

Living up to Life

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**Leica**  
MICROSYSTEMS



# Leica IC80 HD

Integrated, full HD microscope camera for pin-sharp images



## Go High Definition!

Entering the world of digital high definition image processing has never been so easy. With the Leica IC80 HD camera, Leica Microsystems completes its newest family of high-performance microscope cameras optimized for use in industry and research. The Leica IC80 HD offers a variety of benefits to those using high definition display units requiring professional image display. The ergonomic workstation allows samples to be viewed both on a monitor and through the microscope's binocular tube. There is no need for direct computer connection – the camera itself sends a high-resolution live image to the high definition monitor.

### ERGONOMIC DESIGN

The Leica IC80 HD is positioned directly between the optics carrier and binocular tube to protect it from dust without an additional video or photo tube. It is designed to be retrofit with the new M series stereomicroscopes from Leica. All previous M series stereomicroscopes can be easily equipped with the Leica IC80 HD without additional adapters.

Together with Leica ErgoTubes™ and Ergo-Modules™, the M series offers a highly compact, ergonomic unit for precision work. Being able to quickly switch between the binocular tube and HD monitor, means never losing focus of the sample.

### PERFECT IMAGE QUALITY

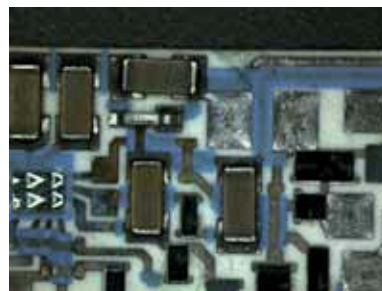
The coaxial illumination beam path of the stereomicroscope ensures the best image quality right up to the edge of the monitor and provides a reflection-free image in the binocular tube. Perfect reproduction quality, precision, and reliability offers lasting improvements in the efficiency and effectiveness of your work processes.



Examination of fracture points



Clockwork quality inspection



Examination of soldered joints

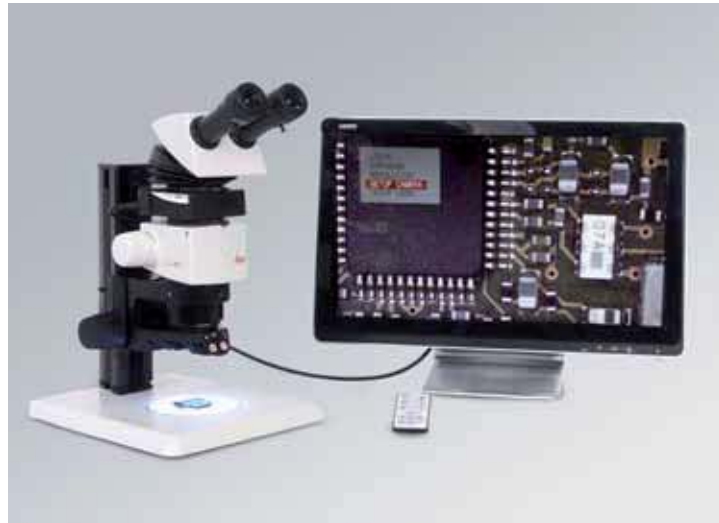


Metal sample seen under coaxial illumination

## EASY TO OPERATE

The Leica IC80 HD camera can be connected directly to a PC or laptop, or operated separately using an HD monitor. In both cases, controlling the camera is very simple, and you can acquire perfect images in no time.

In addition, the user can work with the basic preset settings or adjust the instrument parameters as desired. With the two push buttons on the camera, the user can quickly change to other camera modes, perform white balancing, or save an image to the SD card.



## LEICA IC80 HD ADVANTAGES

- › Digital microscope camera with live HD image for use with or without a computer
- › Very fast high-resolution live preview images on an HD monitor
- › Ergonomically designed; thanks to view switching between the binocular tube and the HD monitor
- › Very compact – fits between the binocular tube and optics carrier of a Leica stereomicroscope
- › Movie clips recorded directly to the SD card (MP4 format)
- › Direct control of all camera parameters via infrared remote control or computer
- › Captured images stored and managed directly on the computer
- › Best image quality and sharpness without vignetting or reflections
- › Automatic or user-specific selection of camera parameters
- › High-resolution, rapid live images due to a 3 megapixel CMOS sensor
- › USB2.0 connection for supplying power and transferring data using a computer
- › Modular Leica software for Windows and Mac computers



LEICA IC80 HD GO HIGH DEFINITION

## WITH A COMPUTER: EASY, FAST IMAGE ACQUISITION AND DISPLAY

The user can quickly and easily create images and set recording parameters such as white balance or illumination modes using two buttons on the camera. The live image is displayed directly on an HD monitor, and images can be immediately saved onto an SD card. Using an optional remote control, additional parameters can be set as needed and, for example, images can be shown in a gallery.

## FOR NOVICES: LAS EZ

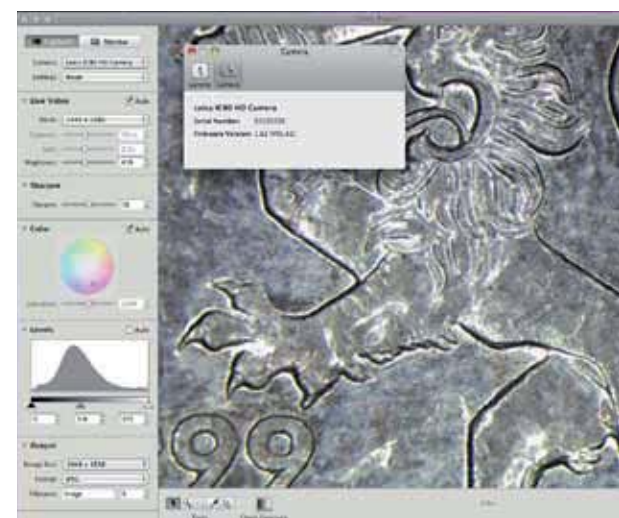
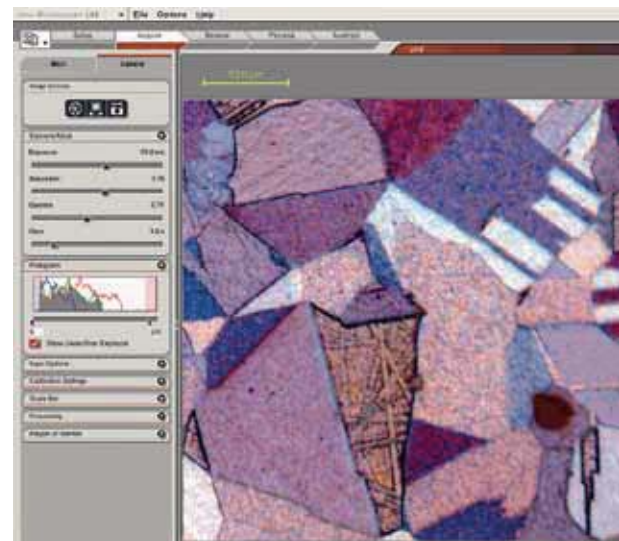
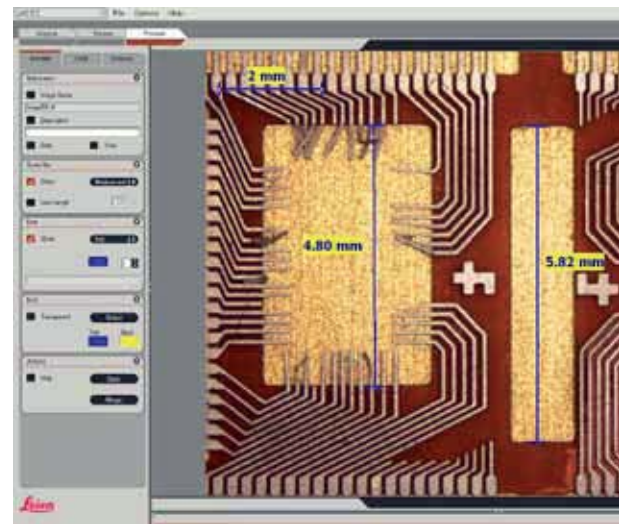
LAS EZ software is ideally suited for routine industrial and life science applications. LAS EZ leads the user intuitively through camera settings and allows images to be stored with optimum image quality. In addition, simple notes and measurements are possible.

## FOR EXPERTS: LAS WITH MODULES

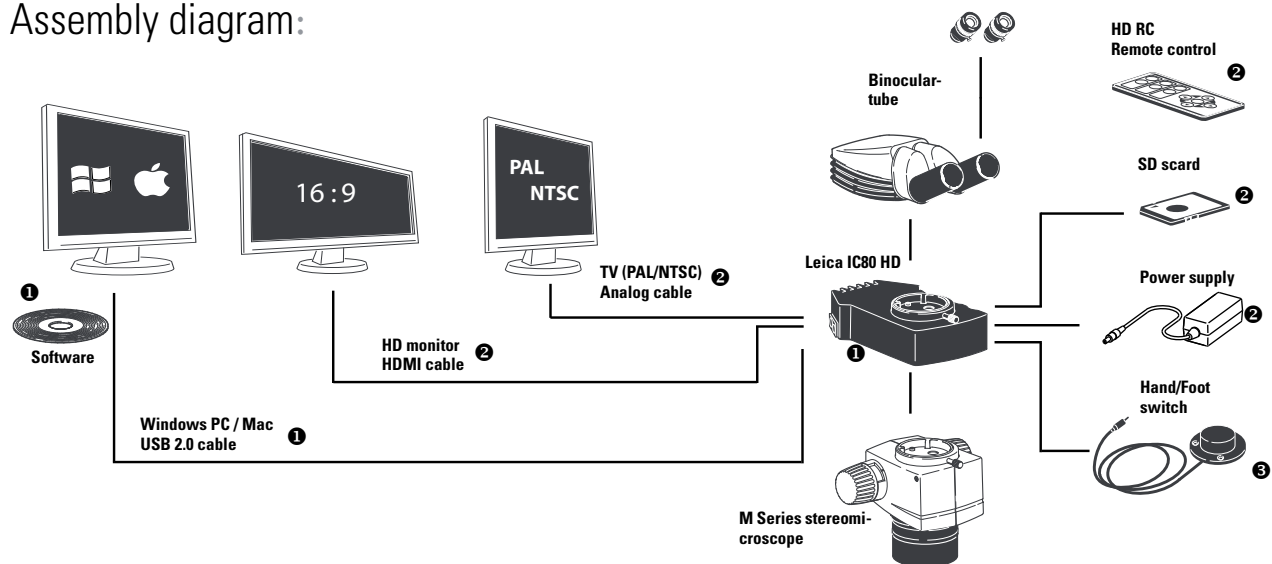
Leica Application Suite (LAS) is the software platform for all microscopes and microscope cameras from Leica Microsystems. Precise measurements and analyses can be performed on a digital image using LAS. This software can be expanded a multitude of modules, which work seamlessly together in a collective, easy-to-use user interface.

## FOR MAC USERS: LEICA ACQUIRE

Leica Acquire is user-friendly software for Apple computers that allows quick, easy image acquisition. Just like LAS, Leica Acquire contains many intuitive functions for optimal camera settings. Using Leica Acquire, images can be immediately transferred to other image editing programs, such as iPhoto or Aperture, or stored in a simple gallery.



# Assembly diagram:



## Leica IC80 HD – Technical Data

### CAMERA

Exposure time	2 ms – 2 s
Max. live image rate	45 fps (1280 × 720 pixels) – 20 fps (1920 × 1080 pixels)
Full-frame image acquisition	2048 × 1536 pixels, 3.1 megapixels
Movie clip	720 × 480 pixels (MP4)
Sensor size	6.55 mm × 4.92 mm
Pixel size	3.2 μm × 3.2 μm
Sensor grade	Micron 1/2" CMOS
Reinforcement	1× – 20×
Color depth	24-bit
Data format	JPEG / TIFF / BMP / MP4
Operating systems	Windows XP, Windows Vista, Windows 7, Mac OS X
Software	LAS EZ software (PC); LAS software (PC) optional LAS modules available; Leica Acquire Software (Mac)
Recommended computer configuration:	Intel DuoCore, >2 GHz 4 GB RAM 24-bit graphics, 1248 × 1024

### MECHANICAL AND OPTICAL INTERFACES

Mechanical	Leica standard connector between tube and M series optics carrier
Light distribution	Optical 50% / Camera 50%
Internal video magnification	0.5×
Sensor	Centered on optical axis ± 0.1 mm
Sensor	Horizontal/vertical orientation ± 1°

### ORDER NUMBERS

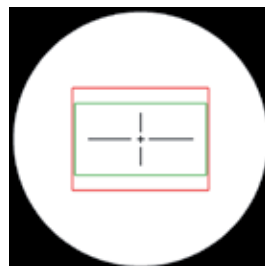
12 730 216 ①	Leica IC80 HD camera (incl. USB cable (1.5 m), Leica software)
12 730 228 ②	Leica stand-alone kit (USB power supply, HDMI and analog cable, SD card, HD RC remote control)
12 730 229 ③	Hand or foot switch with 2 m cable

### ELECTRONIC INTERFACES

Computer	USB 2.0, mini-USB plug
Analog video connector	RCA plug with PAL video signal or NTSC (standard) 320 × 240 pixels
High-definition connector	Mini-HDMI, HD Ready and Full HD
Pin switch	HD Ready or Full HD selection PAL or NTSC selection
Remote release	Hand and foot triggers
LED with 2 colors	Ready (green), image capture (red)
Integrated slot	SD card (Secure Digital) 1-8 GB, WIFI, WORM supported
Capture switch	For acquiring images
Exposure switch	For changing exposure modes

### OTHER

Power supply	USB 2.0 or external power supply
Power requirement	4 W
External power supply	Optional with stand-alone kit
Operating temperature range	+5 °C – 50 °C
Rel. humidity	10 – 90%
Weight	700 g (camera only)
CE conformity confirmation	Available
Tested standards	EMI/RFI: EN55011-B    EN50082-1 EMC: 61000-3-2    61000-3-3



The Leica IC80 HD camera has an image section with a 16:9 size ratio for live images on an HD monitor (shown with a green frame). The images are always saved in a 4:3 size ratio (shown with a red frame).



#### Leica ICC50 HD

The Leica ICC50 HD is a digital high definition microscope camera, which fits between the eyetube and the microscope carrier. It is designed for the Leica DM500 and DM750 compound microscopes and provides quick live video on a monitor or HD screen.



#### Leica DFC290 HD

The Leica DFC290 HD microscope camera creates high-quality color images with a resolution of 3 megapixels. When the camera is combined with a Leica stereomicroscope and Leica Application Suite (LAS) software, this versatile imaging system is ideal for a wide range of applications.



#### Leica M80

The ergonomically and modularly designed Leica M80 routine stereomicroscope, available as an ESD-dissipating system for inspecting sensitive electronic components, offers a large field of view, high depth of field, and excellent optical resolution.



#### Leica M125

The modular Leica M125 stereomicroscope offers a fully apochromatically corrected 12.5:1 zoom. This large range of positions allows an overview of the specimen as well as observation of the finest structures down to a resolution of 1.15 µm.

The statement by Ernst Leitz in 1907, *“With the User, For the User,”* describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: *Living up to Life.*

#### INDUSTRY DIVISION

The Leica Microsystems Industry Division's focus is to support customers' pursuit of the highest quality end result. Leica Microsystems provides the best and most innovative imaging systems to see, measure, and analyze the microstructures in routine and research industrial applications, materials science, quality control, forensic science investigation, and educational applications.

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