

# MICROSCOPE CAMERAS & SOFTWARE







## **KERN Pictograms**



360° rotatable microscope head



Monocular Microscope
For the inspection with
one eye



**Binocular Microscope**For the inspection with both



Trinocular Microscope
For the inspection with both
eyes and the additional
option for the connection
of a camera



Abbe Condenser With high numerical aperture for the concentration and the focusing of light



Halogen illumination For pictures bright and rich in contrast



LED illumination Cold, energy-saving and especially long-life illumination



**Incident illumination**For non-transparent objects



Transmitting illumination For transparent objects



Fluorescence illumination For stereomicroscopes



Fluorescence illumination for compound microscopes With 100W mercury lamp and filter



Fluorescence illumination for compound microscopes With 3 W LED illumination and filter



Phase contrast unit For a higher contrast



Darkfield condenser/ unit For a higher contrast due

to indirect illumination



**Polarising unit**To polarise the light



Infinity system Infinity corrected optical system



**Zoom magnification** For stereomicroscopes



Auto-focus
For automatic control of the focus level



Parallel optical system For stereomicroscopes, enables fatigue-proof working



Integrated scale
In the evepiece



**SD card** For data storage



USB 2.0 interface
For data transmission



**USB 3.0 interface**For data transmission



WIFI data interface: For transmitting of the picture to a mobile display device



**HDMI digital camera**For direct transmitting of the picture to a display device



**PC** software
To transfer the measurementsfrom the device to



Automatic temperature compesation For measurements between 10 °C and 30 °C

Protection against dust



and water splashes IPxx: The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999 +A2:2013



Battery operation Ready for battery operation. The battery type is specified for each device.



Battery operation rechargeable Prepared for a rechargeable

battery operation



Plug-in power supply 230V/50Hz in standard version for EU. On request GB, AUS or USA version.



Integrated power supply unit

Integrated in microscope. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.



Package shipment
The time required to
manufacture the product
internally is shown in
days in the pictogram.



Pallet shipment
The time required to
manufacture the product
internally is shown in
days in the pictogram.

## **Abbreviations**

C-Mount Adapter for the connection of a camera to a trinocular microscope

FPS Frames per second

**H(S)WF** High (Super) Wide Field (Eyepiece with high eye

point for wearers of glasses)

**LWD** Long Working Distance

N.A. Numerical Aperture

**SLR camera** Single-Lens Reflex camera

**SWF** Super Wide Field (Field number at least Ø 23 mm

for 10× eyepiece)

W.D. Working Distance

**WF** Wide Field (Field number up to Ø 22 mm

for 10× eyepiece)

## KERN Models A-Z

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With questions about our products and services, we will be happy to advise you:

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## **KERN Hotlines**

Technical questions about our products?
You will find assistance here quickly: +49 7433 9933-...



 $\rightarrow 444$ 

**→ 555** 

Service Hotline ightarrow 199 for general technical questions about your KERN product

## **Optical Devices**

for all technical questions concerning our microscopes, microscope cameras,  $\rightarrow$  777 refractometers, etc.

## **Laboratory and Analytical Balances**

for all technical questions concerning our high quality precision balances, analytical balances (especially with electromagnetic force-compensated measuring systems, tuning fork and high application density)

## **SAUTER Measuring Instruments**

for all technical questions concerning our SAUTER measuring instruments, test benches, force measuring accessories (clamps etc.), SAUTER software

## System Solutions Industry 4.0

for all technical questions concerning the interlocking of the latest information → 200 and communication technology with our scales, load cells and measuring devices as well as questions about KERN software

## **Calibration and Verification Service**

for any questions concerning our calibration and verification service

## **Features**

- · A large selection of microscope cameras is available for your individual applications
- · The universal microscope cameras can be used anywhere and can be connected to the microscope as well as to a laptop or PC using the USB cable (USB 2.0 or USB 3.0, see table)
- The power supply is through the USB cable, which means that no additional power supply is required
- · Your daily work is made significantly easier with the very best synchronisation, a high frame rate as well as stable image performance together with our camera software microscope VIS KERN OXM 901 which we deliver with the product
- · For details about our software please refer to the "Camera software microscope VIS KERN OXM 901" product group in the catalogue (page 95) or see www.kern-sohn.com

· These universal cameras can also be connected to all microscopes available on the market offering the appropriate C-mount adapter for the particular microscope

#### Accessories

· Object micrometer, for calibrating the software measuring function, division 0,1 mm + 0,01 mm, KERN ODC-A2404, € 40,-

## C-Mount Cameras - USB 2.0/3.0 KERN ODC-82 · ODC-83





documentation, archiving and image processing

#### Features

- · Through the proven CMOS technology, in connection with the USB 2.0 or USB 3.0 the images are shown quickly and clearly
- · These cameras are also ideal for more demanding applications, such as, for example, darkfield, phase contrast and for fluorescence applications
- · As well as the camera, the delivery includes our multi-lingual camera software, an USB cable (length: 2 m), various eyepiece adapters and an object micrometre to calibrate the software
- · Please order the appropriate C-mount adapter to fit your KERN microscope now

STANDARD



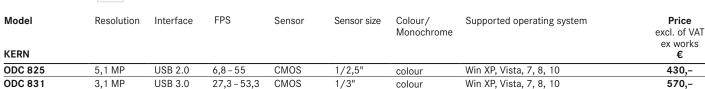
**ODC 832** 







5,1 MP



1/2,5"

colour

colour

## C-Mount Camera - High Resolution KERN ODC-84

**USB 3.0** 





## **Features**

14,2 - 101,2 CMOS

- The high-resolution, professional ODC-84 range offers you an impressive 20 megapixel resolution which will give you bright detailed views of your sample. By using the integrated USB 3.0 interface, live images are transferred to the KERN OXM 902 for processing and documentation
- Power supply is through the USB interface so that there is no requirement for an external power source.
- · As well as the camera, the delivery includes our multi-lingual camera software, an USB cable (length: 2 m), various eyepiece adapters and an object micrometre to calibrate the software

590.-

· Please order the appropriate C-mount adapter (only 1,0× possible) to fit your KERN microscope

STANDARD









Win XP, Vista, 7, 8, 10

Can only be used in combination with compound microscopes

Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	<b>Price</b> excl. of VAT ex works
KERN								€
ODC 841	20 MP	USB 3.0	15 – 60	CMOS	1"	colour	Win XP, Vista, 7, 8, 10	1270,-





## Features

- The ODC 851 HDMI microscope camera has been specially developed for direct HDMI connection to your HDMI compatible display device. The images can be stored straight onto the SD card which is delivered with the product or can be transferred to your PC or laptop for further processing using the USB 2.0 cable in combination with the OXM 902 software
- The HDMI autofocus camera ODC 852 offers you a perfect, effective solution for modern microscopy. The autofocus function automatically detects and adjusts the focus level so that you always have a razor-sharp image. Ideal for all applications in connection with a KERN stereo microscope
- · Realtime images can be transferred to an HDMI-compatible display device using the HDMI connection and they can also be stored on the SD card which was delivered with the product. As an alternative, data can also be transferred using the

- WiFi module (ODC 852) to a PC or laptop in combination with the KERN OXM 902 software which is included with the delivery
- · Power supply is from an external 12 V power unit
- · Scope of delivery ODC 851: Camera, USB mouse, USB 2.0 cable (length: 2 m), HDMI cable (length: 2 m), SD card (16 GB) and camera software Microscope VIS Basic KERN OXM 902
- Scope of delivery ODC 852: Camera, USB mouse, HDMI cable (length: 2 m), SD card (16 GB), WiFi adapter and camera software Microscope VIS Pro KERN OXM 902
- Please order the appropriate C-mount adapter to fit your KERN microscope now

STANDARD















-
1 DAY

Model	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works
KERN								€
ODC 851	2 MP	HDMI, USB 2.0, SD	60	CMOS	1/2"	colour	Win XP, Vista, 7, 8, 10	1150,-
ODC 852*	5 MP	HDMI, SD, WLAN	25 - 60	CMOS	1/1,8"	colour	Win XP, Vista, 7, 8, 10	1170,-

<sup>\*</sup>can only be used in combination with stereo microscopes

C-Mount Camera - High Resolution KERN ODC-86





## The cooled camera for professional fluorescence examinations

## **Features**

· The ODC 861 camera with Peltier cooling technology has been specially designed for fluorescent applications. It is able to significantly compensate for image noise associated with weak lighting. Due to its high resolution and light-sensitive Sony CMOS colour sensor it proves first-class images. The practical, sturdy storage box serves as protection and for transportation of this premium camera

- · Realtime images can be transferred straight to a PC or laptop using the integrated USB 3.0 interface. As an alternative, 2 USB 2.0 interfaces are available, to operate the camera with the KERN OXM 902 software which is included with the delivery
- Power supply is from an external 12 V power unit
- · Please order the appropriate C-mount adapter (only 1,0× possible) to fit your KERN microscope now
- · Black balance possible



•		
USB 3.0	SOFTWARE	1 DAY

Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
ODC 861	20 MP	USB 3.0	5 - 30	CMOS	1"	colour	Win XP, Vista, 7, 8, 10	2400,-



Can only be used in combination with compound microscopes



ODC-87, ODC-88



Eyepiece camera fixed into the tube

#### **Features**

- · With the KERN eyepiece cameras you can convert your standard microscope to a digital microscope, by replacing one eyepiece of your non-digital microscope with an eyepiece camera and connect this to your computer via USB
- The universal eyepiece can be connected to the microscope as well as to a laptop or PC using the USB cable (2.0 or 3.0, see table)
- · The power supply is through the USB cable, which means that no additional power supply is required
- · Your daily work is made significantly easier with the very best synchronisation, a high frame rate as well as stable image performance together with our software
- · As well as the camera, the delivery includes our multi-lingual camera software Microscope VIS 2.0 Pro, a USB cable (length: 1,5m), two eyepiece adapters and an object micrometer to calibrate the software
- · Possible tube diamaters: 23,2 mm (Standard) 30,0 mm (Eyepiece adapter) 30,5 mm (Eyepiece adapter)









Model KERN	Resolution	Interface	FPS	Sensor	Sensor size	Colour/ Monochrome	Supported operating system	Price excl. of VAT ex works €
ODC 874	3 MP	USB 2.0	3 – 7,5	CMOS	1/2,7"	colour	Win XP, Vista, 7, 8, 10	240,-
ODC 881	5 MP	USB 3.0	15 – 30	CMOS	1/2,5"	colour	Win XP, Vista, 7, 8, 10	320,-

USB Microscope - USB 2.0 KERN ODC-89

## The digital USB microscope for rapid testing or for hobby use



## ODC 895

## **Features**

- The USB hand-held microscope is designed for rapid and simple observations. Ideally suited for coins, plants, insects and skin samples for all hobby scientists, children and students
- · With the USB microscope you can easily adjust the magnification to suit all conventional samples. The zoom range can be adjusted to a magnification of 10× as well as 200×
- The eight LEDs fitted in the ring shape ensure strong and effective illumination of your sample. Use the adjustment wheel on the cable to control the illumination setting
- · As well as the camera, you will also find our multi-lingual camera software Microscope VIS 2.0 Pro included with delivery
- · Cable length: 1,4 m

## Stand with focus wheel:

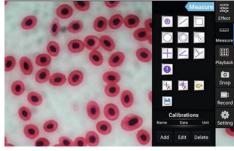
- · Work area: 150×80mm
- · Focus range: 60 mm
- · Overall dimensions: 150×80×135 mm

STANDARD						
•						
USB 2.0	SOFTWARE	1 DAY				

Model	Resolution	Interface	FPS	Sensor	Sensor size	Supported operating system	Magnifica- tion levels	Focusing stand	Illumination	Price excl. of VAT ex works
KERN										€
ODC 895	2 MP	USB 2.0	15 – 30	CMOS	1/3,2"	Win XP, Vista, 7, 8, 10	10×, 200×	Focus wheel	8× LED	220,-







Integrated software with measuring function

## Digital microscopy brought up to date – tablet with integrated camera for optimal observation and digital documentation of the sample

## **Features**

- A 2-in-1 solution in digital microscopy as a universal system for trinocular microscopes with C-mount adapter. The ODC 241 microscopetablet-camera consists of a large Android tablet in combination with a 5-MP camera
- The KERN ODC 241 tablet-camera has been specially developed for simple and direct observation of the sample on the screen. Ideally suited for school pupils and students in education or for demonstration purposes in the laboratory
- As well a live transfer of the image to the Android table, the integrated 5-MP camera also means that images and videos can be created for the documentation
- Simple measuring functions such as, for example, functions for measuring distance, surfaces and angles as well as a manual counting function are also available

- Automatic white balance and automatic contrast adjustment can be performed quickly and easily, which enables efficient working procedures
- A range of additional functions are provided through the integrated interfaces, such as, for example
- Data storage on a USB stick or SD card
- Connection to a USB mouse
- Transfer of the live image to an external screen using HDMI
- Transfer of stored data to external receivers using WiFi
- The delivery includes the tablet camera with pre-installed software as well as the mains adapter

#### Technical data

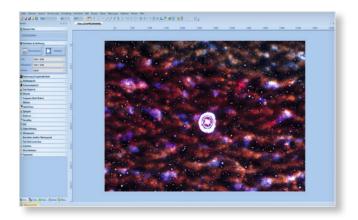
- 9.7" LCD-Touchscreen
- Screen resolution: 2048×1536 pixels
- CPU: Quad Core Cortex-A17; 1,8 GHz
- Overall dimensions W×D×H 238×51×206 mm
- · Net weight approx. 0,65 kg

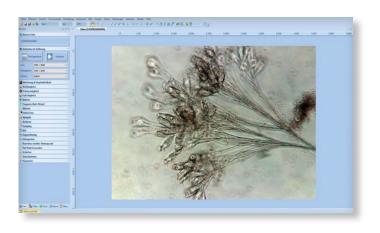
Cannot be combined with the following microscopes:
series OZM-5, OLM 170





Model	Resolution Camera	Interface	FPS	Sensor	Sensor size	Supported operating system	Price excl. of VAT ex works
KERN							€
ODC 241	5 MP	WiFi, USB 2.0, HDMI, SD	15 - 30	CMOS	1/2.5"	Android 5.1	1110





## The digital specialist for measurement, counting and archiving – free of charge with all KERN microsope cameras

## **Features**

- As well as the streaming function for the object to be viewed, the software OXM 902 also offers you an image snapshot function, as well as a video function
- Various measuring functions such as, for example, functions for measuring distance, surfaces and angles and a manual counting function are available. In addition there are extensive image processing and documentation functions available, and of course an exporting function to Microsoft Office applications Word® and Excel®
- With the display settings you can display different measurements, grid sizes, scales and rulers for the very best measuring procedure

- Automatic white balance and automatic contrast adjustment can be performed quickly and easily, which enables efficient working procedures
- · The following highlights are included:
- Image Stitching
- Image Stacking
- DShow and TWAIN support
- Software development kit
- With this software it is possible operate all available KERN microscope cameras

## Technical data

- Can be used for Microsoft Windows 7, 8, 10 and 11
- Depending on the language setting of your
  Windows operating system the software KERN
  microscope VIS Basic & Pro will be identified
  and installed in the current language. This can
  be changed manually at any time
- The software is available in the following languages: German, English, Spanish, Italian, French, Portuguese, Polish, Russian, Turkish, Chinese, Japanese, Korean
- As well as the software CD, a USB cable and an object micrometer are included with all KERN cameras as well as all digital microscopes Please refer to the documentation for the software in the download area of our website www.kern-sohn.com for further details

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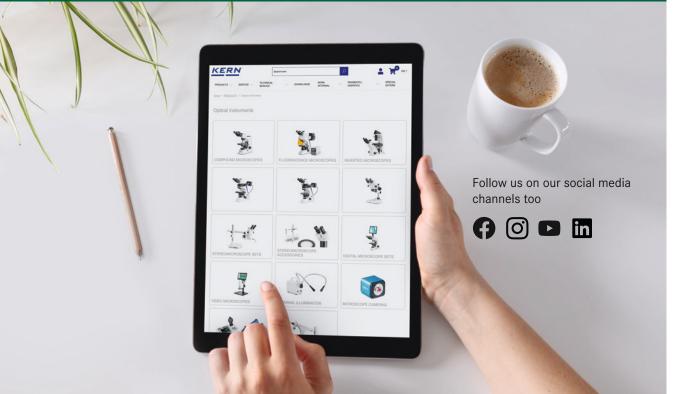


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