

## 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 (OPTIKAM B2, Pro LT models, 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 Pro HDMI**

## **OPTIKAM Pro Cool**

## **DIGI**

## **TB Series**

## **EDUCAM Series**

## **VC Series**

USB cameras for general purpose (software included).

High Performance USB cameras with advanced software package.

High Performance Full HD HDMI camera.

Very high-sensitive USB camera with cooled CCD (software included).

Universal photo & video (1080p) camera (software included).

Tablet PC with C-mount integrated camera (software included).

Multimedia cameras.

CCD videocameras for general purpose.



# Video and photo applications - OPTIKAM BUDGET

| <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, 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, 32-64 bit, USB port 2.0, MAC |
| Software                       | Optika Vision Lite / OPTIKA IsView / ISlisten (for MAC)    |
| 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 B-2 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, 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"

## 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, 32-64 bit, USB port 2.0, MAC |
| Software                       | Optika Vision Lite / OPTIKA IsView / ISlisten (for MAC)    |
| 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, 32-64 bit, USB port 2.0, MAC |
| Software                       | Optika Vision Lite / OPTIKA IsView / ISlisten (for MAC)    |
| 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, 32-64 bit, USB port 2.0, MAC |
| Software                               | Optika Vision Lite / OPTIKA IsView / ISlisten (for MAC)    |
| 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

## Hi-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.

LT versions do not include any eyepiece adapter.

Ideal for professional trinocular microscopes.



|   | <b>OPTIKAM PRO 3LT<br/>4083.11LT</b>   | <b>OPTIKAM PRO 3<br/>4083.11</b>                         | <b>OPTIKAM PRO 5LT<br/>4083.12LT</b>   | <b>OPTIKAM PRO 5<br/>4083.12</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, 32-64bit, USB 2.0 port  |  | Windows XP, Vista, Win7, Win8 32-64bit, USB 2.0 port   |  |
| <b>Software</b>                         | OPTIKA Vision Pro Plus, TWAIN interface, SDK   |  | Optika Vision Pro, 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   | 0.45x with additional ring adapter for stereomicroscopes | None   | 0.45x with additional ring adapter for stereomicroscopes |
| <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  |  | 177 msec   |  |
| <b>Max extended exposure</b>            | 26 sec   |  | 428 msec   |  |

# Video and photo applications - OPTIKAM Pro HDMI

## TV monitor + 4083.13 - B-383PLi



### Optikam Pro HDMI - High-performance Full HD HDMI camera

Your digital unmet needs find in **OPTIKAM PRO 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 PRO HDMI** is the solution. Digital camera equipped with a 6Mpixels sensor, 2GB internal memory, C-mount connection and dual USB / HDMI port.

**OPTIKAM PRO HDMI** offers the highest quality images through a simple connection to projector, TV monitor or PC monitor.

This innovative system provides live video images in high definition (Full HD 1080p), the ability to record photos and videos directly on a 2GB SD card (included) or connected to a PC, to exploit the full potential of the software OPTIKA IsView.

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

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

## TV monitor + 4083.13 - B-293 + PC monitor



**HDMI™**

# Video and photo applications - OPTIKAM Pro HDMI

| Optikam Pro HDMI - 4083.13            | C-mount and 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.<br>Image capture.<br>Video Capture.<br>Setup.<br>Automatic White Balance.<br>Zoom.   |
| <b>External Ports</b>                 | HDMI , USB , MicroSD   |
| <b>MircoSD resolution</b>             | Images : 3264 x 1836 , Video : 1280 x 720  |
| <b>HDMI Resolution</b>                | 1920 x 1080 , 60fps  |
| <b>USB Resolution</b>                 | 1920 x 1080 , 1280 x 720   |
| <b>USB Driver</b>                     | Driver free  |
| <b>System requirements</b>            | HDMI , Windows XP , Vista , Win7 , Win8 , 32 / 64 bit  |
| <b>Software</b>                       | Optika Vision Lite , Optika IsView   |
| <b>USB Capture features</b>           | Resolution. Brightness.<br>Contrast. Tonality.<br>Saturation. Gamma.<br>White Balance.   |
| <b>HDMI features</b>                  | 7 programmable lines ( vertical / horizontal ).<br>Black/white. Contrast.<br>Sharpness. Saturation.<br>Brightness. Gamma.<br>Image mirror. |
| <b>Power supply</b>                   | 12V 1000mA   |
| <b>C-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>           | 2GB MicroSD (max 4GB supported).<br>MicroSD reader.<br>HDMI cable.<br>USB cable.<br>CDrom.   |

**TV monitor + 4083.13 - B-382PL-ALC**



# 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



| <b>OPTIKAM Pro Cool 5 - 4083.CL5</b> | <b>CCD Cooled Camera</b>                                   |
|--------------------------------------|--|
| CCD chip manufacturer, model         | Sony, ICX282AQ   |
| CCD scan mode                        | Interline transfer   |
| CCD size                             | 2/3"   |
| Pixels                               | 3.4mm x 3.4mm  |
| 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 / Win 7 / Win 8, 32-64bit, USB 2.0 port |
| Software                             | Optika View  |

# Video and photo applications - DIGI

OPTIKA Microscopes is pleased to introduce a new model of digital camera, fitted with USB connection and AV output for HDTV or TV set with standard resolution. All you need to capture pictures and videos from your microscope or simply from the surroundings is in this 2-in-1 model.

The advantages of the DIGI camera are the possibility to record videos and to use it as a standard digital camera, for personal use.

The camera sensor has a resolution of 5MPixels (8MPixels through interpolation), it is provided with 3X optical zoom and a very bright 2.4" LCD display.

The system also includes specific adapters that allow the use on all microscopes and stereomicroscopes models with diameter of the eyepiece holder of 23mm or 30mm. A complete software will allow you to process, file and work with the captured images.

The camera includes a 2GB SD memory card.

| DIGI                           | Digital Photo and Video Camera  |
|--------------------------------|---|
| Sensor                         | 5.0 MP 1/2.5" CCD Sensor  |
| Resolution (PHOTO)             | 8Mp (3200x2400 pixels)<br>5Mp (2595x1944 pixels)<br>3Mp (2048x1536 pixels)  |
| Resolution (VIDEO)             | 1440x1080 (HD 1080p, 30fps)<br>1280x720 (HD 720p, 60fps)<br>1280x720 (HD 720p, 30fps)<br>848x480 (480p, 60fps)<br>320x240 (QVGA, 30fps) |
| Lens                           | 3x optical zoom lens  |
| Digital zoom:                  | 4x (2x in 1080p mode)   |
| File format:                   | JPEG, MOV, WAV  |
| Internal Memory:               | 32MB  |
| External Memory:               | 2GB SD card included<br>(up to 32GB SDHC)   |
| LDC display:                   | 2,4"  |
| TV out:                        | HDTV Component Out, PAL/NTSC system supported   |
| Interface:                     | USB 2.0   |
| Voice Recorder:                | Yes   |
| Microphone:                    | Internal (stereo), mic jack   |
| Speaker:                       | Yes   |
| Nightshot:                     | Yes (both in still image and video modes)   |
| E.I.S.:                        | Electronic Image Stabilization  |
| C-Mount:                       | No  |
| Optical adapter                | 10x (for eyepiece tube)   |
| Adapters for stereomicroscopes | 30,0mm diameter   |
| Battery:                       | Li-Ion rechargeable   |
| Remote Control:                | Yes, IR transmission  |

## DIGI



# Video and photo applications - TB Series - Tablet PC with camera

"A 2 in1 solution in digital microscopy"

A Tablet PC with 10" LCD touch screen, in combination with 3Mp and 5Mp cameras;  
an universal system which can be installed on every trinocular microscope.

## TABLET TECHNICAL SPECIFICATIONS

|                          | TB-3W  | TB-5W |
|--------------------------|--|-------|
| Model                    | Acer Iconia W510   |       |
| Operating System         | Windows 8.1 32-bit   |       |
| Language                 | Multilanguages already installed   |       |
| Image capturing software | OPTIKA Vision lite   |       |
| CPU                      | Intel® Atom™ Z2760 (1MB Cache, 1.80 GHz Intel® Burst) , Dual core (2 Core) |       |
| CPU speed                | 1,50 GHz   |       |
| Graphics Card            | Intel® GMA 3650 LPDDR2   |       |
| Memory                   | Ram 2,048 GB LPDDR2  |       |
| LCD display              | LED 10.1" IPS Multi Touch Screen   |       |
| LCD resolution           | 1366 x 768 , 16/9  |       |
| Storage                  | Hdd 64GB   |       |
| Network                  | Wireless IEEE 802.11a/b/g/n Bluetooth 4.0                                  |       |
| Input/output ports       | Micro USB Microphone Micro SD card reader Micro HDMI Head-phone            |       |
| Control Buttons          | Auto rotate off, volume control  |       |
| Battery Technology       | Lithium-ion battery, 2x cell   |       |
| Battery capacity         | 3540 mAh, about 9 hours  |       |
| Max load                 | 18 W   |       |
| Dimensions               | Thikness 8,8 mm, Height 16,75 cm, Width 25,85 cm                           |       |
| Weight                   | 580 g  |       |
| Cables included          | OTG cable, USB Cable   |       |
| Also included            | Instruction manual, Optika Software CD, Cleaning Cloth                     |       |

## CAMERA TECHNICAL SPECIFICATIONS

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



# 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**



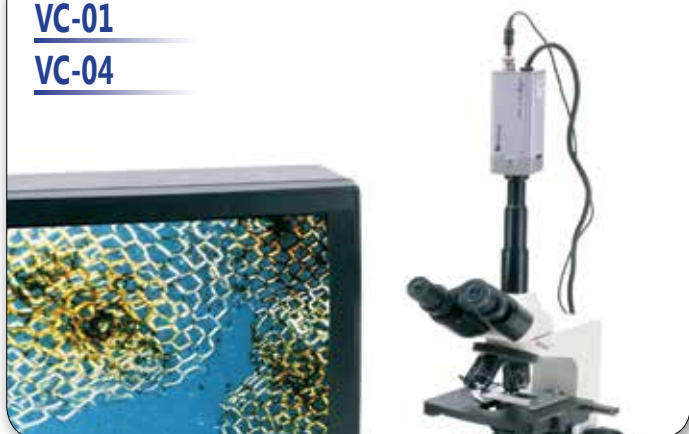
|                         | MULTIMEDIA<br>4083 | MULTIMEDIA PRO<br>4083.1 | STUDENT<br>4083.2 | STUDENT PRO<br>4083.3 | MIC<br>4083.5   | USB<br>4083.4  |
|-------------------------|--------------------|--------------------------|-------------------|-----------------------|-----------------|--|
| CCD 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, Win 7,<br>Win 8 32-64 Bit, USB 2.0 port |

# Video and photo applications - VC Series - CCD Cameras

VC-01



VC-01  
VC-04



VC-02  
VC-03



CONV-USB



VC-05



# Video and photo applications - VC Series - CCD Cameras

Videomicroscopy system composed by a colour 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°             |

Colour 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, 32-64bit.

# Adapters chart - BUDGET Series

## Biological microscopes

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

## Stereomicroscopes

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

# Adapters chart - TABLET PC and OPTIKAM Pro Series

|  | With ADAPTER<br>TB-3W or TB-5W Tablet  | With ADAPTER<br>OPTIKAM PRO3 or PRO5 | With NO ADAPTER<br>OPTIKAM PRO3 or PRO5 LT |
|--|--|--------------------------------------|--|
| Biological microscopes                           | Only for TRINOPORT                     |                                      | Only for "c" mount - Trino microscopes     |
| B-20 - SFC-3A - BP-20 - M-100FL (Monocular head) | NO                                     | READY TO USE                         | NO   |
| B-50 (Monocular head)                            | NO                                     | READY TO USE                         | NO   |
| B-150 (Monocular and binocular head)             | NO                                     | READY TO USE                         | NO   |
| B-191 (Monocular head)                           | NO                                     | READY TO USE                         | NO   |
| B-192 (Binocular head)                           | NO                                     | READY TO USE                         | NO   |
| B-193 (Trinocular head)                          | READY TO USE – FREE TO MOVE 360 DEGREE | READY TO USE                         | M-114                                      |
| B-292 (Binocular head)                           | NO                                     | READY TO USE                         | NO   |
| B-293 (Trinocular head)                          | READY TO USE – FREE TO MOVE 360 DEGREE | READY TO USE                         | M-114                                      |
| B-382 (Binocular head)                           | NO                                     | READY TO USE                         | NO   |
| B-383 (Trinocular head)                          | READY TO USE                           | READY TO USE                         | M-114                                      |
| B-500 (Binocular head)                           | NO                                     | READY TO USE                         | NO   |
| B-500 (Trinocular head)                          | M-699                                  | M-699                                | M-620.1                                    |
| B-500 ERGO (binocular head ONLY)                 | NO                                     | READY TO USE                         | NO   |
| B-500Ti-* (Multihead) for Binocular head         | NO                                     | READY TO USE                         | NO   |
| B-500Ti-* (Multihead) for Trinocular head        | READY TO USE – FREE TO MOVE 360 DEGREE | 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)             | NO                                     | READY TO USE                         | NO   |
| B-800 & B-1000 ERGO (Trinocular head)            | READY TO USE                           | READY TO USE                         | M-114                                      |
| XDS-2 (Trinocular head)                          | READY TO USE – FREE TO MOVE 360 DEGREE | READY TO USE                         | M-778                                      |
| XDS-3 (Trinocular head)                          | M-699                                  | M-699                                | M-789.1                                    |
| XDS-2ERGO (Trinocular connection)                | READY TO USE                           | READY TO USE                         | M-114                                      |
| Stereomicroscopes                                |  |                                      |  |
| STX (Binocular head)                             | NO                                     | READY TO USE                         | NO   |
| MS-2 (Binocular head)                            | NO                                     | READY TO USE                         | NO   |
| S-10-20-30-40-45-50 (Binocular head)             | NO                                     | M-113.2                              | NO   |
| LAB-10 LAB-20 (Binocular head)                   | NO                                     | READY TO USE                         | NO   |
| SZM (Binocular head)                             | NO                                     | READY TO USE                         | NO   |
| SZM (Trinocular head)                            | READY TO USE – FREE TO MOVE 360 DEGREE | READY TO USE                         | ST-090.1                                   |
| SZN (Binocular head)                             | NO                                     | READY TO USE                         | NO   |
| SZN (Trinocular head)                            | READY TO USE – FREE TO MOVE 360 DEGREE | READY TO USE                         | ST-147.1                                   |
| SZP (Binocular head)                             | NO                                     | READY TO USE                         | NO   |
| SZP (For Trinocular connection)                  | ST-170                                 | ST-170                               | ST-170 + M-114                             |
| SZM-SMD (Trinocular head)                        | READY TO USE – FREE TO MOVE 360 DEGREE | READY TO USE                         | ST-090                                     |
| SZM-GEM-1 (Binocular head)                       | NO                                     | READY TO USE                         | NO   |
| SZM-GEM-2 (Trinocular head)                      | Not Suggested                          | READY TO USE                         | ST-090                                     |
| OPTIGEM-3 (Binocular head)                       | NO                                     | READY TO USE                         | NO   |
| OPTIGEM-4 (Trinocular head)                      | Not Suggested                          | READY TO USE                         | ST-147.1                                   |
| OPTIGEM-1 (Binocular head)                       | NO                                     | READY TO USE                         | NO   |
| OPTIGEM-2 (Trinocular head)                      | Not Suggested                          | READY TO USE                         | ST-090                                     |
| XC-100L (Monocular head)                         | NO                                     | READY TO USE                         | NO   |
| XZ-1 (Monocular head)                            | NO                                     | READY TO USE                         | NO   |
| XZ-2 (Binocular head)                            | NO                                     | READY TO USE                         | NO   |

# Adapters chart - PRO Cool 5 & PRO HDMI & DIGI

## Biological microscopes

|   | With NO ADAPTER    | With NO ADAPTER  | With ADAPTER |
|---|--------------------|------------------|--------------|
|   | OPTIKAM PRO COOL 5 | OPTIKAM Pro HDMI | DIGI         |
| <b>B-20 - SFC-3A - BP-20 - M-100FL (Monocular head)</b> | M-116              | M-114            | READY TO USE |
| <b>B-50 (Monocular head)</b>                            | M-116              | M-114            | READY TO USE |
| <b>B-150 (Monocular and binocular head)</b>             | M-116              | M-114            | READY TO USE |
| <b>B-191 (Monocular head)</b>                           | M-116              | M-114            | READY TO USE |
| <b>B-192 (Binocular head)</b>                           | M-116              | M-114            | READY TO USE |
| <b>B-193 (Trinocular head)</b>                          | M-116              | M-114            | READY TO USE |
| <b>B-292 (Binocular head)</b>                           | M-116              | M-114            | READY TO USE |
| <b>B-293 (Trinocular head)</b>                          | M-116              | M-114            | READY TO USE |
| <b>B-382 (Binocular head)</b>                           | M-116              | M-114            | READY TO USE |
| <b>B-383 (Trinocular head)</b>                          | M-116              | M-114            | READY TO USE |
| <b>B-500 (Binocular head)</b>                           | M-116 + M-113.1    | M-114 + M-113.1  | READY TO USE |
| <b>B-500 (Trinocular head)</b>                          | M-699 + M-116      | M-620.1          | M-699        |
| <b>B-500 ERGO (binocular head ONLY)</b>                 | M-116 + M-113.1    | M-114 + M-113.1  | READY TO USE |
| <b>B-500Ti-* (Multihead) for Binocular head</b>         | M-116 + M-113.1    | M-114 + M-113.1  | READY TO USE |
| <b>B-500Ti-* (Multihead) for Trinocular head</b>        | M-116              | M-114            | READY TO USE |
| <b>B-800 &amp; B-1000 (Trinocular head)</b>             | M-699 + M-116      | M-699 + M-114    | M-699        |
| <b>B-800 &amp; B-1000 ERGO (Binocular head)</b>         | M-116 + M-113.1    | M-114 + M-113.1  | READY TO USE |
| <b>B-800 &amp; B-1000 ERGO (Trinocular head)</b>        | M-116              | M-114            | READY TO USE |
| <b>XDS-2 (Trinocular head)</b>                          | M-116              | M-114            | READY TO USE |
| <b>XDS-3 (Trinocular head)</b>                          | M-699 + M-116      | M-789.1          | M-699        |
| <b>XDS-2ERGO (Trinocular connection)</b>                | M-116              | M-114            | READY TO USE |

## Stereomicroscopes

|   |                 |                 |              |
|---|-----------------|-----------------|--------------|
| <b>STX (Binocular head)</b>                 | NO              | NO              | READY TO USE |
| <b>MS-2 (Binocular head)</b>                | M-116           | M-114           | READY TO USE |
| <b>S-10-20-30-40-45-50 (Binocular head)</b> | M-116 + M-113.2 | M-114 + M-113.2 | M-113.2      |
| <b>LAB-10 LAB-20 (Binocular head)</b>       | M-116 + M-113.1 | M-114 + M-113.1 | READY TO USE |
| <b>SZM (Binocular head)</b>                 | M-116 + M-113.1 | M-114 + M-113.1 | READY TO USE |
| <b>SZM (Trinocular head)</b>                | M-116           | M-114           | READY TO USE |
| <b>SZN (Binocular head)</b>                 | M-116 + M-113.1 | M-114 + M-113.1 | READY TO USE |
| <b>SZN (Trinocular head)</b>                | M-116           | ST-147.1        | READY TO USE |
| <b>SZP (Binocular head)</b>                 | M-116 + M-113.1 | M-114 + M-113.1 | READY TO USE |
| <b>SZP (For Trinocular connection)</b>      | ST-170 + M-116  | ST-170 + M-114  | ST-170       |
| <b>SZM-SMD (Trinocular head)</b>            | M-116           | M-114           | READY TO USE |
| <b>SZM-GEM-1 (Binocular head)</b>           | M-116 + M-113.1 | M-114 + M-113.1 | READY TO USE |
| <b>SZM-GEM-2 (Trinocular head)</b>          | M-116           | M-114           | READY TO USE |
| <b>OPTIGEM-3 (Binocular head)</b>           | M-116 + M-113.1 | M-114 + M-113.1 | READY TO USE |
| <b>OPTIGEM-4 (Trinocular head)</b>          | M-116           | ST-147.1        | READY TO USE |
| <b>OPTIGEM-1 (Binocular head)</b>           | M-116 + M-113.1 | M-114 + M-113.1 | READY TO USE |
| <b>OPTIGEM-2 (Trinocular head)</b>          | M-116           | M-114           | READY TO USE |
| <b>XC-100L (Monocular head)</b>             | M-116           | M-114           | READY TO USE |
| <b>XZ-1 (Monocular head)</b>                | M-116           | M-114           | READY TO USE |
| <b>XZ-2 (Binocular head)</b>                | M-116           | M-114           | READY TO USE |

# Adapters chart - 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 - SFC-3A - BP-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 |

# Adapters chart - REFLEX CAMERAS

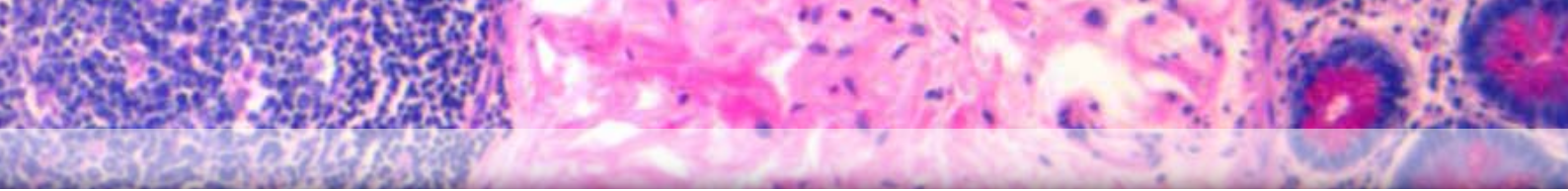
|  | APS Sensor               | FULL Frame / 35mm SRL Cameras | MIRROR-LESS              |
|--|--------------------------|-------------------------------|--------------------------|
|  | + T/2 BOUGHT BY CUSTOMER | + T/2 BOUGHT BY CUSTOMER      | + T/2 BOUGHT BY CUSTOMER |

Biological microscopes

|  |                 |                 |                 |
|--|-----------------|-----------------|-----------------|
| B-20 - SFC-3A - BP-20 - M-100FL (Monocular head) | M-173           | M-173           | M-173           |
| B-50 (Monocular head)                            | M-173           | M-173           | M-173           |
| B-150 (Monocular and binocular head)             | M-173           | M-173           | M-173           |
| B-191 (Monocular head)                           | M-173           | M-173           | M-173           |
| B-192 (Binocular head)                           | M-173           | M-173           | M-173           |
| B-193 (Trinocular head)                          | M-173           | M-173           | M-173           |
| B-292 (Binocular head)                           | M-173           | M-173           | M-173           |
| B-293 (Trinocular head)                          | M-173           | M-173           | M-173           |
| B-382 (Binocular head)                           | M-173           | M-173           | M-173           |
| B-383 (Trinocular head)                          | M-173           | M-173           | M-173           |
| B-500 (Binocular head)                           | M-173 + M-113.1 | M-173 + M-113.1 | M-173 + M-113.1 |
| B-500 (Trinocular head)                          | M-699+M-173     | M-619           | M-699+M-173     |
| B-500 ERGO (binocular head ONLY)                 | M-173 + M-113.1 | M-173 + M-113.1 | M-173 + M-113.1 |
| B-500Ti-* (Multihead) for Binocular head         | M-173 + M-113.1 | M-173 + M-113.1 | M-173 + M-113.1 |
| B-500Ti-* (Multihead) for Trinocular head        | M-173           | M-173           | M-173           |
| B-800 & B-1000 (Trinocular head)                 | M-699+M-173     | M-699+M-173     | M-699+M-173     |
| B-800 & B-1000 ERGO (Binocular head)             | M-173 + M-113.1 | M-173 + M-113.1 | M-173 + M-113.1 |
| B-800 & B-1000 ERGO (Trinocular head)            | M-173           | M-173           | M-173           |
| XDS-2 (Trinocular head)                          | M-173           | M-173           | M-173           |
| XDS-3 (Trinocular head)                          | M-699+M-173     | M-788           | M-699+M-173     |
| XDS-2ERGO (Trinocular connection)                | M-173           | M-173           | M-173           |

Stereomicroscopes

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



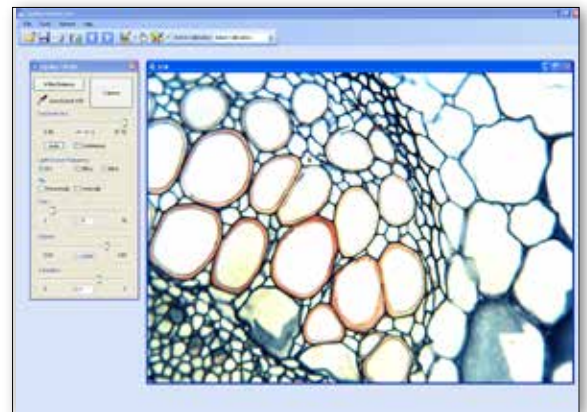
# Video and photo applications - SOFTWARE SUITE

**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.

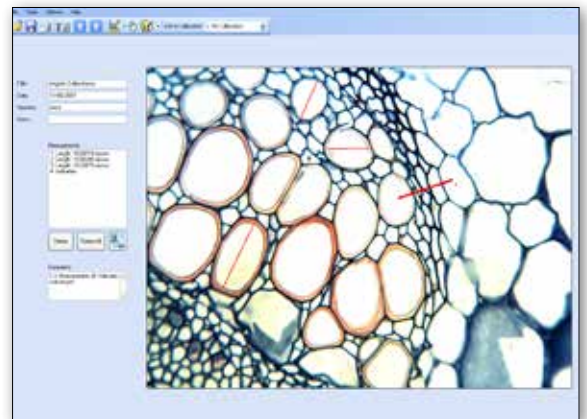


## Measurements

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.



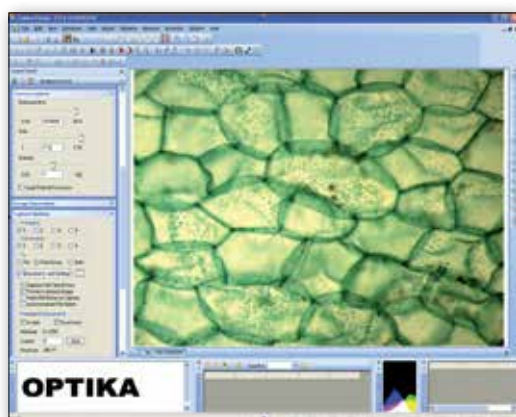
## Documentation

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.



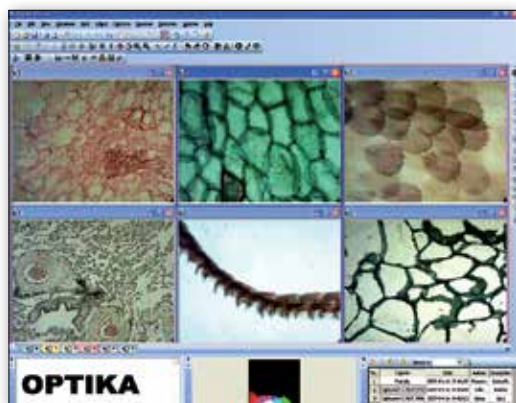
## Image Acquisition

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.

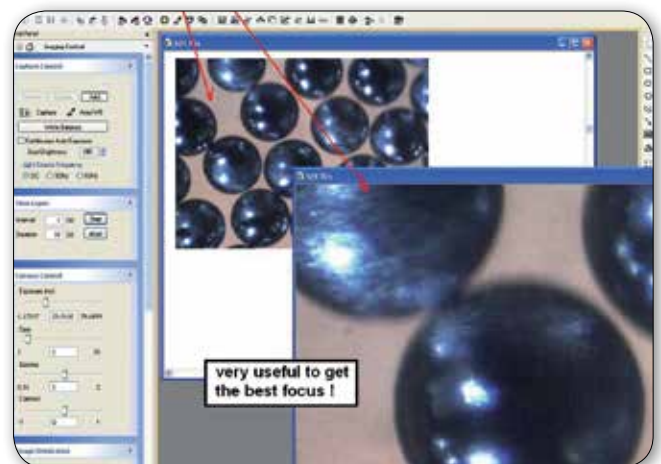
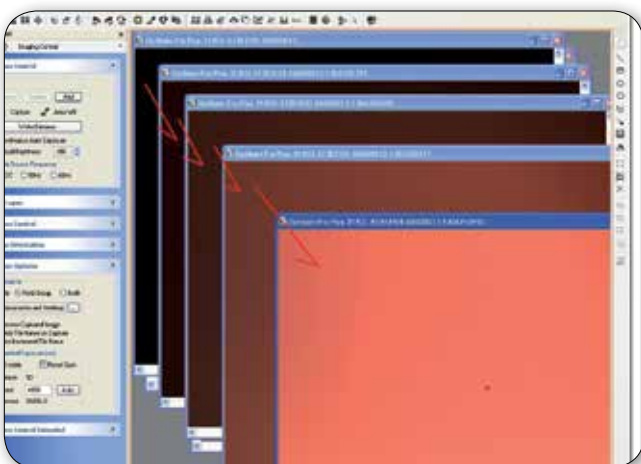
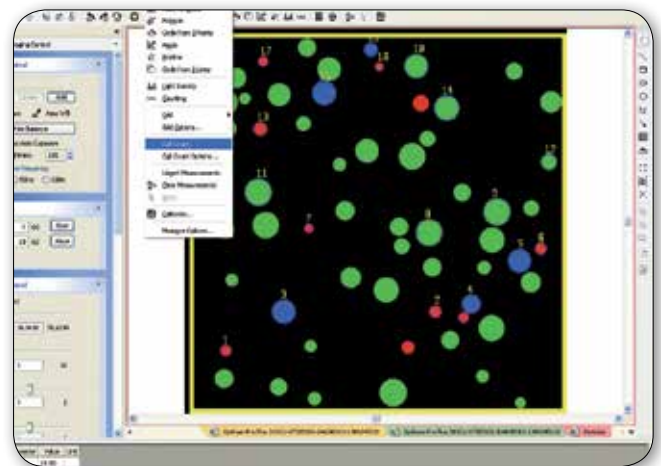
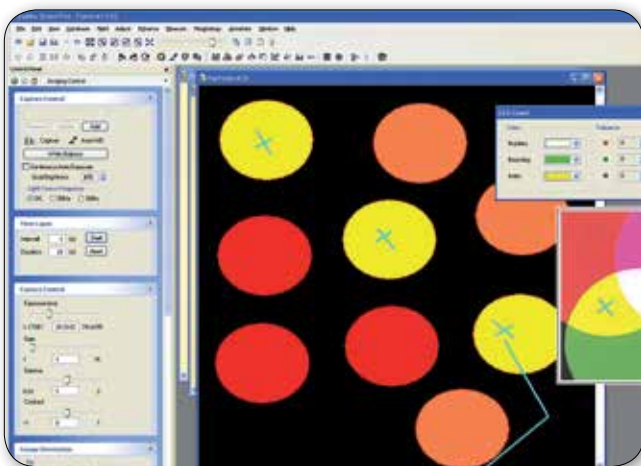
# Video and photo applications - SOFTWARE SUITE

**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.

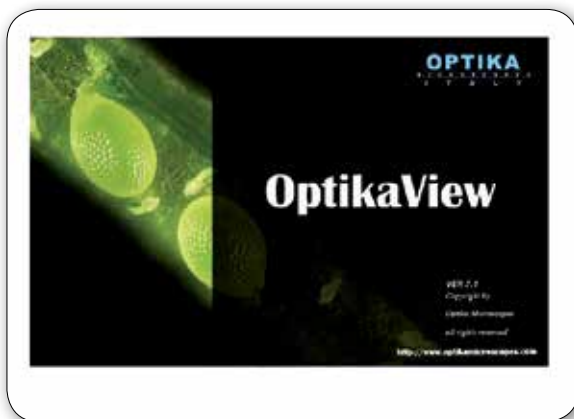
and furthermore :

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



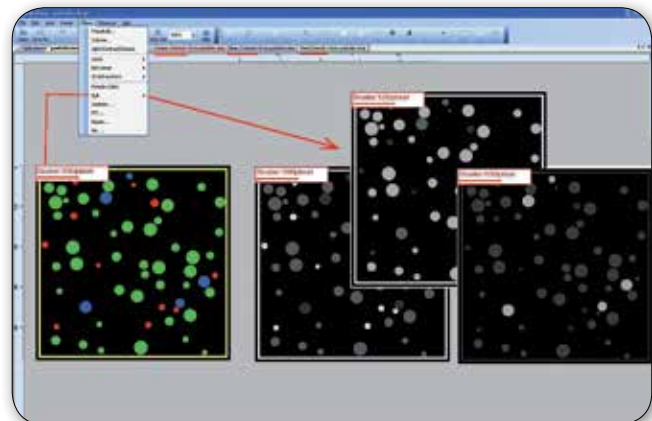
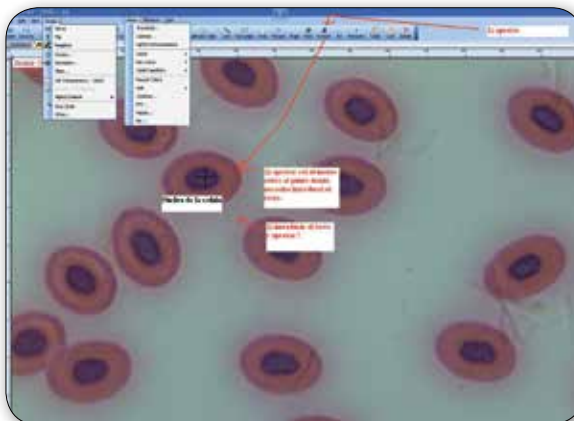
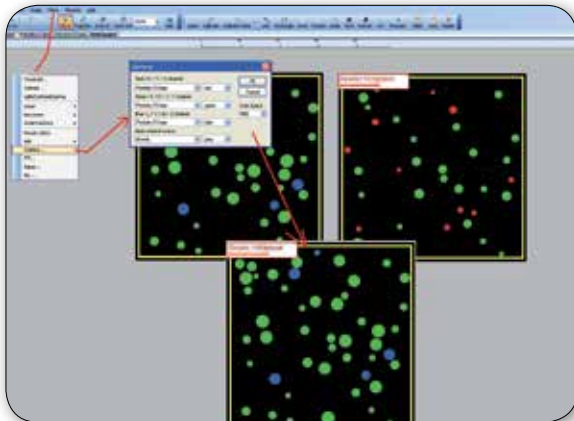
# Video and photo applications - SOFTWARE SUITE

**OPTIKA VIEW** is a new generation of microscope image analysis instruments, especially developed for our Optikam Budget 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 View 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.



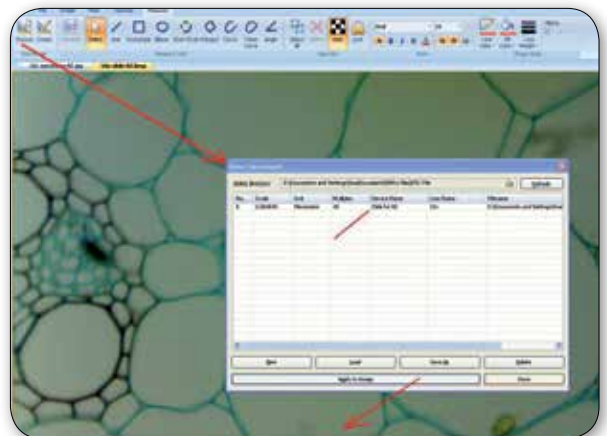
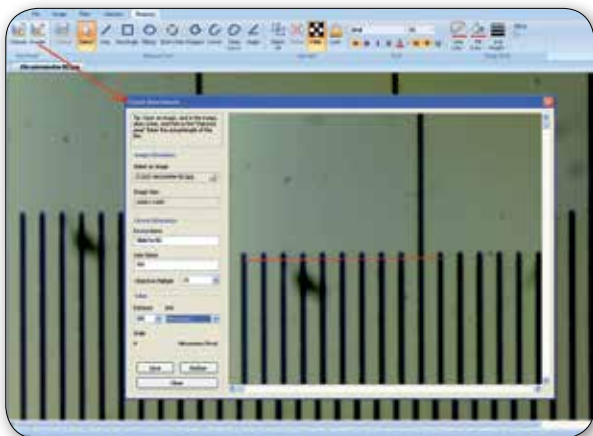
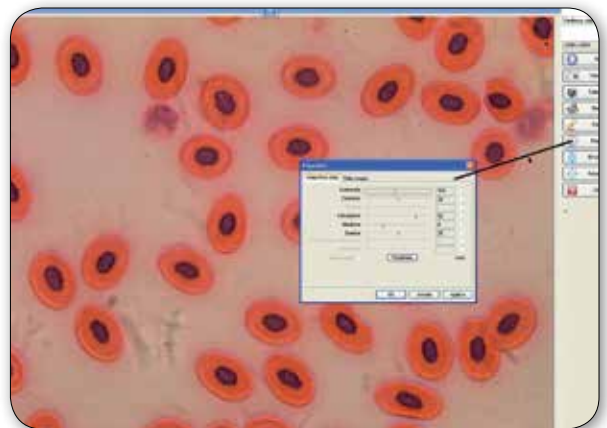
# OPTIKA - SOFTWARE SUITE

## OPTIKA MiPro

OPTIKA MiPro is a new generation of microscope image analysis instruments, especially developed for our Optikam B0.5 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 colour 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.

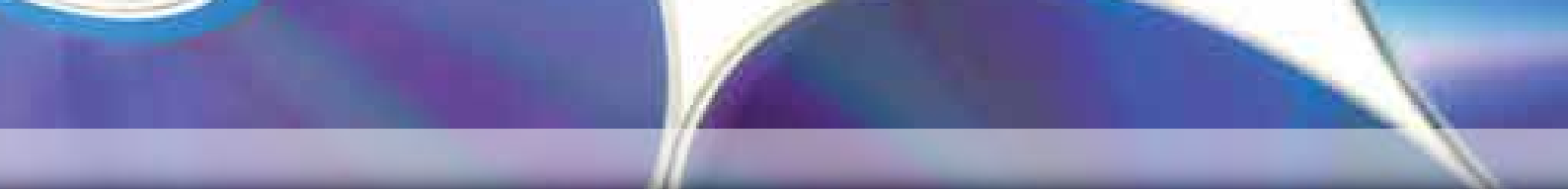
ImageTool provides for geometric transformations and magnification up to four levels. All analysis and processing functions are available at any magnification factor.

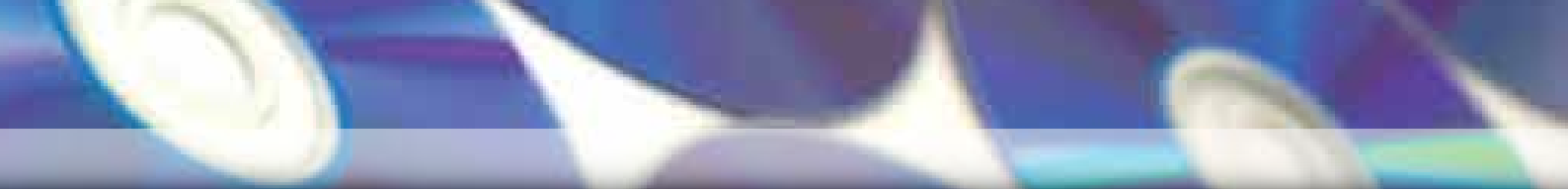
ImageTool also provides for image annotation with text, arrows, rectangle, ellipses and polygon.

## **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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**OPTIKA® USA** [usa@optikamicroscopes.com](mailto:usa@optikamicroscopes.com)  
**OPTIKA® Hungary** [hungary@optikamicroscopes.com](mailto:hungary@optikamicroscopes.com)