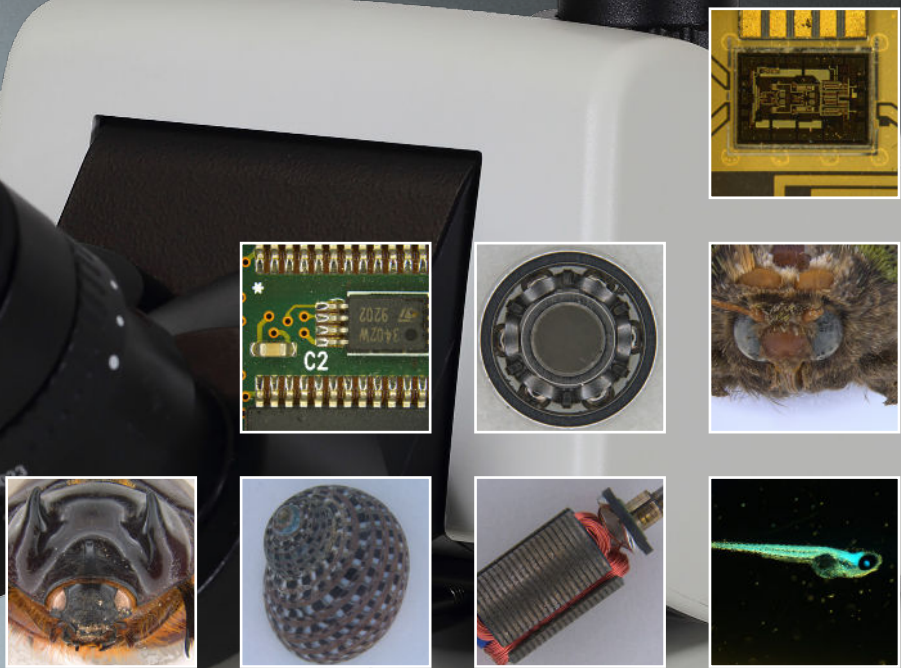From Eye to Insight

Digital Microscope Camera
for Analysis and Documentation
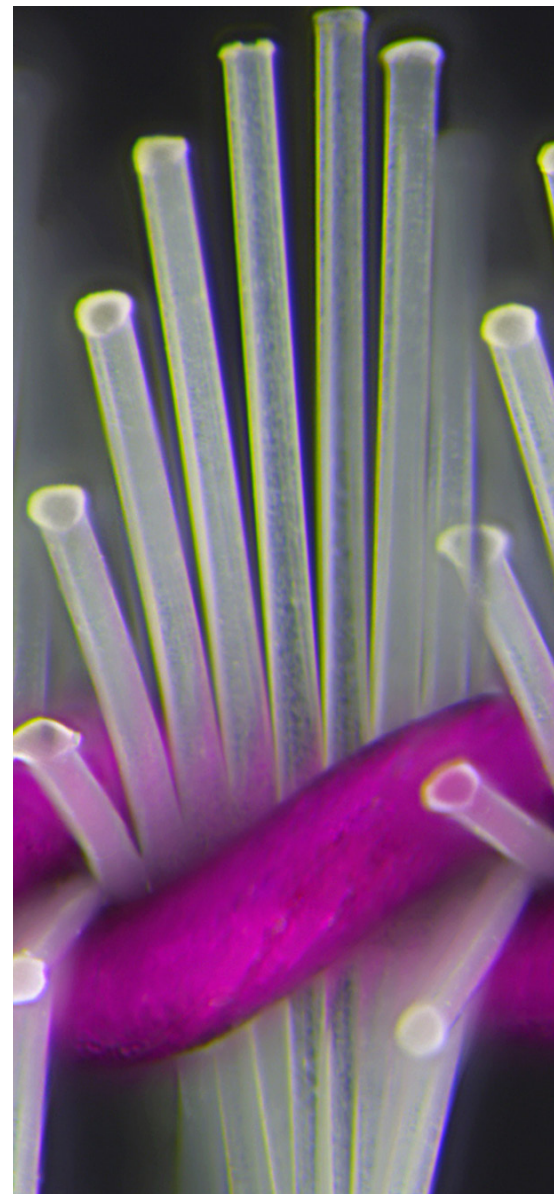
LEICA DMC4500 FOR INDUSTRY AND LIFE SCIENCE APPLICATIONS

The Amazing Allrounder

INDUSTRY AND LIFE SCIENCE APPLICATIONS

Capture sharp, brilliant images for everyday analysis and documentation with the Leica DMC4500 color camera. This versatile, easy-to-use tool simplifies your imaging process all the way from capture and processing to analysis.

High Speed, Professional Imaging

> USB 3.0 interface: Plug and play, simply connect the camera directly to your computer or laptop

> 5 MP CCD sensor: Sharp, clear, crisp images for precise analysis

> 18 frames per second: Place and position your samples while viewing them on your computer screen
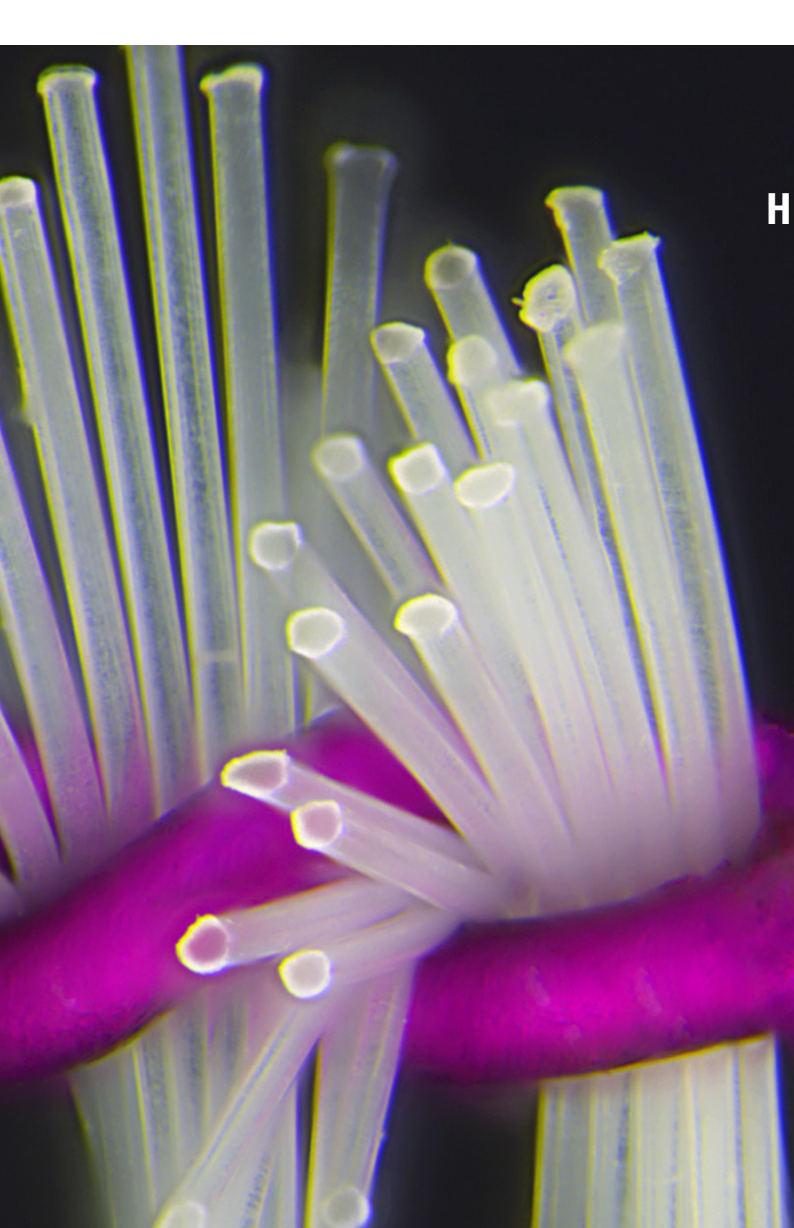
High-Performance Microscope Software

Leica Application Suite (LAS) and LAS X software integrate Leica Microsystems' microscopes and digital cameras into a common, easy-to-operate working system. The versatility of the software makes it ideal for a diverse range of industrial applications such as quality control and failure analysis, and for many different life science applications.

LAS and LAS X accelerate the visualization, documentation, measurement, and archiving of digital images. The software gives you convenient, precise control of microscope functions and helps make your daily tasks easier.

The software is also modular so you can add application-specific functions to your system. For example, add the LAS Live Image Builder module to your system and create extended depth of focus images within minutes.

Example of Live Z Image Builder: assembles images from the entire focal range into a single sharp image so you see all the detail at the same time.

The outstanding contrast of the Leica DMC4500 on the example of an ephemera larva

Excellent Image Quality

> Offers excellent noise suppression and perfect acquisition of the unprocessed CCD signal
> Excellent images at high frame rates, enabled by image pre-processing directly in the camera head of the Leica DMC4500
> Light collected from the sample is digitized with a depth of 12 bit per color channel. Resulting in the ability to differentiate 6 times more color information than the human eye. And hence leaves plenty of headroom for signal dynamic image post processing without compromising image quality
> The true-color calibration of the camera provides natural color reproduction, which translates to high-quality images

Fast and Easy - USB 3.0

> Quickly obtain fast high-quality live images at up to 18 frames per second at SXGA progressive scan and 9 frames per second in full frame mode
> Place and reposition your samples while viewing directly on the computer screen
> The USB 3.0 interface makes the camera connection to your computer easy and convenient
> The system will be up and running in an instant

TECH SPECS

MICROSCOPE CAMERA LEICA DMC4500

Camera type	Digital camera for microscopy with control software
Sensor	Interline transfer frame readout CCD — ICX282
Scan area	8.7 mm × 6.5 mm
Color filter	RGB Bayer mosaic
Protective color filter	UV & IR filter
Shutter control	Electronic global shutter / 2 frames interlaced readout
Number of pixels / pixel size	5 megapixels, 2560 × 1920 / 3.4 µm × 3.4 µm
A/D converter	14 bit
Dynamic range	59 dB typical / > 900:1 dB
Readout noise	σ 4.5 LSB (12 Bit) typical
Exposure time	total: 1 msec — 60 sec, step 1µsec
Gain control	0 — 20 dB
Device clock frequency	50 MHz fast scan / 25 MHz high quality (HQ) scan
Region of interest	Freely adjustable in 2 pixel steps from 2 × 2 up to full resolution

IMAGE FORMATS	PIXEL	SPEED FPS: (50MHZ/25MHZ)
Full frame	2560 × 1920 interlaced	9 fps / 4.5 fps / 9 fps
Color binning (2x2)	1280 × 960 progressive	18 fps / 9 fps
Subsample	1280 × 960 progressive	18 fps / 9 fps
Grayscale	Transferred from color binning (2x2) to mono in software	
Modes	Formats in fast (50 Mhz) or high quality (25 Mhz) modes	

COMPUTER

PC requirements	Min. computer configuration Intel Core 2 Duo 2.4 GHz, or faster
	2 GB RAM, high res graphic card with 128 MB or 256 MB RAM
	Direct X V9c or V10 USB3 or free PCI-express slot
Software	Leica LAS and LAS X Software
	Windows 7 and Windows 10 (LAS and LAS X) Windows 8 (LAS only)
	Windows XP not supported

INTERFACES

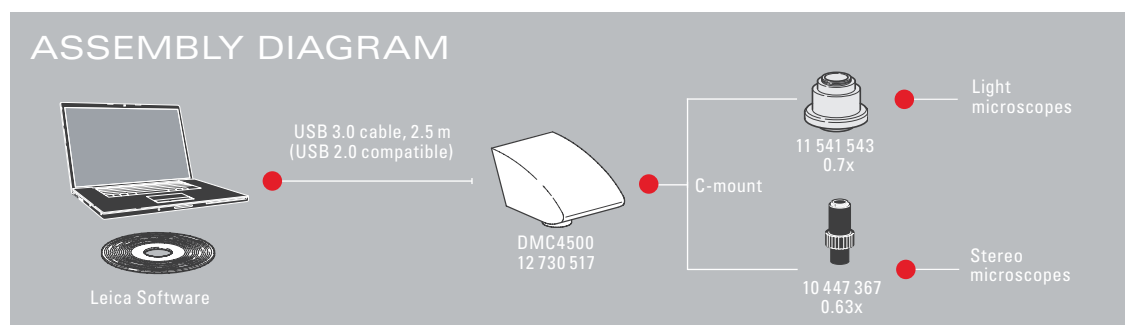|	
Recommended video adapter	C-mount 0.63× (stereo microscope) or 0.7× (light microscope)
Data	Single USB3.0 (Micro-B connector with screw lock)
USB Usage: USB 3.0	Full functionality of the camera
USB Usage: USB 2.0	25 MHz clock only, full frame, without: binning, subsample or partial scan

PHYSICAL AND ENVIRONMENTAL

Power consumption	Approx.: 4W (USB 3.0) / 3W (USB 2.0)
Power supply	Via USB3 cable
Housing	Die cast aluminum
Size	112 × 70 × 74 mm
Weight	410 g
Operating temperature	5°C to 40°C
Relative humidity	10% — 90% non-condensing

ORDER NUMBER

12 730 517 Leica DMC4500 Camera (incl. USB 3.0 PCI Express card, two mounting brackets (long and short), Molex power connector, SATA adapter cable (3x SATA, 1x Molex), USB 3.0 cable (2.5 m), quick start guide, USB 3.0 cable 2.5 m, LAS and LAS X Software)

ASSEMBLY DIAGRAM

USB 3.0 cable, 2.5 m
(USB 2.0 compatible)

Leica Software

DMC4500
12 730 517

C-mount

11 541 543
0.7x
Light microscopes

10 447 367
0.63x
Stereo microscopes

CONNECT WITH US!

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