is the solution! Our WiFi camera is equipped with a 5Mpixels sensor, USB connection and C & C-short mount.

**OPTIKAM WiFi** offers the Easiest way to show the camera live view on your Smartphone or on any other O.S. having a wifi connection. The on-board software allows any user to show the camera live view by simply running the browser and introducing the WiFi camera address.

This innovative system provides live video images in various resolutions and the the ability to record photos and videos directly on your Smathphone or Tablet.  
Not any Software or App is needed as the software is On-board the WiFi camera, this generally called Browser connection avoids you to have any Wifi Ruoter.  
Despite of the On-board software some Apps are also available.

Last but not least more than 20 Users are simultaneously allowed to be connected so they can frendly use the WiFi camera on their own IOS, Windows, BlackBerry or Android systems.  
**OPTIKAM WiFi** is the best solution for various applications above all in the education field.

## 4083.WiFi



## 4083.WiFi + TABLET - B-293



OPTIKAM WiFi - 4083.WiFi	C and C-Short mount, Eyepieces Camera
<b>Sensor</b>	1\2.5"
<b>Resolution</b>	5 Megapixels
<b>External Ports</b>	USB
<b>WiFi signal</b>	From the camera
<b>WiFi Router requirements</b>	No
<b>WiFi password</b>	No
<b>Ethernet port</b>	No
<b>WiFi Frame rate Low resolution</b>	2 frames/sec: 640x480 with 10 user
<b>WiFi Frame rate other resolutions</b>	1 frame/sec: 1024x768 with 10 users, 1 frames/3 sec: 1600x1200 with 10 users
<b>USB Frame rate Full resolution</b>	3 frames/sec: 2592x1944
<b>USB Driver</b>	Driver free
<b>WiFi system requirements</b>	Windows Tablet, Android Table, IOS Tablet, IOS Phone, Android Phone, Windows Phone.
<b>USB System requirements</b>	Windows Vista, Win7, Win8, Win10 32/64 bit, USB 2.0
<b>USB Software</b>	Optika Vision Lite
<b>WiFi available APP</b>	Via Browser: No APP is needed
<b>WiFi additional available APP</b>	For IOS and Android
<b>USB Capture features</b>	Continuous auto white balance, continuous auto exposure, image size, image capture, compressed video capture.
<b>WiFi features</b>	Automatic exposure, resolution.
<b>Power Supply</b>	5V 2000mA
<b>C-mount</b>	Yes
<b>C-short mount</b>	Yes
<b>Optical Adapter</b>	Yes
<b>Adapters for stereomicroscopes</b>	Yes
<b>Calibration slide</b>	76x24mm micrometric calibration slide.
<b>Accessories included</b>	USB cable, CD-Rom.



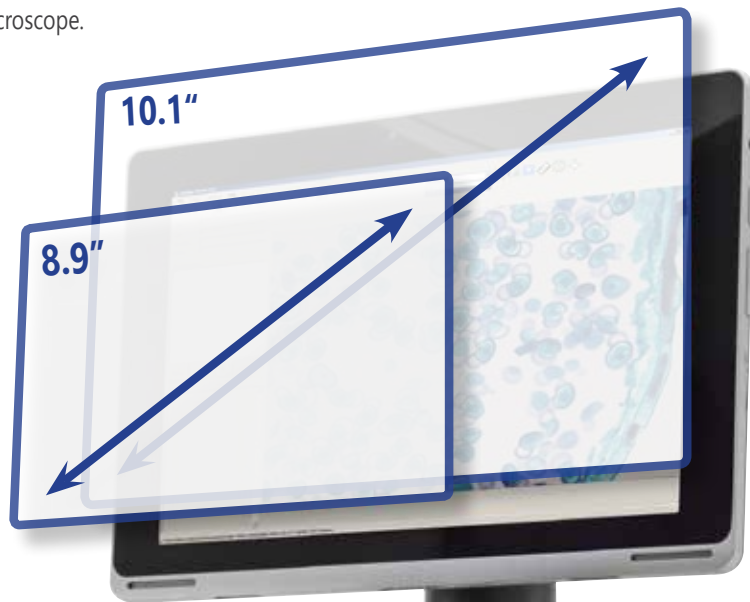
# Video and photo applications - TB Series

**TB SERIES - Tablet PC with C-mount integrated camera.**

"A 2 in 1 solution in digital microscopy"

A Tablet PC with OPTIKA detachable system, 8.9" or 10.1" LCD touch screen, in combination with 3Mp or 5Mp cameras; a universal system which can be installed on every trinocular microscope.

## TB-5W - TB-3W



**B-383PHi + TABLET**

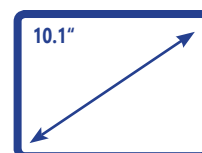
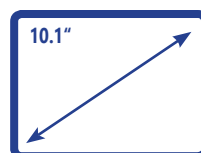
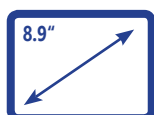
## TB-3WLT



# Video and photo applications - TB Series

## TABLET TECHNICAL SPECIFICATIONS

Model	Tablet 8.9"	Tablet 10.1"
Operating System	Windows 8.1 32-bit, Microsoft Office 365 Personal (1 year subscription)	Windows 8.1 32-bit
Language	Multilanguages already installed	Multilanguages already installed
Image capturing software	OPTIKA Vision lite	OPTIKA Vision lite
CPU	Intel® Bay trail Z3735F, Quad core	Intel® Atom™ Z3735F, Quad core
CPU speed	1,83 GHz	1,33 GHz
Graphics Card	Intel® HD Graphics, LPDDR3 controller	Intel® HD Graphics 3D Accelerator
Memory	Ram 2,048 GB, LPDDR3	Ram 2,048 GB DDR3L
LCD display	<b>LED 8.9" IPS Multi Touch Screen</b>	<b>LED 10.1" IPS Multi Touch Screen</b>
LCD resolution	1920 x 1200 Full HD, Active Matrix TFT Color LCD	1280x800, 16/10 (WXGA)
Storage	HDD 16+16GB	HDD 32GB
Network	Wireless IEEE 802.11 a/g/n, Bluetooth 4.0	Wireless IEEE 802.11 b/g/n/ + BT, Bluetooth 4.0
Input/output ports	Micro USB-B - Microphone, Micro SD card reader, Micro HDMI Head-phone, Separated power supply input	Micro USB-B, Microphone, Micro SD card reader, Micro HDMI, Head-phone
Control Buttons	Auto rotate off, volume control	Auto rotate off, volume control
Battery Technology	Lithium-ion battery, 2x cell	Lithium-ion battery, 2x cell
Battery capacity	6000 mAh	5700 mAh
Max load	10 W	18 W
Dimensions	Thickness 9,5 mm Height 15,7 cm Width 22,0 cm	Thikness 8,9 mm, Height 17,7 cm, Width 26,1 cm
Weight	477 g	585 g
Cables included	USB camera cable, OTG cable	OTG cable (Micro USB-B to USB-A)
Also included	Instruction manual, Touch Pen and keyboard with touchpad.	Instruction manual, Cleaning Cloth, Keyboard with touchpad, touch pen.



## CAMERA TECHNICAL SPECIFICATIONS

Model	TB-3WLT	TB-3W	TB-5W
Digital camera resolution	3,14 MegaPixels	3,14 MegaPixels	5,0 MegaPixels
Analog camera resolution	NO	NO	NO
Signal output	USB 2.0	USB 2.0	USB 2.0
Audio Signal	NO	NO	NO
Sensor Size	1\2"	1\2"	1\2,5"
Sensor technology	CMOS	CMOS	CMOS
Image format	4\3	4\3	4\3
Full Image size	2048 x 1536	2048 x 1536	2592 x 1944
Pixel size	3,2 x 3,2 micron	3,2 x 3,2 micron	2,2 x 2,2 micron
Frame rate full resolution	6,5 frames/sec (2048x1536)	6,5 frames/sec (2048x1536)	7 frames/sec (2592 x 1944)
Frame rate other resolutions	28 frame/sec (1024x768) 55 frames/sec (640x480)	28 frame/sec (1024x768) 55 frames/sec (640x480)	46 frames/sec (640x480)
Sensitivity	1,0 V/Lux-second (550 nm)	1,0 V/Lux-second (550 nm)	0,53 V/Lux-second (550 nm)
Signal / noise ratio	43 dB	43 dB	38 dB
Dynamic range	61 dB	61 dB	70.1 dB

# Video and photo applications - OPTIKAM Pro Cool

A new CCD cooled camera for fluorescence applications

- \* Scientific-grade CCD chip
- \* 5 Mega pixels resolution (2580x1944 pixels)
- \* 12 bit color RGB
- \* Peltier-cooled to 30° below room temperature
- \* Very long exposure time for fluorescence imaging
- \* Anti "amplifier glow" function for long exposure
- \* CNC aluminum alloy metal case



OPTIKAM Pro Cool 5 - 4083.CL5	CCD Cooled Camera
CCD chip manufacturer, model	Sony, ICX282AQ
CCD scan mode	Interline transfer
CCD size	2/3"
Pixels	3.4 µm x 3.4 µm
G sensitive	280 mV
Resolution	2580H x 1944V
Filter	RGB
C-mount	Yes
Frame Rate at Max Resolution	3 fps (2580x1944)
Frame Rate at middle Resolution	10 fps (1280x932)
Low-speed readout	Yes
A/D conversion	8/12 bit
Peltier cooling system	30°C below room temperature
Exposure control	Automatic, manual
Exposure time	0.1ms - 6 minutes
Anti "amplifier glow"	Yes
White balance	Automatic, manual
Parameter controls	Image size, brightness, gain, exposure time, white balance
Interface	USB2.0 / 480Mb/s
Dimensions	130mm x 111mm x 54mm
System Requirements	Windows XP/Vista, Win7, Win8, Win10 32/64bit, USB 2.0 port
Software	Optika View



# Video and photo applications - EDUCAM® Series - Multimedia cameras

The EDUCAM® video camera is especially designed to meet the various requirements in the educational field. When it is connected to a professional monitor or simply to a TV set, EDUCAM® is able to carry out many different functions.

It can be used as an episcopo, for the reproduction of:

- texts, documents, photographs;
- to enlarge small objects, insects, minerals;
- for video-microscopy, connected to microscopes used in biology or to stereomicroscopes;
- as an overhead projector, for the projection of drawings;
- as a camera for teleconferences, assemblies, meetings;
- as a camera for filming, with the help of a video recorder.

Its ultra-high sensitivity enables to record clearly even in low-light conditions.

The special lens enables you to focus from 0,76 cm, up to an infinite distance. An extremely sensitive microphone (only on Multimedia models), records the teacher's voice during the lesson, or sounds and noises from the surrounding area, that can be heard via the TV itself, or via a separate amplifying system.

The microphone can be switched off if required.

The special 50-or 65-cm flexible arm (12mm dia.) and the heavy weight of the base (approx. 2.7 Kg), make EDUCAM® versatile, sturdy and stable at the same time.

The CCD camera is placed on the end of a flexible arm that can be safely twisted in any position, even projecting from the base, without affecting the system stability. A special joint allows the head to rotate without damaging the wires inside the flexible arm. All models are equipped with an external power supply and a dual adapter for video-microscopy (for biological and stereo microscopes). For the connection to a PC, a USB video grabber is available as option (see next page, CONV-USB video grabber). In the model EDUCAM USB, the video grabber is built-in.

**EDUCAM**



	MULTIMEDIA 4083	MULTIMEDIA PRO 4083.1	STUDENT 4083.2	STUDENT PRO 4083.3	MIC 4083.5	USB 4083.4
CCD element	1/3"	1/3"	1/3"	1/3"	1/3"	1/3"
Resolution (TV lines)	420	420	420	420	420	420
Total pixels	244.000	244.000	244.000	244.000	244.000	307.000
Signal/noise ratio	>48 dB	>48 dB	>48 dB	>48 dB	>48 dB	>48 dB
Sensitivity (lux/F1.2)	0.08lux/F1.2	0.08lux/F1.2	0.08lux/F1.2	0.08lux/F1.2	0.08lux/F1.2	0.08lux/F1.2
Electronic shutter	yes	yes	yes	yes	yes	yes
Automatic gain control	yes	yes	yes	yes	yes	yes
White balance (auto)	yes	yes	yes	yes	yes	yes
Video signal	PAL (NTSC opt.)	PAL (NTSC opt.)	PAL (NTSC opt.)	PAL (NTSC opt.)	PAL (NTSC opt.)	PAL (NTSC opt.)
USB output	-----	-----	-----	-----	-----	yes
Digital resolution	-----	-----	-----	-----	-----	640x480 pixels
Working distance	>0,76 cm	>0,76 cm	>0,76 cm	>0,76 cm	>0,76 cm	>0,76 cm
Objective	8 mm	8 mm	8 mm	8 mm	8 mm	8 mm
Magnification	> 90x	> 90x	> 90x	> 90x	> 90x	> 90x
Microphone	yes	yes	-----	-----	-----	yes
Audio signal	analogic	analogic	-----	-----	-----	analogic
Voltage	15Vdc	15Vdc	12Vdc	12Vdc	12Vdc	15Vdc
Power adapter 230/12Vdc	included	included	included	included	included	included
Flexible arm length	50 cm	65 cm	50 cm	65 cm	-----	65 cm
Base diameter	17 cm	17 cm	17 cm	17 cm	-----	17 cm
Weight	3,4 Kg	3,5 Kg	3,3 Kg	3,4 Kg	0,4 Kg	3,5 Kg
Microscope adapters	included	included	included	included	included	included
System Requirements						Windows XP, Vista, Win7, Win8, Win10 32-64 Bit, USB 2.0 port

# Video and photo applications - VC Series

VC-01



VC-01

VC-04



VC-02

VC-03



CONV-USB



VC-05



# Video and photo applications - VC Series

## VC Series - Analogue CCD videocameras for general purpose.

Videomicroscopy system composed by a color CCD TV camera, complete with Bio & Stereo Microscope adapter tube, integrated power supply unit, cables and manuals.

VC-01	Videomicroscopy system
Sensor	CCD SONY sensor 1/3"
Horizontal Resolution	420 TV lines (PAL)
Picture elements	500[H]x582[V]
Video output	BNC VBS 1.0Vp-p, 75 Ohm
C-Mount	C/CS
Sensitivity	0.5lux/F=1.2
Auto white balance	Yes
Auto gain control	Yes
Load current	150mA
Dimension	60x50x145mm - Weight 400g
Operating temperature	-10° to + 50°

VC-04	Videomicroscopy system
Sensor	CCD SONY sensor 1/3"
Horizontal Resolution	480 TV lines (PAL)
Picture elements	752[H]x582[V]
Video output	BNC VBS 1.0Vp-p, 75 Ohm
C-Mount	C/CS
Sensitivity	0.8lux/F=1.2
Auto white balance	Yes
Auto gain control	Yes
Load current	150mA
Dimension	60x50x145mm - Weight 400g
Operating temperature	-10° to + 50°

Color CCD TV camera for C-Mount connection, complete with cables, SCART adapter & manual.

VC-02	Videomicroscopy system
Sensor	CCD SONY sensor 1/3"
Horizontal Resolution	420 TV lines (PAL)
Picture elements	500[H]x582[V]
Video output	BNC VBS 1.0Vp-p, 75 Ohm
C-Mount	C/CS
Sensitivity	0.5lux/F=1.2
Auto white balance	Yes
Auto gain control	Yes
Load current	150mA
Dimension	60x50x145mm - Weight 400g
Operating temperature	-10° to + 50°

VC-03	Videomicroscopy system
Sensor	CCD SONY sensor 1/3"
Horizontal Resolution	480 TV lines (PAL)
Picture elements	752[H]x582[V]
Video output	BNC VBS 1.0Vp-p, 75 Ohm
C-Mount	C/CS
Sensitivity	0.8lux/F=1.2
Auto white balance	Yes
Auto gain control	Yes
Load current	150mA
Dimension	60x50x145mm - Weight 400g
Operating temperature	-10° to + 50°

## VC-05 Eyepiece CCD camera

Simple eyepiece camera with CCD sensor. 340 TV Lines (PAL).

## CONV-USB Video Grabber

Analogic to Digital signal converter for PC.

Real time video capture from camcorder, VCR or camera. User friendly software easily stores and manages images & videos. Real time/full size Video capture window. The CONV-USB video grabber comes with a CD with drivers for Windows XP/Vista, Win7, Win8, Win10, 32-64bit.

# Adapter reference list - OPTIKAM Budget Series

	With ADAPTER	With ADAPTER	With NO ADAPTER
	OPTIKAM B05	OPTIKAM B1, B3, B5 & B9	OPTIKAM B2
Biological microscopes			
B-20 - M-100FL (Monocular head)	READY TO USE	READY TO USE	M-114
B-50 (Monocular head)	READY TO USE	READY TO USE	M-114
B-150 (Monocular and binocular head)	READY TO USE	READY TO USE	M-114
B-191 (Monocular head)	READY TO USE	READY TO USE	M-114
B-192 (Binocular head)	READY TO USE	READY TO USE	M-114
B-193 (Trinocular head)	READY TO USE	READY TO USE	M-114
B-292 (Binocular head)	READY TO USE	READY TO USE	M-114
B-293 (Trinocular head)	READY TO USE	READY TO USE	M-114
B-382 (Binocular head)	READY TO USE	READY TO USE	M-114
B-383 (Trinocular head)	READY TO USE	READY TO USE	M-114
B-500 (Binocular head)	READY TO USE	READY TO USE	M-114+M-113.1
B-500 (Trinocular head)	M-699	M-699	M-620.1
B-500 ERGO (binocular head ONLY)	READY TO USE	READY TO USE	M-114+M-113.1
B-500Ti-* (Multihead) for Binocular head	READY TO USE	READY TO USE	M-114+M-113.1
B-500Ti-* (Multihead) for Trinocular head	READY TO USE	READY TO USE	M-778
B-800 & B-1000 (Trinocular head)	M-699	M-699	M-620.1
B-800 & B-1000 ERGO (Binocular head)	READY TO USE	READY TO USE	M-114+M-113.1
B-800 & B-1000 ERGO (Trinocular head)	READY TO USE	READY TO USE	M-114
XDS-2 (Trinocular head)	READY TO USE	READY TO USE	M-778
XDS-3 (Trinocular head)	M-699	M-699	M-789
XDS-2ERGO (Trinocular connection)	READY TO USE	READY TO USE	M-114

## Stereomicroscopes

STX (Binocular head)	READY TO USE	READY TO USE	M-114
MS-2 (Binocular head)	READY TO USE	READY TO USE	M-114
S-10-20-30-40-45-50 (Binocular head)	M-113.2	READY TO USE	M-114 + M-113.2
LAB-10 LAB-20 (Binocular head)	READY TO USE	READY TO USE	M-114 + M-113.1
SZM (Binocular head)	READY TO USE	READY TO USE	M-114 + M-113.1
SZM (Trinocular head)	READY TO USE	READY TO USE	ST-090
SZN (Binocular head)	READY TO USE	READY TO USE	M-114 + M-113.1
SZN (Trinocular head)	READY TO USE	READY TO USE	ST-147.1
SZP (Binocular head)	READY TO USE	READY TO USE	M-114 + M-113.1
SZP (For Trinocular connection)	ST-170	ST-170	ST-170 + M-114
SZM-SMD (Trinocular head)	READY TO USE	READY TO USE	ST-090
SZM-GEM-1 (Binocular head)	READY TO USE	READY TO USE	M-114 + M-113.1
SZM-GEM-2 (Trinocular head)	READY TO USE	READY TO USE	ST-090
OPTIGEM-3 (Binocular head)	READY TO USE	READY TO USE	M-114 + M-113.1
OPTIGEM-4 (Trinocular head)	READY TO USE	READY TO USE	ST-147.1
OPTIGEM-1 (Binocular head)	READY TO USE	READY TO USE	M-114 + M-113.1
OPTIGEM-2 (Trinocular head)	READY TO USE	READY TO USE	ST-090
XC-100L (Monocular head)	READY TO USE	READY TO USE	M-114
XZ-1 (Monocular head)	READY TO USE	READY TO USE	M-114
XZ-2 (Binocular head)	READY TO USE	READY TO USE	M-114



# Adapter reference list - TABLET PC and OPTIKAM Pro Series

	With ADAPTER TB-3WLT, TB-3W or TB-5W Tablet	With NO ADAPTER OPTIKAM PRO3 LT or PRO5 LT	With NO ADAPTER OPTIKAM PRO COOL 5
Biological microscopes	Only for TRINOPORT		
B-20 - M-100FL (Monocular head)	NO	NO	M-116
B-50 (Monocular head)	NO	NO	M-116
B-150 (Monocular and binocular head)	NO	NO	M-116
B-191 (Monocular head)	NO	NO	M-116
B-192 (Binocular head)	NO	NO	M-116
B-193 (Trinocular head)	READY TO USE – FREE TO MOVE 360 DEGREE	M-114	M-116
B-292 (Binocular head)	NO	NO	M-116
B-293 (Trinocular head)	READY TO USE – FREE TO MOVE 360 DEGREE	M-114	M-116
B-382 (Binocular head)	NO	NO	M-116
B-383 (Trinocular head)	READY TO USE	M-114	M-116
B-500 (Binocular head)	NO	NO	M-116 + M-113.1
B-500 (Trinocular head)	M-699	M-620.1	M-620.1
B-500 ERGO (binocular head ONLY)	NO	NO	M-116 + M-113.1
B-500Ti-* (Multihead) for Binocular head	NO	NO	M-116 + M-113.1
B-500Ti-* (Multihead) for Trinocular head	READY TO USE – FREE TO MOVE 360 DEGREE	M-778	M-116
B-800 & B-1000 (Trinocular head)	M-699	M-620.1	M-620.1
B-800 & B-1000 ERGO (Binocular head)	NO	NO	M-116 + M-113.1
B-800 & B-1000 ERGO (Trinocular head)	READY TO USE	M-114	M-116
XDS-2 (Trinocular head)	READY TO USE – FREE TO MOVE 360 DEGREE	M-778	M-116
XDS-3 (Trinocular head)	M-699	M-789.1	M-789.2
XDS-2ERGO (Trinocular connection)	READY TO USE	M-114	M-116

## Stereomicroscopes

STX (Binocular head)	NO	NO	NO
MS-2 (Binocular head)	NO	NO	M-116
S-10-20-30-40-45-50 (Binocular head)	NO	NO	M-116 + M-113.2
LAB-10 LAB-20 (Binocular head)	NO	NO	M-116 + M-113.1
SZM (Binocular head)	NO	NO	M-116 + M-113.1
SZM (Trinocular head)	READY TO USE – FREE TO MOVE 360 DEGREE	ST-090.1	M-116
SZN (Binocular head)	NO	NO	M-116 + M-113.1
SZN (Trinocular head)	READY TO USE – FREE TO MOVE 360 DEGREE	ST-147.1	M-116
SZP (Binocular head)	NO	NO	M-116 + M-113.1
SZP (For Trinocular connection)	ST-170	ST-170 + M-114	ST-170 + M-116
SZM-SMD (Trinocular head)	READY TO USE – FREE TO MOVE 360 DEGREE	ST-090	M-116
SZM-GEM-1 (Binocular head)	NO	NO	M-116 + M-113.1
SZM-GEM-2 (Trinocular head)	Not Suggested	ST-090.1	M-116
OPTIGEM-3 (Binocular head)	NO	NO	M-116 + M-113.1
OPTIGEM-4 (Trinocular head)	Not Suggested	ST-147.1	M-116
OPTIGEM-1 (Binocular head)	NO	NO	M-116 + M-113.1
OPTIGEM-2 (Trinocular head)	Not Suggested	ST-090.1	M-116
XC-100L (Monocular head)	NO	M-114	NO
XZ-1 (Monocular head)	READY TO USE – FREE TO MOVE 360 DEGREE	M-114	NO
XZ-2 (Binocular head)	NO	M-114	NO

# Adapter reference list - HDMI - WiFi

## Biological microscopes

	With NO ADAPTER	With NO ADAPTER	With ADAPTER
	OPTIKAM HDMI Pro, OPTIKAM HDMI	OPTIKAM HDMI Easy	OPTIKAM WiFi
<b>B-20 - M-100FL (Monocular head)</b>	M-114	M-114	READY TO USE
<b>B-50 (Monocular head)</b>	M-114	M-114	READY TO USE
<b>B-150 (Monocular and binocular head)</b>	M-114	M-114	READY TO USE
<b>B-191 (Monocular head)</b>	M-114	M-114	READY TO USE
<b>B-192 (Binocular head)</b>	M-114	M-114	READY TO USE
<b>B-193 (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>B-292 (Binocular head)</b>	M-114	M-114	READY TO USE
<b>B-293 (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>B-382 (Binocular head)</b>	M-114	M-114	READY TO USE
<b>B-383 (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>B-500 (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>B-500 (Trinocular head)</b>	M-620.1	M-620.1	M-699
<b>B-500 ERGO (binocular head ONLY)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>B-500Ti-* (Multihead) for Binocular head</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>B-500Ti-* (Multihead) for Trinocular head</b>	M-114	M-114	READY TO USE
<b>B-800 &amp; B-1000 (Trinocular head)</b>	M-699 + M-114	M-699 + M-114	M-699
<b>B-800 &amp; B-1000 ERGO (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>B-800 &amp; B-1000 ERGO (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>XDS-2 (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>XDS-3 (Trinocular head)</b>	M-789.1	M-789.1	M-699
<b>XDS-2ERGO (Trinocular connection)</b>	M-114	M-114	READY TO USE

## Stereomicroscopes

<b>STX (Binocular head)</b>	NO	M-114	READY TO USE
<b>MS-2 (Binocular head)</b>	M-114	M-114	READY TO USE
<b>S-10-20-30-40-45-50 (Binocular head)</b>	M-114 + M-113.2	M-114 + M-113.2	READY TO USE
<b>LAB-10 LAB-20 (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>SZM (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>SZM (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>SZN (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>SZN (Trinocular head)</b>	ST-147.1	ST-147.1	READY TO USE
<b>SZP (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>SZP (For Trinocular connection)</b>	ST-170 + M-114	ST-170 + M-114	ST-170
<b>SZM-SMD (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>SZM-GEM-1 (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>SZM-GEM-2 (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>OPTIGEM-3 (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>OPTIGEM-4 (Trinocular head)</b>	ST-147.1	ST-147.1	READY TO USE
<b>OPTIGEM-1 (Binocular head)</b>	M-114 + M-113.1	M-114 + M-113.1	READY TO USE
<b>OPTIGEM-2 (Trinocular head)</b>	M-114	M-114	READY TO USE
<b>XC-100L (Monocular head)</b>	M-114	M-114	READY TO USE
<b>XZ-1 (Monocular head)</b>	M-114	M-114	READY TO USE
<b>XZ-2 (Binocular head)</b>	M-114	M-114	READY TO USE

# Adapter reference list - VC Series & EDUCAM

	With NO ADAPTER	With ADAPTER	With ADAPTER
	VC-02 or VC-03	VC-01 or VC-04	EDUCAM
Biological microscopes	Only for "c" mount - Trino microscopes		
<b>B-20 - M-100FL (Monocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-50 (Monocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-150 (Monocular and binocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-191 (Monocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-192 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-193 (Trinocular head)</b>	M-114	READY TO USE	READY TO USE
<b>B-292 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-293 (Trinocular head)</b>	M-114	READY TO USE	READY TO USE
<b>B-382 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-383 (Trinocular head)</b>	M-114	READY TO USE	READY TO USE
<b>B-500 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-500 (Trinocular head)</b>	M-620	M-699	M-699
<b>B-500 ERGO (binocular head ONLY)</b>	NO	READY TO USE	READY TO USE
<b>B-500Ti-* (Multihead) for Binocular head</b>	NO	READY TO USE	READY TO USE
<b>B-500Ti-* (Multihead) for Trinocular head</b>	M-778	READY TO USE	READY TO USE
<b>B-800 &amp; B-1000 (Trinocular head)</b>	M-620	M-699	M-699
<b>B-800 &amp; B-1000 ERGO (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>B-800 &amp; B-1000 ERGO (Trinocular head)</b>	M-114	READY TO USE	READY TO USE
<b>XDS-2 (Trinocular head)</b>	M-778	READY TO USE	READY TO USE
<b>XDS-3 (Trinocular head)</b>	M-789	M-699	M-699
<b>XDS-2ERGO (Trinocular connection)</b>	M-114	READY TO USE	READY TO USE

## Stereomicroscopes

<b>STX (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>MS-2 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>S-10-20-30-40-45-50 (Binocular head)</b>	NO	M-113.2	M-113.2
<b>LAB-10 LAB-20 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>SZM (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>SZM (Trinocular head)</b>	ST-090	READY TO USE	READY TO USE
<b>SZN (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>SZN (Trinocular head)</b>	ST-147	READY TO USE	READY TO USE
<b>SZP (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>SZP (For Trinocular connection)</b>	ST-170 + ST-174	ST-170	ST-170
<b>SZM-SMD (Trinocular head)</b>	ST-090	READY TO USE	READY TO USE
<b>SZM-GEM-1 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>SZM-GEM-2 (Trinocular head)</b>	ST-090	READY TO USE	READY TO USE
<b>OPTIGEM-3 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>OPTIGEM-4 (Trinocular head)</b>	ST-147	READY TO USE	READY TO USE
<b>OPTIGEM-1 (Binocular head)</b>	NO	READY TO USE	READY TO USE
<b>OPTIGEM-2 (Trinocular head)</b>	ST-090	READY TO USE	READY TO USE
<b>XC-100L (Monocular head)</b>	NO	READY TO USE	READY TO USE
<b>XZ-1 (Monocular head)</b>	NO	READY TO USE	READY TO USE
<b>XZ-2 (Binocular head)</b>	NO	READY TO USE	READY TO USE

# Adapter reference list - REFLEX CAMERAS

## Biological microscopes

	APS Sensor	FULL Frame / 35mm SRL Cameras	MIRROR-LESS
	+ T/2 BOUGHT BY CUSTOMER	+ T/2 BOUGHT BY CUSTOMER	+ T/2 BOUGHT BY CUSTOMER
<b>B-20 - M-100FL (Monocular head)</b>	M-173	M-173	M-173
<b>B-50 (Monocular head)</b>	M-173	M-173	M-173
<b>B-150 (Monocular and binocular head)</b>	M-173	M-173	M-173
<b>B-191 (Monocular head)</b>	M-173	M-173	M-173
<b>B-192 (Binocular head)</b>	M-173	M-173	M-173
<b>B-193 (Trinocular head)</b>	M-173	M-173	M-173
<b>B-292 (Binocular head)</b>	M-173	M-173	M-173
<b>B-293 (Trinocular head)</b>	M-173	M-173	M-173
<b>B-382 (Binocular head)</b>	M-173	M-173	M-173
<b>B-383 (Trinocular head)</b>	M-173	M-173	M-173
<b>B-500 (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>B-500 (Trinocular head)</b>	M-699+M-173	M-619	M-699+M-173
<b>B-500 ERGO (binocular head ONLY)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>B-500Ti-* (Multihead) for Binocular head</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>B-500Ti-* (Multihead) for Trinocular head</b>	M-173	M-173	M-173
<b>B-800 &amp; B-1000 (Trinocular head)</b>	M-699+M-173	M-699+M-173	M-699+M-173
<b>B-800 &amp; B-1000 ERGO (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>B-800 &amp; B-1000 ERGO (Trinocular head)</b>	M-173	M-173	M-173
<b>XDS-2 (Trinocular head)</b>	M-173	M-173	M-173
<b>XDS-3 (Trinocular head)</b>	M-699+M-173	M-788	M-699+M-173
<b>XDS-2ERGO (Trinocular connection)</b>	M-173	M-173	M-173

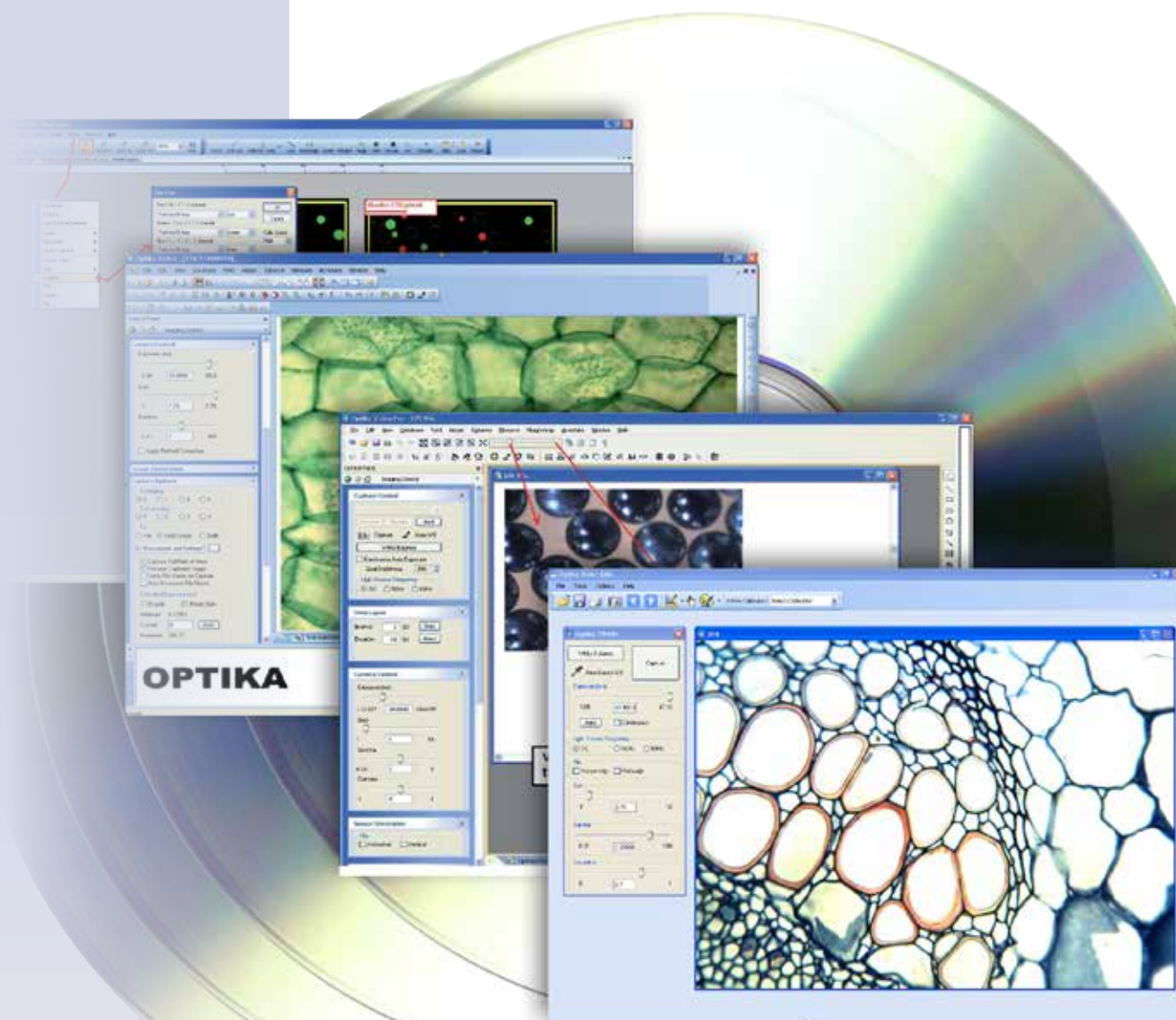
## Stereomicroscopes

<b>STX (Binocular head)</b>	M-173	M-173	M-173
<b>MS-2 (Binocular head)</b>	M-173	M-173	M-173
<b>S-10-20-30-40-45-50 (Binocular head)</b>	M-173 + M-113.2	M-173 + M-113.2	M-173 + M-113.2
<b>LAB-10 LAB-20 (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>SZM (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>SZM (Trinocular head)</b>	M-173	ST-089	M-173
<b>SZN (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>SZN (Trinocular head)</b>	M-173	ST-146	M-173
<b>SZP (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>SZP (For Trinocular connection)</b>	ST-170+M-173	ST-170 + M-173	ST-170+M-173
<b>SZM-SMD (Trinocular head)</b>	M-173	ST-089	M-173
<b>SZM-GEM-1 (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>SZM-GEM-2 (Trinocular head)</b>	M-173	ST-089	M-173
<b>OPTIGEM-3 (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>OPTIGEM-4 (Trinocular head)</b>	M-173	ST-146	M-173
<b>OPTIGEM-1 (Binocular head)</b>	M-173 + M-113.1	M-173 + M-113.1	M-173 + M-113.1
<b>OPTIGEM-2 (Trinocular head)</b>	M-173	ST-089	M-173
<b>XC-100L (Monocular head)</b>	M-173	M-173	M-173
<b>XZ-1 (Monocular head)</b>	M-173	M-173	M-173
<b>XZ-2 (Binocular head)</b>	M-173	M-173	M-173



# OPTIKA SOFTWARE

Optika software suite



# Video and photo applications - SOFTWARE SUITE

**OPTIKA VISION® LITE** is a software developed by OPTIKA® Microscopes with the main purpose to be a handy and simple tool for our customers using our OPTIKAMS and other digital microscope cameras. It has a simple user interface and can be used for image acquisition, line measurements and documentation. It is available in seven languages: English, Italian, French, Spanish, German, Swedish and Polish.

## Image and video Acquisition

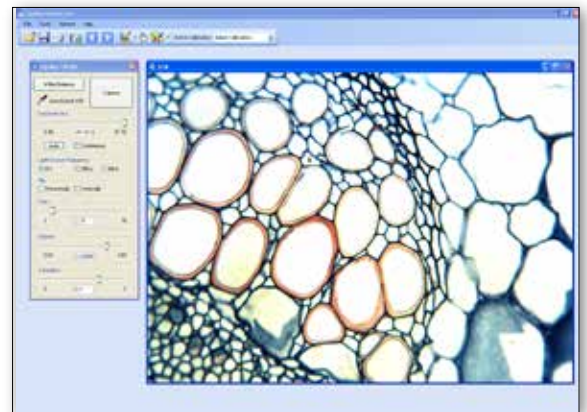
You can capture still images using a live preview that allows to precisely focus your image and change image parameters in order to have a perfect final result.

The image can be saved separately in BMP, JPG or TIFF formats.

It is also possible to import saved images from other sources.

Moreover:

- Image stacks acquisition (adjustable time steps)
- Square or round grid on live preview
- Video acquisition function included.

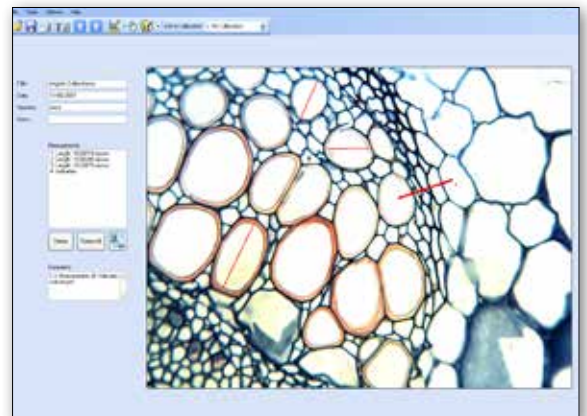


## Measurements

Linear in-scale measurements can be made in any unit you like, using a simple calibration and measurement tool.

The data can be exported to a spreadsheet document for further elaboration.

There is also the possibility to indicate special objects in the image and to write comments.



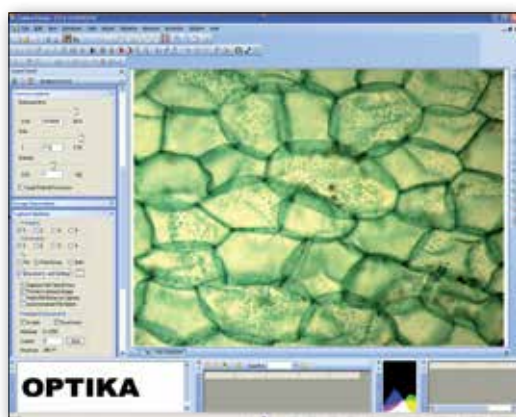
## Documentation

A report can be generated simply by printing the document on a normal printer or to a PDF. The document can be personalized with your own logo.



# Video and photo applications - SOFTWARE SUITE

**OPTIKA VISION® PRO** is a new generation of microscope image analysis instruments, especially developed for our Optikam Pro series, which contains various tools for processing and analysis of digital microscope images. It includes powerful tools for image capturing, adjusting, operating and measuring. You have also the possibility to create your own database for easy organisation and storage of your images.



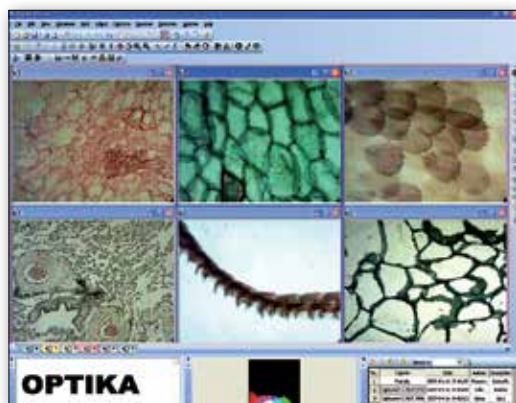
## Image Acquisition

Optika Vision® Pro allows still image acquisition with several possibilities to control the image output according to your needs. There are functions such as white balance, automatic exposure, frame average, sub-sampling, hue, saturation and intensity controls, to mention a few.



## Post Elaboration and Measurements

Optika Vision® Pro also offers the possibility to make various types of enhancements and adjustments of the captured image and calibrated measurements of lines, angles and areas. You can also perform manual counting and measure the light density of your acquired image.



## Organize your work

For easy storage and fast upload you can organize your images into a database where it is possible to search for the images using keywords. In Optika Vision® Pro you can also arrange images into groups in order to combine them calculate the average or create a multi-focus composition.



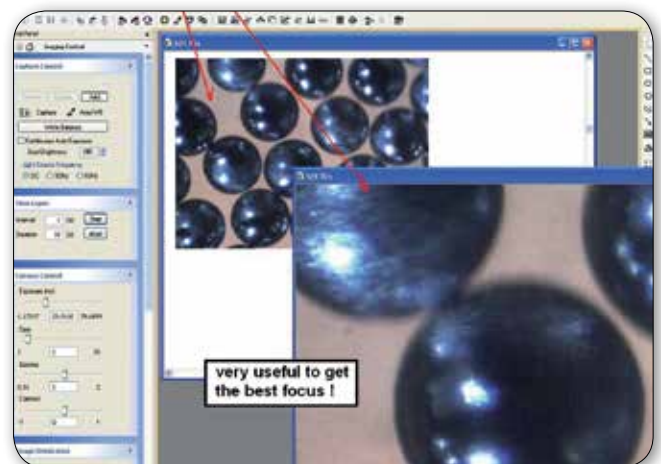
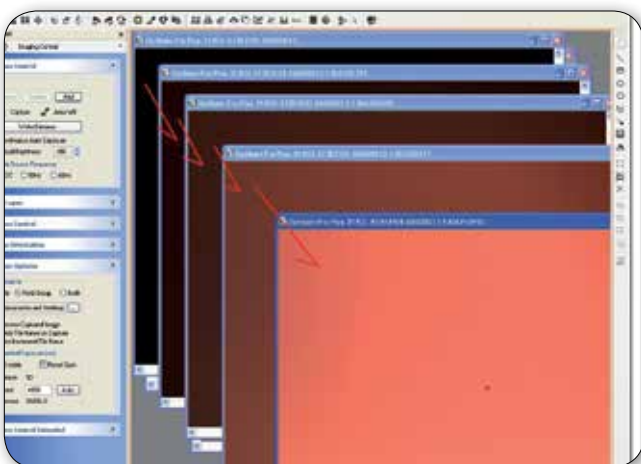
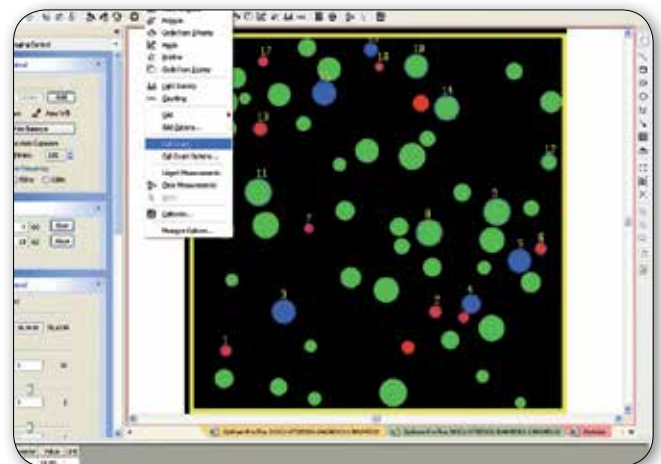
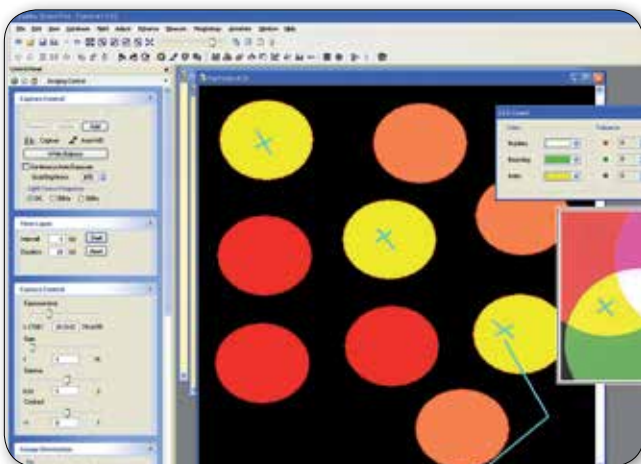
# Video and photo applications - SOFTWARE SUITE

**OPTIKA VISION® PRO PLUS** is a software version just for your PRO3 camera which, having a powered internal clock, allows a faster frame rate and additional useful functions such as:

- exposure time up to 1000msec.
- snap exposure time up to 26 sec, very useful when the light source is weak.
- automatic live image brightness on the screen.

And furthermore :

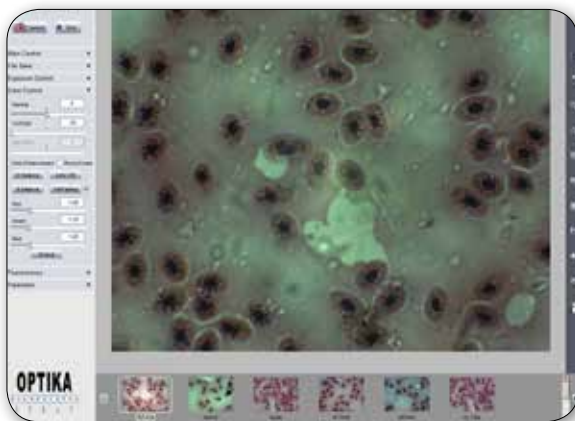
- a simple to use live zoom bar, very helpful to get the better focusing point.
- automatic cells counting ( based on RGB colors )
- direct measurement on live view





# Video and photo applications - SOFTWARE SUITE

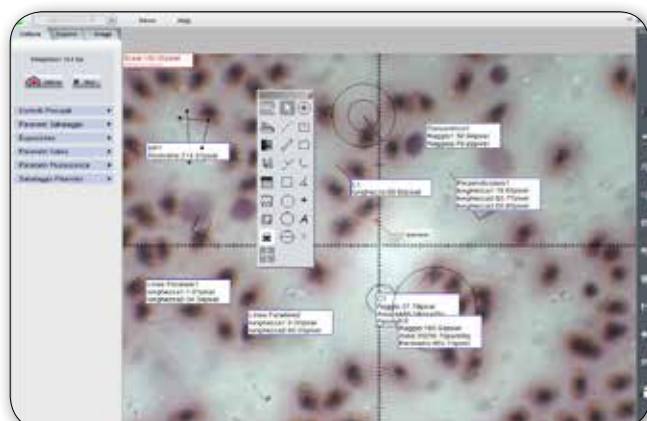
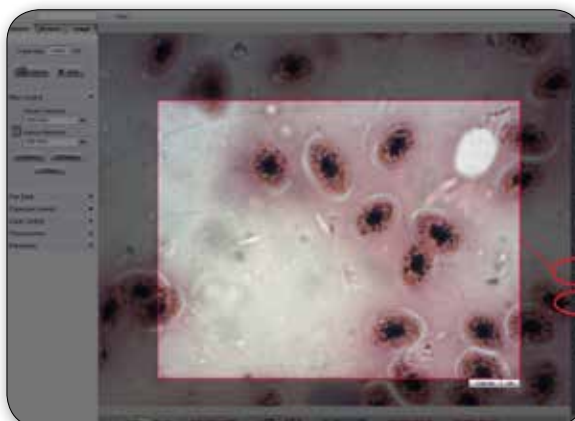
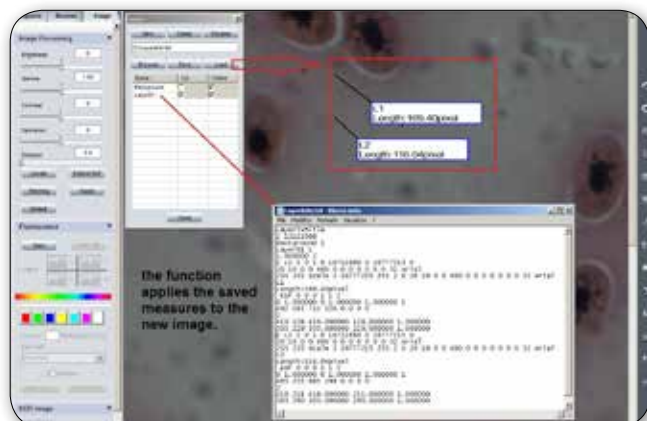
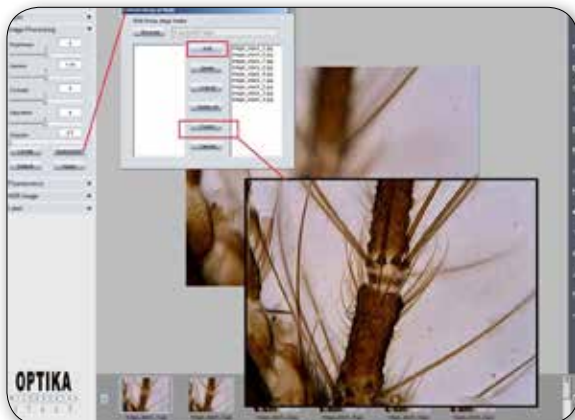
**IS VIEW** is a new generation of microscope image analysis instruments, especially developed for our Optikam Budget , PRO HDMI and Pro Cool series, which contains various tools for processing and analysis of digital microscope images. It includes powerful tools for image capturing, adjusting, operating and measuring.



## Image Acquisition

Optika ISview allows still image acquisition with several possibilities to control the image output according to your needs.

There are functions such as white balance, automatic exposure, hue, saturation and intensity controls, Image Comparison, Crop, Flat Fielding, HDR, Extended DoF, to mention a few.



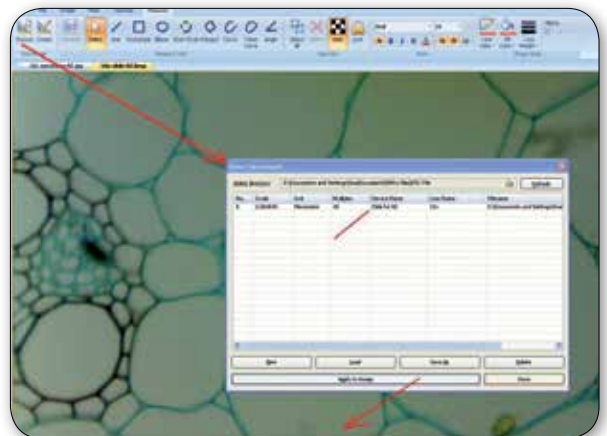
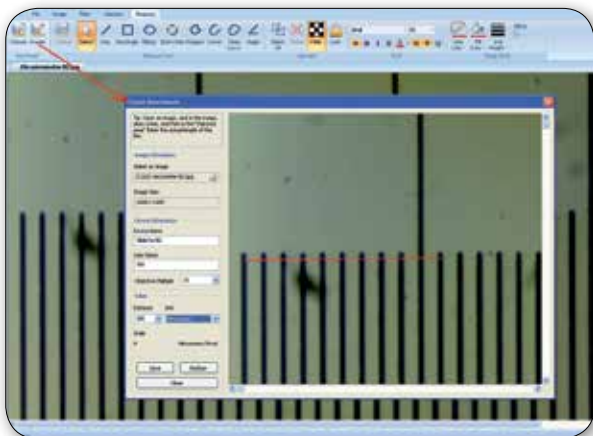
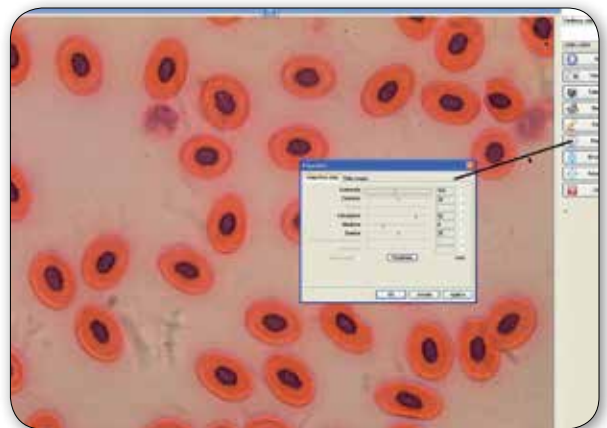
# OPTIKA - SOFTWARE SUITE

## OPTIKA MiPro

OPTIKA MiPro is a new generation of microscope image analysis instruments, especially developed for our Optikam B05 and B2 cameras, which contains simple tools for processing and analysis of digital images. It includes powerful tools for image capturing, adjusting, operating and measuring.

### Image Acquisition

Optika MiPro allows still image acquisition with several possibilities to control the image output according to your needs. There are functions such as white balance, automatic exposure, frame average, sub-sampling, hue, saturation and intensity controls, to mention a few.



# OPTIKA - SOFTWARE SUITE

## **FREWARE**

The Optika Vision® software package also contains a bundle of imaging, video and image analysis software that are freely available from the Internet. They are provided free of charge, according to the original license, as an aid in the use of your Optika product.

## **Emamcapture**

AMCap is a small yet fully functional video capture and preview application compatible with Microsoft™ DirectShow (formerly ActiveMovie, hence the name). It is based on the sample AMCap source code from the Microsoft DirectX 9 SDK.

## **GIMP**

GIMP is the GNU Image Manipulation Program. It is a freely distributed advanced software for tasks such as photo retouching, image composition and image authoring. It works on many operating systems, in many languages.

## **Combine Z**

This small software combines pictures to increase depth of focus.

## **Image Tool (not for Windows 64bit)**

ImageTool is an advanced image processing and analysis program for Windows. It can acquire, display, edit, analyze, process, compress, save and print greyscale and color images. It can read and write over 22 common file image formats.

Image analysis functions include dimensional (distance, angle, perimeter, area), automatic (or manual) object/cell counting and full analysis functions, and greyscale measurements (point, line and area histogram with statistics). ImageTool supports standard image processing functions such as contrast manipulation, sharpening, smoothing, edge detection, median filtering and spatial convolutions with user-defined convolution masks.

ImageTool also has built-in scripting capabilities that allow the user to record repetitive tasks and playback saved scripts to automate image analysis. ImageTool was designed with an open architecture that provides extensibility via a variety of plug-ins for example image acquisition using either Adobe Photoshop plug-ins or Twain scanners is built-in.

ImageTool provides for geometric transformations and magnification up to four levels. All analysis and processing functions are available at any magnification factor.

ImageTool also provides for image annotation with text, arrows, rectangle, ellipses and polygon.

## **MBF ImageJ**

ImageJ is a public domain Java image processing program that runs on any computer with a Java 1.4 or later virtual machine.

It can display, edit, analyze, process, save and print 8-bit, 16-bit and 32-bit images of various image formats. It supports "stacks", a series of images that share a single window. It is multithreaded, so time-consuming operations such as image file reading can be performed in parallel with other operations.

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#### Headquarters and Manufacturing Facilities

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