



**Your microscopes for
laboratory and teaching.**

www.zeiss.com/micro/applications



Seeing beyond

Your microscopes for increased efficiency in the lab and for more fun in teaching and working.

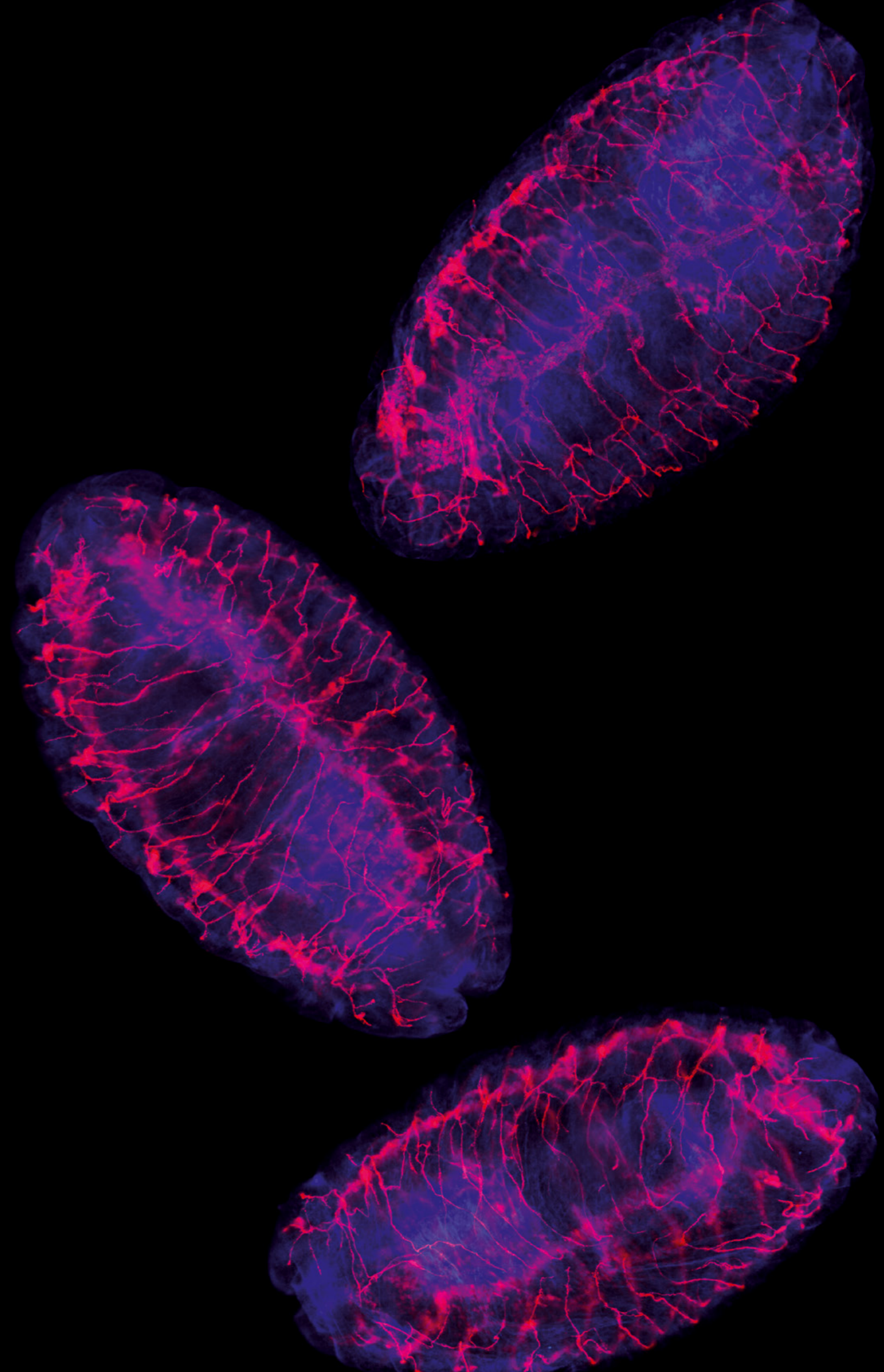
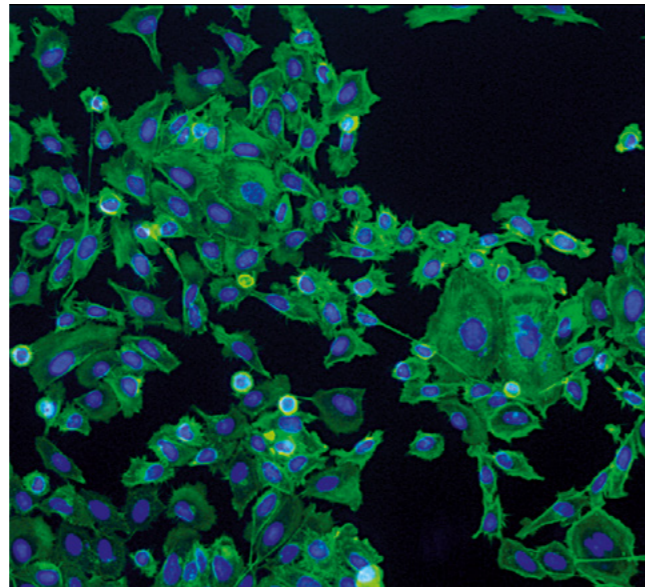
Enjoy the convenience for your daily checks, every day. Choose a sturdy microscope that is easy to use and has a long life. Make the best of your tuition and work with ZEISS microscope systems.

Use a microscope to investigate cells and body fluids in your laboratory. You prepare, manipulate, or document human, plant, or animal organisms, often for several hours at a time. You assess the quantity, type, and characteristics of blood cells. You need convenient and efficient solutions. You need to easily operate your microscope and expect excellent optical performance. Does your microscope need to fit into a restricted space?

Enjoy the convenience of ZEISS laboratory microscopes for your daily checks, every day. These ergonomically designed microscopes are so flexible that they adapt to you and your working procedures. They speed up your daily routines. And they have an outstanding price–performance ratio.

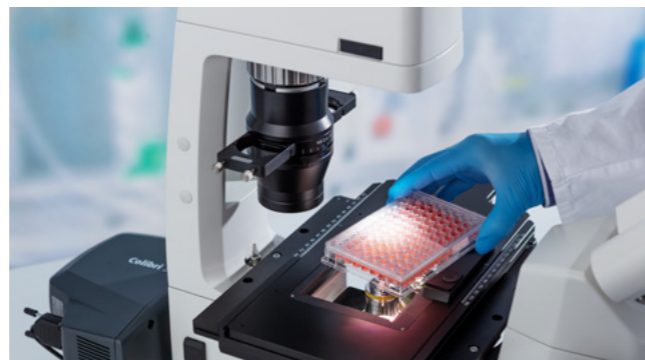
For your training courses, you can rely on a sturdy microscope that is easy to use and has a long life. Teaching

involves demonstrating procedures and then jointly considering and discussing the results. You can use the iPad imaging app Labscope to document and analyze your samples. You can also connect several microscopes to make a digital classroom and allow your students to simultaneously participate in your observations – on a mobile basis. ZEISS systems can make your courses a real success both for you and your students.



Select your system according to your requirements.

Whether you use your microscope for training or for your daily laboratory investigations, your experience and knowledge grow from day to day. Of course, your microscope has always to perform reliably and should be easy to use. ZEISS microscopes have been optimized for use in your medical laboratory or your training department. The systems make it easier for you to efficiently apply your knowledge and methods on a daily basis.



Stereo Microscopes and Zoom Microscopes

ZEISS Stemi 305
ZEISS Stemi 508
ZEISS SteREO Discovery.V8
ZEISS Axio Zoom.V16

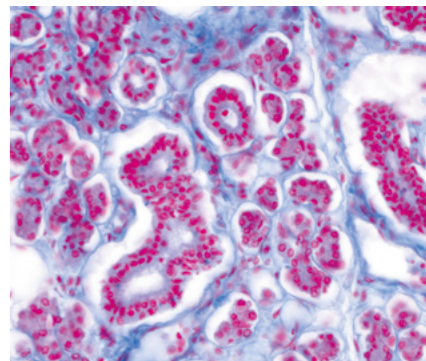
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Upright Microscopes

ZEISS Primostar 1
ZEISS Primostar 3
ZEISS Primo Star iLED
ZEISS Axiolab 5
ZEISS Axioscope 5
ZEISS Axio Imager

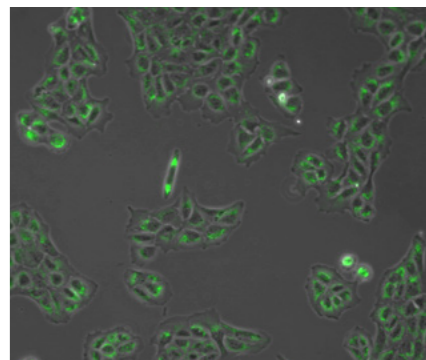
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Inverted Microscopes

ZEISS Primovert
ZEISS Axiovert 5
ZEISS Axiovert 5 digital
ZEISS Axio Observer

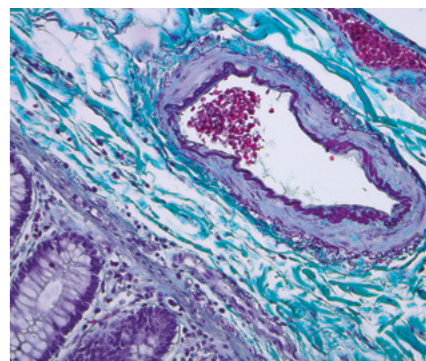
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Digital Documentation

ZEISS Labscope
ZEISS ZEN core
ZEISS AxioCam
ZEISS Mutlidiscussion

Page 46



Stereo Microscopes and Zoom Microscopes

Brilliant 3D impressions with good depth of field.



With these microscopes, you can observe your large or living samples nondestructively and without needing complex preparation. Zooming smoothly, you can adjust the magnification to your object and analyze its morphology. In the lower overview magnification, you can screen and sort your samples. Then, with higher magnification, you can effortlessly analyze details and prepare and manipulate the samples thanks to a large working distance that enables good access to them.

ZEISS Stemi 305

Compact size, big impact: your stereo microscope with integrated illumination and documentation.



Wing of *Chrisopidae*; transmitted light brightfield



Royal fern, sori and sporangia; spot K LED, oblique light, zoom 2.0x

Configured to Your Requirements

Stemi 305 is your compact Greenough stereo microscope with 5:1 zoom. Equally at home in the biology classroom, research lab or on the industrial shop floor. Observe your samples as they are: three dimensional and crisp in contrast with no preparation required. Then share your images, whenever you want.

Profit from an easy-to-use microscope, where everything is integrated: long-life LED illumination, reflected and transmitted light and documentation. Stemi 305 makes documentation easy and affordable. Simply snap your images with the integrated 1.2 Megapixel Wi-Fi camera and share them using Labscope, the iPad imaging app. Or opt for the conventional phototube to have access to all Axiocam cameras and free ZEN lite imaging software.

Microscopes

Stemi 305

Stemi 305 trino with phototube (fixed division 50/50)

Stemi 305 cam with integrated camera

Stands

Stand K, stand K MAT, stand K EDU, stand K LAB,

Boom stands: stand A, stand U with tilting arm

Illumination Techniques

Reflected light, transmitted light and variable mixed light

Brightfield, darkfield and oblique light, polarization

Illumination

Reflected light: spot, double spot, ring light, near vertical, polarization

Transmitted light: homogeneous brightfield, darkfield, oblique light with relief contrast, polarization

Accessories

Eyepieces and interchangeable front optics, eyepiece reticles, fiberoptic cold-light sources with various light guides, stages, polarization accessories

Simpler. More Intelligent. More Integrated.

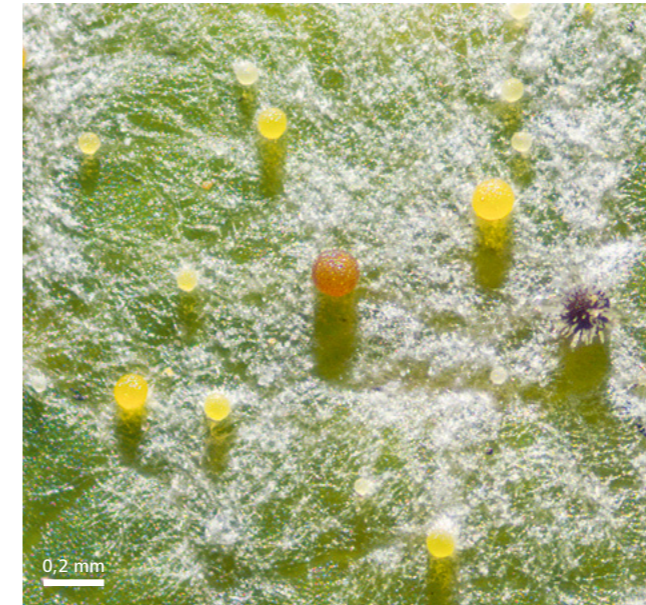
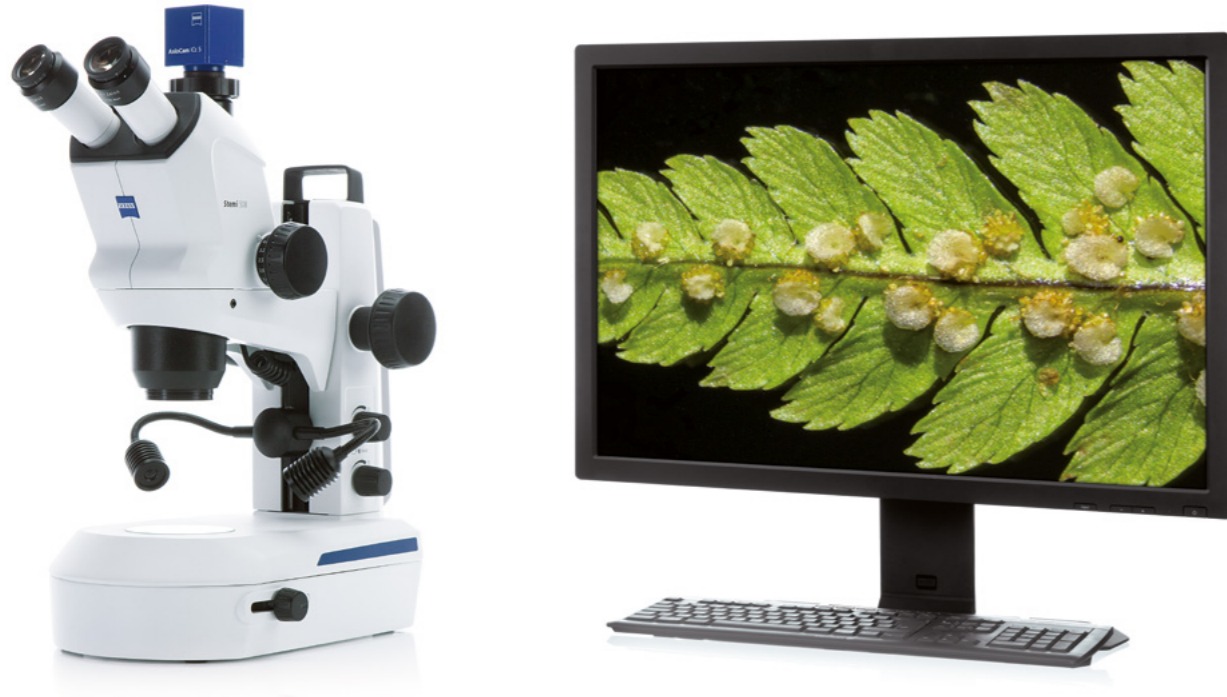
- Stemi 305 integrates everything you need. This compact Greenough stereo microscope comes without additional boxes and cables.
- With the microscope camera already on board, you're prepared to save your results, share your images and collaborate on projects with friends, colleagues and classmates.
- An LED illumination is already integrated in stands K EDU/LAB/MAT and provides reflected, oblique and transmitted light. Easily select and mix the integrated LED illuminations such as vertical and oblique reflected light, so as transmitted light.
- Stemi 305 comes with two options for documentation. Choose the conventional phototube and have access to all Axiocam microscope cameras.
- With the iPad imaging app Labscope you create your own digital classroom and share your images.
- Stemi 305 microscope sets for education, lab and industry ensure optimized object illumination for your application.

Created for Your Applications

- You observe and identify biological samples during biology lessons, in the classroom, and in the lab.
- In a teaching environment you connect microscopes and build up your own digital network.
- In your practical botanical work, you investigate the morphology of plants' organs. Your zoological studies deal with worms, snails, spiders, frogs, crabs, eggs, and larvae.
- As a fungus expert, you investigate the macroscopic characteristics of the fruiting bodies of large fungi to differentiate between edible mushrooms and inedible look-alikes. The Stemi 305 large working distance allows you to examine whole mushrooms without the need for extensive preparation.
- Are you a veterinarian who carries out investigations and does surgery? Then you will particularly appreciate the shadow-free, homogeneous illumination provided by Stemi 305 as well as the flexible alignment of the microscope with stand U with tilting arm.

ZEISS Stemi 508

Your apochromatic stereo microscope with 8:1 zoom for excellent image contrast and color accuracy.



Powdery mildew on Norway maple, cleistothecia, Spot K LED, oblique reflected light, zoom 2.0x



Tick, segmentable ring light K LED, half circle mode, zoom 1.0x

Configured to Your Requirements

Microscopes

Stemi 508
Stemi 508 doc with phototube and (100/0 switchover)

Stands

Stand K, stand K MAT, stand K EDU, stand K LAB, stand N
Boom stands: stand A, SDA and stand U with tilting arm

Illumination Techniques

Reflected light, transmitted light and variable mixed light
Brightfield, darkfield and oblique light, polarization

Illumination

Reflected light: light guides for spot, ring, line, vertical, diffuser, and area illumination, direct LED spots and segment ring lights
Transmitted light: brightfield, darkfield, oblique light with relief contrast and polarization option

Accessories

Interchangeable eyepieces and front optics, eyepiece reticles, camera adapter, cold-light sources with various light guides, gliding stage, rotating stage, ball-and-socket stage, polarization accessories

Stemi 508 is compact, reliable and equipped with optics and mechanics designed for heavy workloads. With the large 36 mm object field you always keep the overview of your sample. The 8:1 zoom then allows to bring details up to 50x magnification. You even have larger samples? Add interchangeable optics and observe an area of up to 122 mm, making Stemi 508 a top perin its class. Stemi 508 offers better ergonomics than any other Greenough-type stereo microscope: The low viewing angle of 35° lets you keep a relaxed posture even after hours of work.

With Stemi 508 you observe and document your samples exactly as they are: rich in detail, sharp in focus and free from distortion or color fringes. Stemi 508 is your robust all-rounder for everyday lab work and industrial inspections: accurate, ergonomic – and always easy to use.

Simpler. More Intelligent. More Integrated.

- Thanks to their excellent optics, Stemi 508 stereo microscopes provide a crisp and highly resolved three-dimensional image, sharp in focus and free of distortions or color fringes.
- Enjoy the 8:1 zoom range and observe even minute structures. Zoom in on details, either continuously or reproducibly by adding click stops. Due to mechanical corrected zoom curves and precise zoom mechanics, the image stays sharp in each zoom position.
- The large field of view lets you overview an object area larger than 35 mm in diameter. The 0.3x supplementary lens even expands this to 123 mm.
- Stemi 508 doc always comes with camera adapter 0.5x to connect Axiocam microscope cameras.
- Configure exactly the stereo microscope you require – select from stands, mounting brackets and stages. A large range of fiberoptic or direct LED accessories allow various illumination contrasts in reflected and transmitted light, such as brightfield, darkfield, oblique light and polarization.

Created for Your Applications

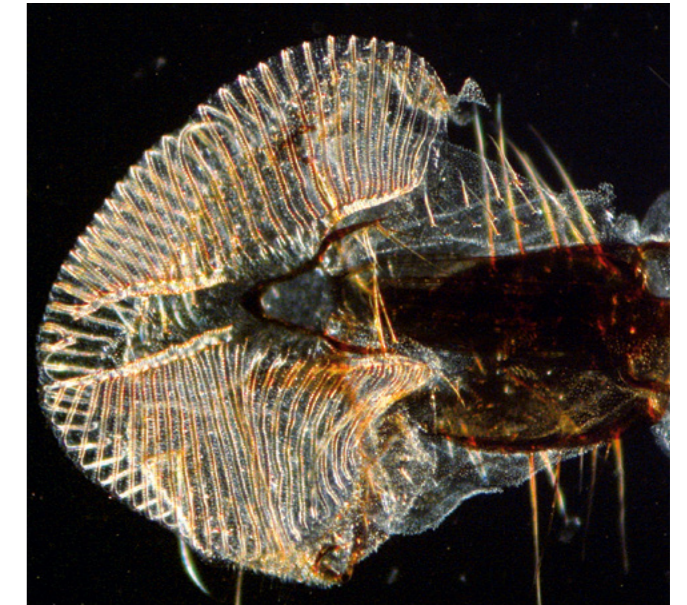
- You work in developmental biology with model organisms such as *Drosophila*, *C. Elegans*, or *Xenopus*. You assess, select, and prepare eggs, larvae, and embryos using micromanipulators.
- You are an entomologist who identifies insects, sometimes in the field – for example to map biotopes.
- You look for and classify horse or cattle embryos for subsequent transfer or for deep freezing for breeding purposes. Then you need high-contrast oblique transmitted light.
- Do you study, compare, and document plants from your herbarium? Then, for your larger samples, you will need a boom stand, a large working distance, and a maximum field of view.
- You look for and identify macroparasites such as ticks, fleas, and lice, as well as their eggs and larvae.

ZEISS SteREO Discovery.V8

Acquire brilliant, high-contrast, three-dimensional images.



Zebra fish embryos, four hours after fertilization, obliquely illuminated in transmitted light brightfield, magnification: 25x (as seen in the eyepiece)



Housefly mouthparts, obliquely illuminated in transmitted light darkfield, magnification: 80x

Configured to Your Requirements

SteREO Discovery.V8 is equipped with open interfaces and is completely integrated into the ZEISS system. Its modular design and extensive accessories offer you a variety of options to set up your workplace to your exact requirements. You can configure your microscope as a manual microscope for the preparation of specimens, as a powerful tool for fluorescent screening with easy-to-use documentation, or as a largely motorized system with ergonomic operation and imaging options.

The impressive stereoscopic image helps you to better observe, understand, and manipulate your specimens. You get a high-resolution, high-contrast, and apochromatically corrected microscopic image – that has sharp edges over the entire field of view and is always in focus when zooming. With its 8x zoom, you can quickly change from the overview down to the magnified detail. Add in click stops to the continuous zoom and you can easily reproduce ten discrete levels of magnification so that you can correctly scale your images.

Microscopes

SteREO Discovery.V8 (manual)

Illumination Techniques

Brightfield, darkfield, oblique light, polarization, fluorescence

Illumination

Reflected light: fiber-optic cold-light sources with spot, ring, line, vertical, diffuser, area, and coaxial illumination, LED ring lights with a segment function

Transmitted light: fiber-optic setup 450 with sliding mirror, low-profile LED setup 300

Accessories

Interchangeable lenses, observation and intermediate tubes, additional viewer attachments, illumination, manual and motor-driven stands, cameras, software modules to document images and for image processing

Simpler. More Intelligent. More Integrated.

- The intermediate LED tubes for fluorescence have been designed for screening tasks. They are high performance, robust, and easy to use. For this, they combine Achromat S lenses with high transmission.
- With the PlanApo S objective lenses, you get a level image with sharp edges and no distortion or color fringing.
- The 300 and 450 stands ensure vibration-free 3D viewing – even at high magnification.
- Choose between the variably adjustable fiber-optic transmitted light 450 unit and the especially low-profile 300 LED unit. Both units offer brightfield, darkfield, oblique-light, and polarization contrast.
- ZEISS cold-light sources provide intense light that is free from infrared to prevent damage to your sample. Long-life LEDs make lamp changes a thing of the past. A wide spectrum of light guides guarantees that your specimens' structures are optimally emphasized.
- In macroscope mode, you observe your specimen vertically through the right-hand stereo channel. You can produce z-stacks that are free from parallax errors and with increased depth of field.

Created for Your Applications

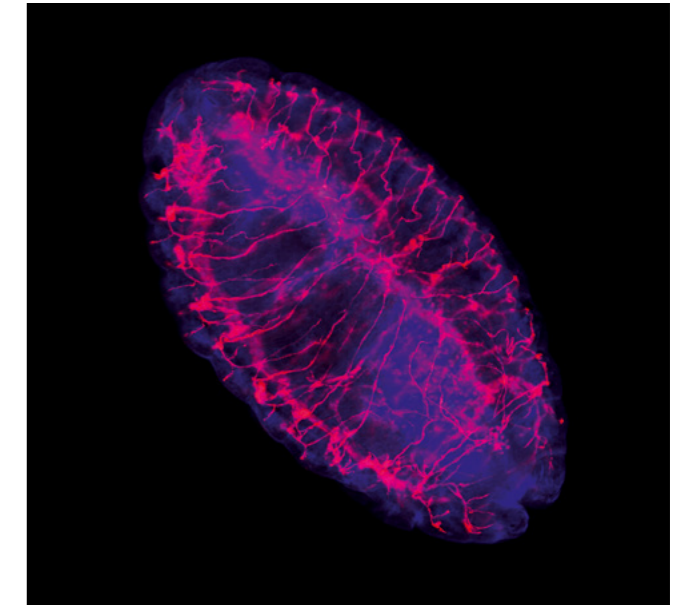
- You work in embryology and prepare model organisms for more extensive imaging using laser scanning microscopes. Then the 5–45° ergotubes ensure that your working posture is ergonomic.
- You can document the embryonic growth of your zebra fish with the time-lapse module in the ZEN imaging software.
- You assess the health of plants or seeds, or you identify pathogens and record their incidence. When investigating whole plants, you will benefit for the large focusing range and the large sample space.
- In their biology classes, your students can draw plants and animals using drawing-tube attachment S. You can teach the preparation of samples or monitor it in 3D with the additional viewer attachment S.
- Do you carry out IVF or ICSI treatments in a fertility clinic? Then with SteREO Discovery.V8, you can isolate the eggs before fertilization and then later assess the growing embryos.
- In the forensic department, with the plan apochromatic lens, you can compare fibers and hairs with no color tints.
- Your task is restoration of precious museum artefacts? SteREO Discovery.V8 is an essential tool in restoration of museum collections to preserve Cultural Heritage for future generations.

ZEISS Axio Zoom.V16

Your zoom microscope for high resolution in large fields.



Tick (*Ixodida*) from below, objective lens PlanApo Z 1x/0.25 FWD 60 mm, autofluorescence, EDF



Fruit fly larva (*Drosophila*), objective lens PlanNeoFluar Z 2.3x/0.57 FWD 10 mm, multiple fluorescence

Configured to Your Requirements

Microscopes

Axio Zoom.V16 (manual focus)

Axio Zoom.V16 (motor-driven focus)

Illumination Techniques

Brightfield, darkfield, relief contrast with reflected, transmitted, and mixed light, polarization, fluorescence

Illumination

Reflected light: fiber-optic cold-light sources with spot, ring, line, vertical, diffuser, area, and coaxial illumination with switchable relief illumination, LED ring lights with a segment function

Transmitted light: fiber-optic setup 450 with sliding mirror, low-profile LED setup 300

Accessories

Interchangeable lenses (objective lenses, eyepieces), observation and intermediate tubes, manual and motor-driven stands, manual and motor-driven stages, cameras and software modules to document images and for image processing

Axio Zoom.V16 offers you a successful combination of a large field of view, zoom, and working distance as in a stereo microscope together with the high resolution of a light microscope.

With the Axio Zoom.V16 zoom microscope, thanks to its double-sized basic aperture compared to powerful CMO stereo microscopes, you benefit from a resolution that is 2.5x higher, as well as fluorescence that is 10x brighter in comparable fields of view. As needed, you can quickly and easily switch in the stereoscopic image.

Simpler. More Intelligent. More Integrated.

- With a 16x zoom and a basic aperture of 0.25 (with a 1x objective lens), with Axio Zoom.V16 you will benefit from what is currently the most powerful available stereo or zoom microscope.
- Axio Zoom.V16 offers you a high resolution of 0.3 μm in a large field of 1.6 mm.
- Its patented eZoom allows you to choose between optimized zoom modes for viewing through the eyepiece, for fluorescent applications, or for the documentation of images.
- With eZoom, you get reproducible magnifications with accuracy of over 99%.
- Take advantage of the intelligence of the 450 mot transmitted-light module. When zooming in *Best Mode*, you get an image that is automatically optimized for contrast and brightness, while taking account of the microscope's current state.

Created for Your Applications

- Use Axio Zoom.V16 when you need more resolution in larger fields.
- You benefit from the significantly higher aperture if, with image processing software, you manage to add value to the information in the image compared to the classical view through the eyepiece.
- Axio Zoom.V16 offers you high optical performance together with large working distances, which are of particular importance when manipulating your specimen. As well as in museums collection restoration.
- Do you need to investigate model organisms and zoom from a large overview down into the smallest details of organs, tissues, and individual cells? Then Axio Zoom.V16 is your best choice.

Technical Specifications

Choose the microscope system that best matches your application.

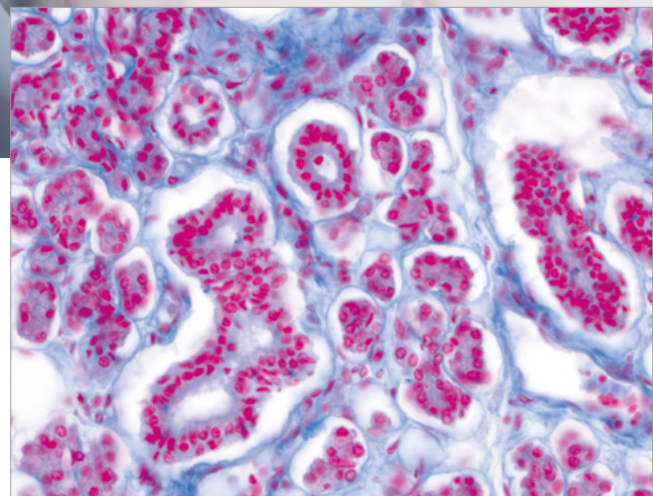
	Stemi 305	Stemi 508	SteREO Discovery.V8	Axio Zoom.V16
General				
Optical system	Greenough stereo microscope	Greenough stereo microscope	CMO stereo microscope	Zoom microscope
Model type	Two zoom systems, tilted by the stereo angle, 12°	Two zoom systems, tilted by the stereo angle, 11°	Two zoom systems, arranged in parallel, with a common main objective lens	One-channel zoom system with a high aperture, with a main objective lens
Stereoscopic image (through eyepieces)	●	●	●	○ (ergo phototube Z needed)
Optical Data of the Basic System*				
Magnification	8–40x	6.3–50x	10–80x	7–122x
Maximum resolution, smallest visible structure in the specimen	200 LP/mm, 2.5 μm	200 LP/mm, 2.4 μm	346 LP/mm, 1.5 μm	745 LP/mm, 0.7 μm
Field size	28.8–5.8 mm	123 mm	23–2.9 mm	33–2 mm
Optical Data with Interchangeable Lenses				
Magnification	4–200x	2–250x	3–460x	3.5–644x
Maximum resolution, smallest visible structure in the specimen with interchangeable lenses	400 LP/mm, 1.25 μm	400 LP/mm, 1.25 μm	796 LP/mm, 0.6 μm	1710 LP/mm, 0.3 μm
Maximum field size	57.6 mm	122 mm	76.7 mm	66 mm
Microscope Body				
Zoom factor	5:1	8:1	8:1	16:1
Low-distortion zoom optics	●	●	●	●
Apochromatically corrected zoom lenses	–	●	●	●
Parfocal zoom: your specimen will stay in focus when zooming	●	●	●	●
Axial mode for vertical observation, free from parallax errors	–	–	○	●
Viewing angle	45°	35°	20°, 35°, ergotubes 5–45°	20°, ergotube 5–45°
Eyepieces	10x/23 (included), 16x/14	10x/23 (included), 16x/16	10x/23, 16x/16	10x/23, 16x/16
Eyepieces (with diopter adjustment, incl. eyecups)	25x/10	25x/10	25x/10	25x/10
Viewing tubes	–	–	Fixed tubes and ergotubes with/without camera output, ergotube with extended eyepiece tube	Fixed tube with camera output, ergotube with camera output and 3D slider
Modular intermediate tubes	–	–	40 mm spacing ergotube, Y-tube manual and motor-driven, drawing attachment, additional viewer attachment, intermediate fluorescence tube, coaxial reflected illumination	Fluorescence attachment, coaxial reflected illumination

- Available
 - Optional
 - Not available
- * Stemi 305 and 508 without interchangeable front optics, SteREO Discovery and AxioZoom with objective lens 1x

	Stemi 305	Stemi 508	SteREO Discovery.V8	Axio Zoom.V16
Microscope Body				
Documentation options	Stemi 305 trino: phototube with 50/50 split to the left. Built-in c-mount adapter 0.5x for ZEISS AxioCam cameras. Stemi 305 cam**: built-in 1.2 MP Wi-Fi camera, to be used with iPad imaging app Labscope.	Stemi 508 doc: phototube with 0/100 switch to the right*. Integrated: Changeable c-mount adapter 0.5x for ZEISS AxioCam cameras.	Binocular phototubes with 0/100 switch to the right*. Intermediate phototubes with: - 0/100 switch, manual or motorized - 0/100 switch + 50/50 split, manual - 50/50 split with two ports (left/right)*	Binocular phototubes with 0/100 switch and 60N interface*. Two digital phototubes without eyepiece view*: - with integrated 5 MP camera
Attachment systems/objective lenses	Achromatic front optics 3 0.5x, 0.75x, 1.5x, 2.0x	Achromatic front optics 5 0.3x, 0.4x, 0.3–0.5x Apochromatic front optics 5 Apo 0.63x, Apo 1.5x, Apo 2.0x	Achromat S 0.3x, 0.5x, 0.63x, 1x, 1.25x, 1.5x Plan S 1x, Plan Apo S 0.63x, 1x, 1.5x, 2.3x, 3.5x mono	Plan-NEOFLUAR Z 1x, 2.3x, Apo Z 1.5x, Plan Apo Z 0.5x, Plan Z 1x
Stands				
Bench stands	Stand K, K EDU, K LAB, K MAT	Stand K, K EDU, K LAB, K MAT, Stand N, stand system 300	Stand systems 300 and 450	Stand systems 300 and 450
Focusing	Manual coarse adjustment	Manual coarse adjustment, column 350 with coarse/fine drive	Manual or motorized coarse/fine adjustment	Manual or motorized coarse/fine adjustment
Boom stands	Stands A and U	Stands A, SDA, and U	Stands A and SDA	Stands SDA
Stages				
Gliding/ball/rotating polarization stage	●	●	●	●
XY stages	–	–	Manual and motorized	Manual and motorized
Illumination				
Integrated LED illuminations (stands K)				
Integrated near vertical LED spot	●	–	–	–
Spot K, height adjustable, zoomable	○	○	–	–
Double spot K, gooseneck	○	○	–	–
Segmentable ring light K	○	○	○ (with controller K)	○ (with controller K)
Flat transmitted light stand	○	○	–	–
Mirror-based transmitted light stand	○	○	–	–
Fiberoptics				
Cold light sources (LED or halogen)	○	○	○	○
Annular ring lights (brightfield or darkfield)	○	○	○	○
Single/dual spots (flexible or gooseneck)	○	○	○	○
Diffuse illumination (dome or face light)	○	○	○	○
Linear light (for grazing illumination)	○	○	○	○
Vertical illuminator (for recessions)	○	○	○	○
Fluorescence equipment (LED)	–	–	○	–
Fluorescence equipment (fiber optic, HXP)	–	–	○	○
Coaxial illuminator (for flat reflective objects)	–	–	○	○
Mirror-based transmitted light unit 450	–	–	○	○
Direct LED				
Segmentable ring lights (BF or DF)	○	○	○	○
LED double spot gooseneck	○	○	○	○
Flat transmitted light base (BF, DF, oblique)	–	○	○	○
Motorized transmitted light unit 450 (BF, DF, oblique)	–	–	–	○
Polarizing Equipment				
Pol equipment (for spots or ring lights)	○	○	○	○
Pol equipment (for transmitted light)	○	○	○	○
● Available	*	with 60N interface with accepts changeable camera adapters for ZEISS AxioCam cameras, SLR or video cameras		
○ Optional	**	Please ask your local contact for approval in your country		
– Not available				

Upright Microscopes

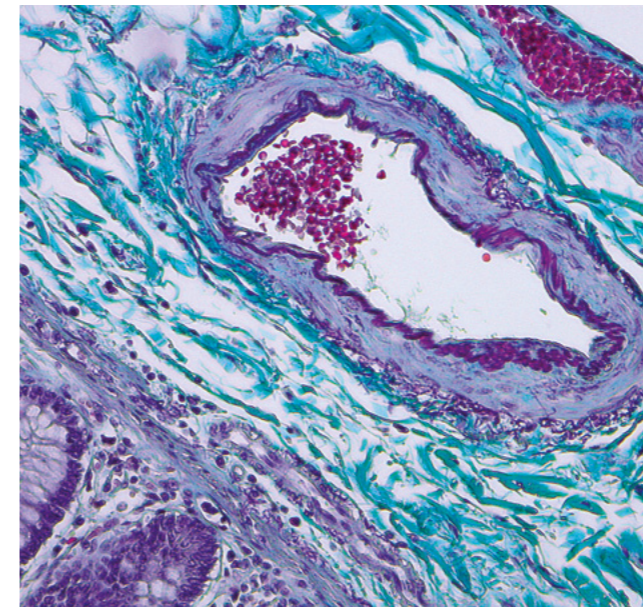
Use all contrast methods with reliable, compact microscopes.



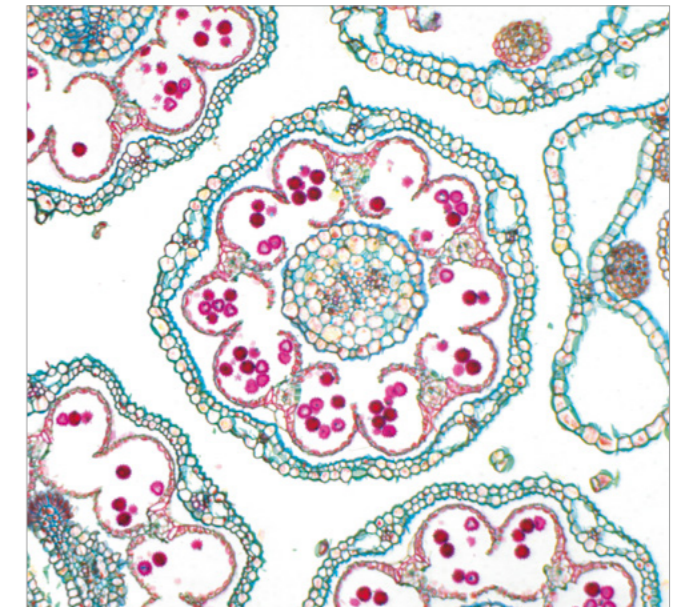
You can detect even the smallest details of your specimen with upright ZEISS microscopes thanks to their numerous contrasting techniques. Especially in clinical labs, you can rely on proven, reliable technology when assessing complete blood counts, smear tests, or sections. Ranging from robust educational microscopes and ergonomically designed laboratory units up to the most demanding platforms, upright microscopes from ZEISS enrich your daily work.

ZEISS Primostar 1

Your affordable microscope for education and teaching.



Pig intestine, Masson-Goldner stained.



Daisy umbel (*Bellis perennis*) brightfield.

Configured to Your Requirements

Primostar 1 focuses on the essentials. This teaching microscope is optimized for brightfield microscopy of stained samples in the life sciences. Primostar 1 comes as a fixed-package microscope with Fixed-Koehler illumination. Simply plug in and start your discoveries. For sustainable use, Primostar 1 is made of high quality materials and focuses on energy-saving LED illumination. Precision makes teaching with Primostar 1 effective and your choice a highly economical investment. Additional plus: 5 year warranty are guaranteed.

Microscopes

Primostar 1 (fixed Köhler)

Contrasting Techniques

Brightfield

Illumination

Transmitted light: LED, illumination mirror

Accessories

Illumination mirror,
Plan-Achromat 100x / 1.25 Oil

Simpler. More Intelligent. More Integrated.

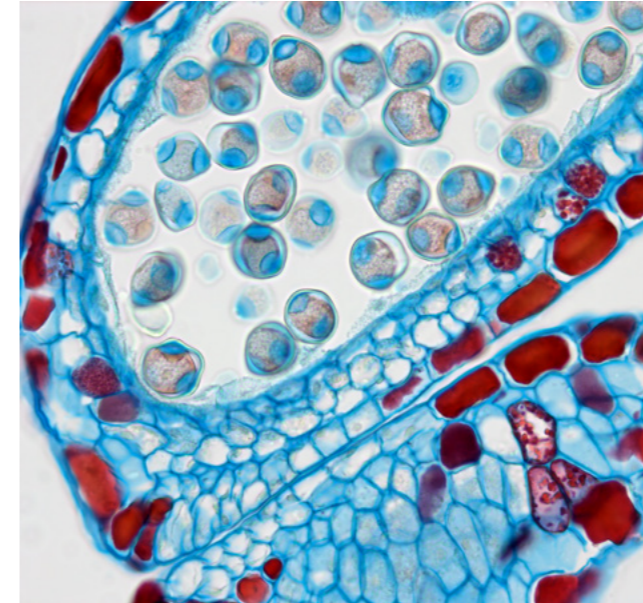
- Ready-to-use package – simply plug in and start working.
- Have full control: blue light intensity display on both sides of the stand act as important control function over all microscopes in the course room: for control by the educator and quick control of the light intensity by the users
- For right-hand practice: Operate the stage drive with the right hand and use the focus drive with your left hand
- Rackless stage and stage cover for your safety and comfort
- For longevity: robust and short stage drive with easy-to-read scales
- A must-have: high standards in material selection: the microscopes consist mainly out of metal

Created for Your Applications

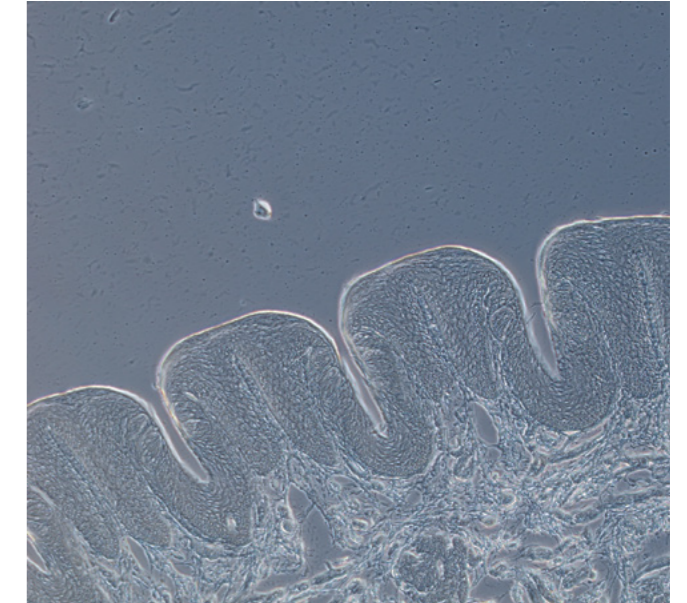
- You examine stained samples in the life sciences using brightfield.
- As a botanist, you examine cross sections of plant stems.
- You examine tissue sections in brightfield from anatomy, pathology, hematology, and zoology to record symptoms.

ZEISS Primostar 3

Your robust yet compact microscope for digital teaching and routine lab work



Corylus avallana in brightfield, magnification: 40x



Rabbit tongue, taste buds in phase contrast, magnification: 40x

Configured to Your Requirements

In the classroom or in the routine lab, you need reliable microscopes that can take a lot of wear and tear. After all, you and your colleagues or students will be working long hours, often in cramped spaces. You need microscopes that will pay back your investment with smooth operation – day-to-day and year in, year out. Primostar 3 packs all of that into its sturdy metal frame. Yet this robust light microscope is also designed for maximum ease of use. For both productive learning and efficient lab work, students and staff alike will be free from the very beginning to focus on the essentials.

Primostar 3 is your reliable partner in microscopy – today and in years to come.

Microscopes

Primostar 3 Fixed-Köhler
Primostar 3 Full-Köhler
Primostar 3 HD

Contrasting Techniques

Brightfield, darkfield, phase contrast, simple polarization contrast, fluorescence (optional)

Illumination

Transmitted light: HAL 30 (halogen), LED, illumination mirror
Reflected light: LED fluorescent reflected light

Accessories

Objective lenses (HF, Ph, D = 0, 100x dry), Ph-sliders, set of filters (blue, green, yellow), reflected light fluorescence attachments, sample slide kit, transmitted light mirror, eyepiece pointer, crossline micrometer, simple polarization accessory, transport and storage cases

Simpler. More Intelligent. More Integrated.

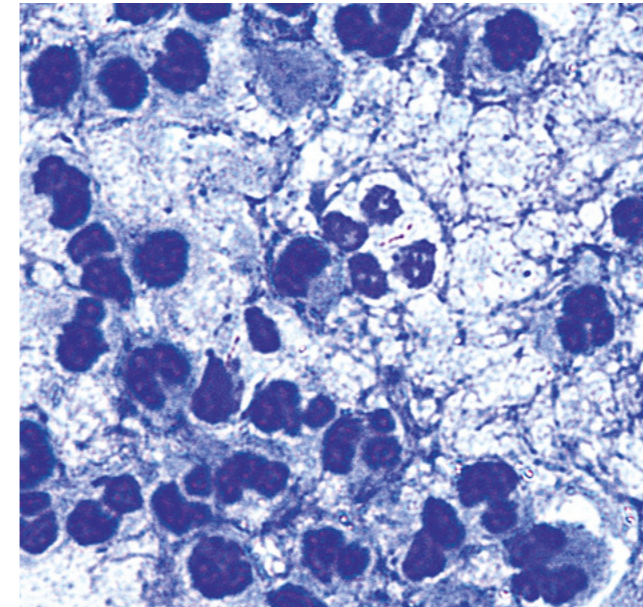
- Choose the best configuration for your tasks at hand from a number of pre-defined packages. A selection of objectives is already included.
- Plug in and start focusing on your work with the Fixed Köhler Primostar 3. Or train and learn the Köhler set-up with Primostar 3 Full-Köhler packages.
- Transmitted light brightfield, darkfield, simple polarization, phase contrast and fluorescence contrast are contrast techniques of choice. Just choose what your application asked for.
- Be ready to teach digital natives in a digital classroom with Primostar 3 HD.
- Benefit from the integrated 8.3 MPx HD with numerous interfaces for your flexible setup in your training courses environment (USB 3.0, HDMI, Ethernet, Wi-Fi compatible).
- Use free of charge Labscope App on your Windows PC or iOS device. Create images, movies, share your results with your peers and get ready for your first annotations.

Created for Your Applications

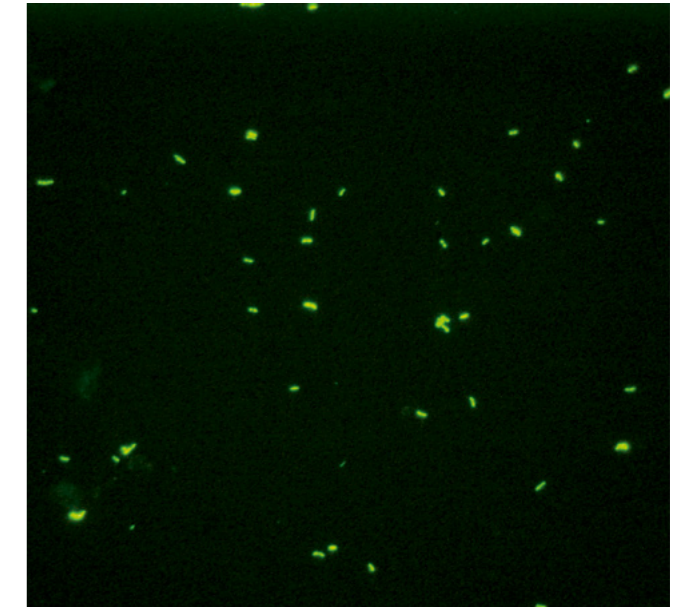
- You examine stained tissue sections using brightfield or fluorescent contrast. You look at unstained specimens with phase contrast. You analyze extremely fine structures such as diatoms using darkfield.
- As a botanist, you examine cross sections of plant stems.
- You examine tissue sections and blood smears from anatomy, pathology, hematology, and zoology to record symptoms.
- You examine cultivated plants for phytopathogenic agents or pests, or you track the development of illnesses and the course of diseases.
- You investigate the morphology of bacteria cells such as *Bacillus subtilis*, *Staphylococcus epidermidis*, *Micrococcus luteus* and *Escherichia coli*.

ZEISS Primo Star iLED

Observe microbiological structures.



Mycobacterium tuberculosis, Ziehl-Neelsen stain: the mycobacteria stained purple are hard to see in a microscopic image



Mycobacterium tuberculosis, auramine-rhodamine stain; Sample: courtesy of Dr. H. Hoffmann of the WHO Supranational Reference Laboratory IML Gauting, Germany

Configured to Your Requirements

Primo Star iLED is your recommended microscope to visualize structures smaller than 0.5 μm with LED fluorescence excitation and transmitted-light brightfield illumination such as the rod-shaped bacterium *Mycobacterium tuberculosis*. *Mycobacterium tuberculosis* comes with a size of 2 – 4 μm in lengths and 0.2 – 0.5 μm in width.

Based on experiences in the WHO Supranational Reference Laboratory of Tuberculosis, Gauting, Germany, tuberculosis may whether analyzed with Ziehl-Neelsen-staining or fluorescence excitation, e.g. Auramine O.

Microscopes

Primo Star (fixed Köhler with iLED fluorescence attachment)

Contrasting Techniques

Brightfield, LED fluorescence

Illumination

Transmitted light: LED

Reflected light: LED reflected fluorescent light (455 nm)

Accessories

Objective D=0, eyecups; optional: transport box, rechargeable battery pack, illumination mirror, Axiocam microscope cameras

Simpler. More Intelligent. More Integrated.

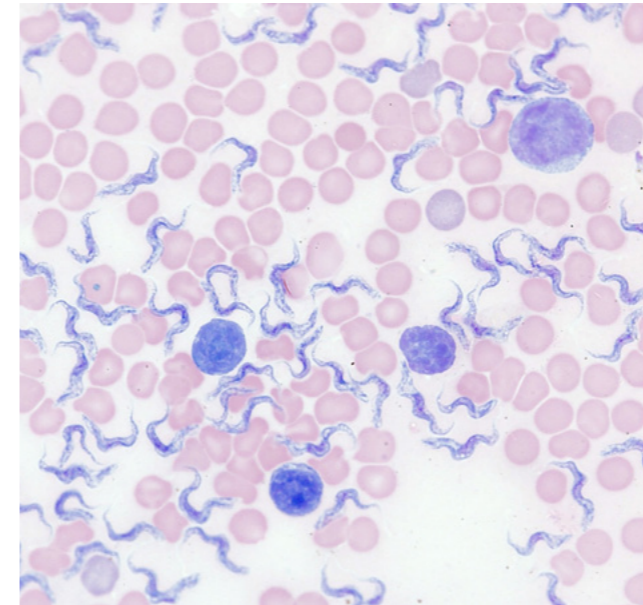
- It is easy to change between fluorescence and brightfield. You get images with outstanding contrast, especially when you work with samples colored with auramine-rhodamine stain.
- LED fluorescence is safe, energy-efficient, and easy to use. You neither have to wait for lamps to heat up or cool down, nor do you have to replace or adjust them.
- In areas without a power supply, you can use a rechargeable battery pack.
- With the ergonomic eyecups, you can get precise results even without a darkroom.
- If you are a customer from the public health services of those countries most heavily affected by tuberculosis, you can get Primo Star iLED at an especially low price.

Created for Your Applications

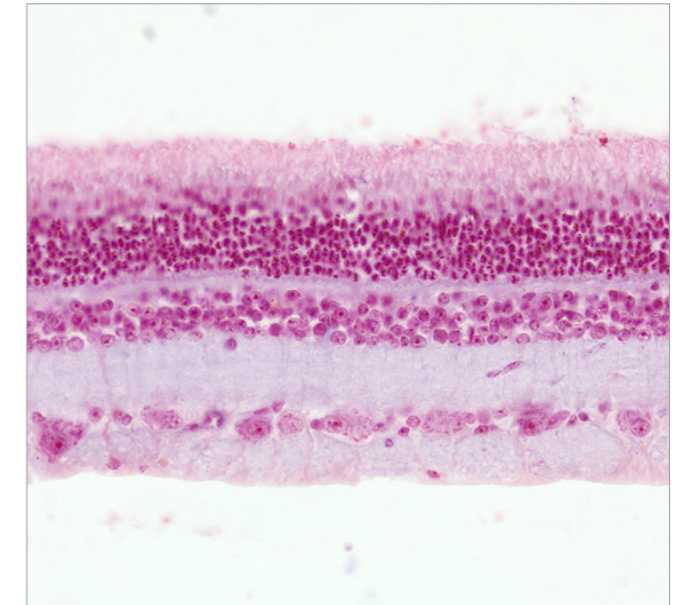
- You examine stained tissue sections using brightfield or fluorescent contrast. You look at unstained specimens with phase contrast. You analyze extremely fine structures such as diatoms using optional darkfield.
- As a botanist, you examine cross sections of plant stems.
- You examine tissue sections and blood smears from anatomy, pathology, hematology, and zoology to record symptoms.
- You examine cultivated plants for phytopathogenic agents or pests, or you track the development of illnesses and the course of diseases.
- You investigate the morphology of bacteria cells such as *Bacillus subtilis*, *Staphylococcus epidermidis*, *Micrococcus luteus* and *Escherichia coli*.

ZEISS Axiolab 5

Your smart microscope for more efficient routine lab work.



Blood smear, Giemsa staining, transmitted light brightfield, objective: Plan-Apochromat 63x/1.4



Rat retina, section, nuclear fast red, transmitted light brightfield, objective: Plan-Apochromat 20x/0.8

Configured to Your Requirements

Microscopes

Axiolab 5 (transmitted light)

Axiolab 5 (transmitted light and reflected light fluorescence)

Contrasting Techniques

Brightfield, darkfield, phase contrast, simple polarization, LED fluorescence

Illumination

Transmitted light:

- 35 W halogen illumination (optional)
- 10 W LED illumination

Reflected light:

- Up to 3 fluorescence LEDs

Accessories

Axiocam 208 color and Axiocam 202 mono microscope cameras, stages for left and right hand operation, ergotubes, multidiscussion equipment

Axiolab 5 is made for the routine work that goes on every day in your lab. Its compact and ergonomic design saves space and makes for easy handling.

Axiolab 5 is a real team player. Combine it with Axiocam 208 color and take full advantage of the smart microscopy concept: you'll be experiencing a completely new form of digital documentation. Just focus your sample and press a single button for crisp images in true color. The digital image will look exactly like you see it through the eyepieces, with all the details and subtle color differences clearly visible.

Plus, Axiolab 5 automatically adds the correct scaling information to your images. You get all of this in a standalone operation, without needing a PC or any additional software. Save time, money and valuable lab space with Axiolab 5. Digital documentation has never been easier.

Simpler. More Intelligent. More Integrated.

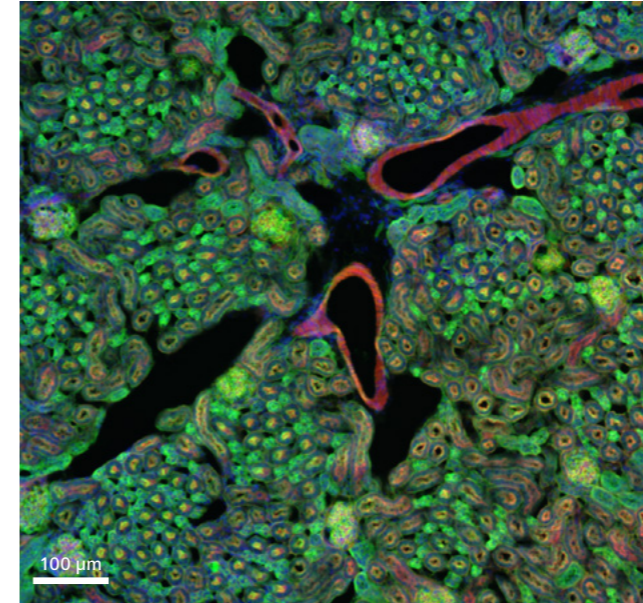
- Axiolab 5 offers you an easy handling, ergonomic user concept that's adapted to your lab routine. You can control the microscope and its attached camera without even changing your grip.
- To acquire an image, simply press the snap button right on the stand. Your smart microscope system then automatically adjusts the parameters for you and documents your sample precisely as you see it through the eyepieces – detail-rich and in true color. The correct scaling is always included automatically, even without a computer.
- LED fluorescence is safe, energy-efficient, and easy to use. You neither have to wait for lamps to heat up or cool down, nor do you have to replace or adjust them.
- Ergotubes and torque adaptable stage handle allow you to work in a comfortable position, even during extended use.
- With the multidiscussion equipment, all co-observers can see the same image with the same orientation.

Created for Your Applications

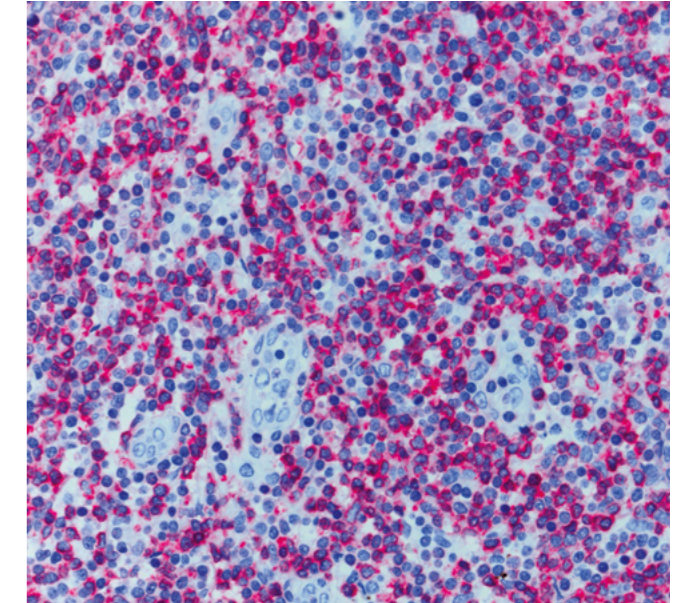
- With Axiolab 5, it is particularly easy for you to count white blood cells in brightfield, as you can reach all of the essential controls with one hand.
- In darkfield, you can recognize uncolored structures at a glance.
- Using polarization contrast, you can detect birefringent crystals, for example when visualizing gout.
- Using fluorescence contrast, you can examine heparinized blood for cytogenetic (chromosome analysis) and molecular cytogenetic investigations.
- In the laboratory, you can analyze body fluids, tissues, and excretions. You can do hematological analyses on the cell morphology of blood and tissue cells and can do hemostasis analyses for bleeding tendency or thrombophilia.
- In your IVF laboratory you use Axiolab 5 for enlarged visualization of sperm cells in brightfield or phase contrast.

ZEISS Axioscope 5

Your smart microscope for biomedical routine and research.



Mouse kidney in fluorescence, cryosection, AF 488 – WGA, AF 568 Phalloidin, DAPI, objective: Plan-Apochromat 20x/0.8



Histological specimen, CDx immunohistological stain; Red: immunoreactive antigens in cytoplasm; Blue: nuclear counterstaining Ziehl-Neelsen-Färbung, objective: EC Plan-Neofluar 63x/0.95 Korr.

Configured to Your Requirements

Microscopes

Axioscope 5, transmitted light, LED
Axioscope 5, transmitted light, Hal 50
Axioscope 5, fluorescence

Contrasting Techniques

Transmitted light: brightfield, darkfield, DIC, PlasDIC, simple polarization, phase contrast
Reflected light: brightfield, darkfield, DIC, C-DIC, simple polarization, fluorescence

Illumination

Transmitted light:
■ LED 10W, Hal 50, Hal 100
Reflected light, fluorescence:
■ Colibri 3, HXP 120, and other

Accessories

Axiocam 208 color and Axiocam 202 mono microscope cameras, Colibri 3, XY stages, ergotubes und multidiscussion equipment

In the past, documenting samples with multiple fluorescent labels in your routine lab could be time consuming. To get best image quality, you needed to manually switch filters, adjust illumination intensities and exposure times and to snap each single channel image. For three different channels, this could sum up to 15 steps and clicks. With Smart Microscopy from ZEISS, this is a thing of the past.

Your Axioscope 5 with Axiocam 202 mono and Colibri 3 LED illumination take this workload from you. You don't even need to move your hands from the microscope stand anymore. All you have to do is focus and press Snap – and you're done! You can now concentrate on the essence of your job and let your Axioscope 5 work for you. You'll work more efficiently, save time and produce high contrast images with best image quality. What's more: this even works without any PC involved.

Simpler. More Intelligent. More Integrated.

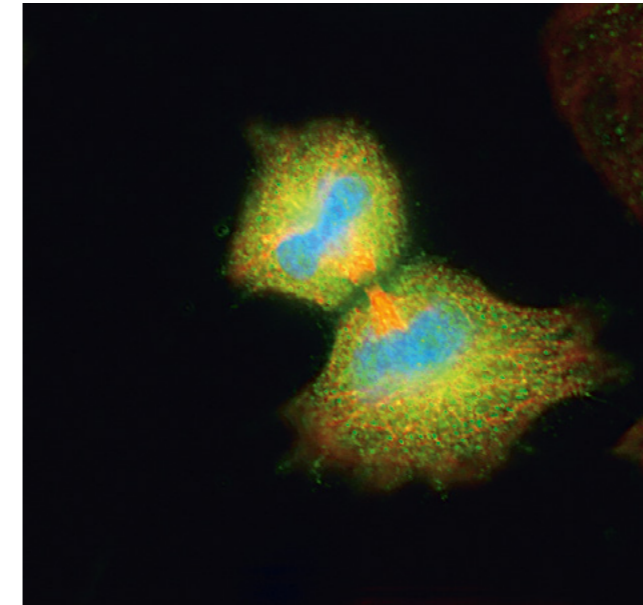
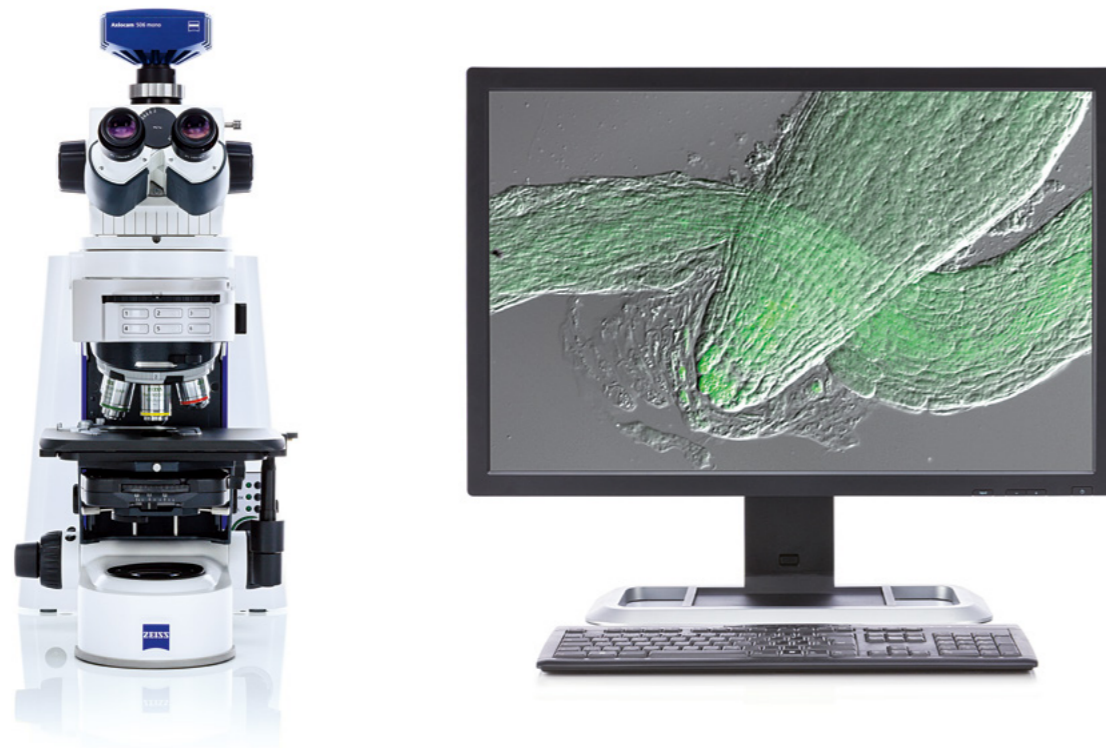
- Capture up to four fluorescence channels with just one click: the system automatically adjusts the exposure time, acquires the image, switches the channel and starts again. You get your overlaid multichannel fluorescence image including scale bar.
- Colibri 3 provides up to four fluorescence LEDs which can be individually controlled, directly from the stand.
- For transmitted light applications, the smart Axioscope 5 system makes automatic adjustments for brightness and white balance to keep digital documentation easy.
- Axioscope 5 uses its transmitted white light LED to provide powerful illumination with high color fidelity.
- With Axioscope 5 you can use a sheer variety of contrasting techniques for your applications.

Created for Your Applications

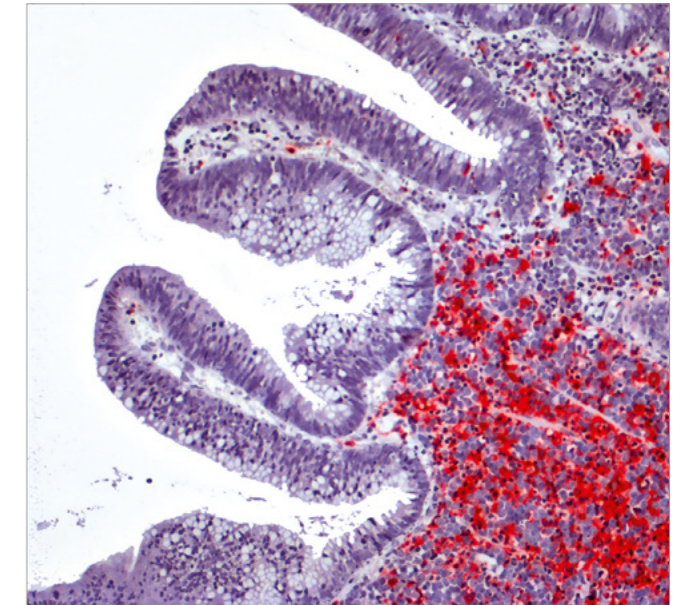
- You can carry out histological or pathohistological analyses of tissue sections in brightfield contrast.
- With polarization contrast, you can analyze foreign bodies and crystals in tissue and body fluids.
- You can examine stained mucosal cells in hematology, urology, and gynecology using brightfield and fluorescence.
- Perform multichannel fluorescence imaging of tissues and cells in your lab.

ZEISS Axio Imager 2

All contrasting techniques on a single imaging platform.



HeLa cells, mitotic phase; red: Alexa Fluor 594-DM1-alpha, green: Alexa Fluor 488-Mad2, blue: DAPI, objective lens: EC Plan-NEOFLUAR 100x/1.3 oil, Sample: courtesy of H.Y. Li and Y. Xheng, department of embryology at HHMI and CIW, Maryland, USA



Histological section; red: MPOX2, blue: nuclear counterstaining, objective lens: EC Epiplan-NEOFLUAR 10x/0.3, Sample: courtesy of A. Schmitt-Gräff, pathology department, Freiburg University, Germany

Configured to Your Requirements

Microscopes

- Axio Imager.A2 (manual)
- Axio Imager.A2 LED (manual, LED fixed Köhler illumination)
- Axio Imager.D2 (partially motor-driven)
- Axio Imager.M2p (pathology system, partially motor-driven)

Contrasting Techniques

- Transmitted light: brightfield, darkfield, DIC, polarization, phase contrast
- Reflected light: brightfield, darkfield, DIC, C-DIC, fluorescence

Illumination

- Transmitted light: DL 12 V 100 W HAL, 12 V LED
- Reflected light: 12 V 100 W HAL, 12 V 100 W HBO, 12 V LED, 75 W XBO, VisiLED, microLED, Colibri 5/7

Accessories

- LEDs with push-and-click modules, manual stages for left- and right hand operation, encoded and motorized stages, sample holders, binocular tubes with various viewing angles, camera tubes, multi-discussion equipment

Simpler. More Intelligent. More Integrated.

- Axio Imager 2 impresses with its outstanding optics, perfect contrast and illumination.
- It evenly illuminates your specimens.
- Your Axio Imager 2 is equipped with a light manager for transmitted and reflected light. You benefit from a constant light impression at all magnifications and for all contrasting techniques.
- The stands for Axio Imager 2 family are coded and all details of the image acquisition, such as objective lens and magnification, are saved together with the image.
- Axio Imager.M2p is perfectly tailored for your requirements in the pathology department. Thanks to the encoded nosepiece turret and convenient motorization such as automated parfocal correction, you can work efficiently with a high specimen rate.
- The motorization of Axio Imager 2 allows an ergonomical workflow and speeds up your work.

Created for Your Applications

- Axio Imager.A2 with LED illumination in connection with Achroplan or EC Plan-NEOFLUAR objective lenses is your ideal basic equipment for histology.
- Axio Imager 2 with polarization contrast is indispensable in showing debris in tissue or in diagnosing Alzheimer's disease, for example. Depending on the application, you can use fixed or rotating polarizers and analyzers, or even a lambda plate.
- In histology and anatomy, you benefit from excellent resolution, convincing colors in details and overviews, and the ability to quickly and precisely relocate important positions in the specimen. The EC Plan-NEOFLUAR and Plan-APOCHROMAT objective lenses in connection with motorized stages are ideally tailored for this.
- You can visualize parasites, bacteria, or clusters of viruses.
- You identify extrinsic particles.

Technical Specifications

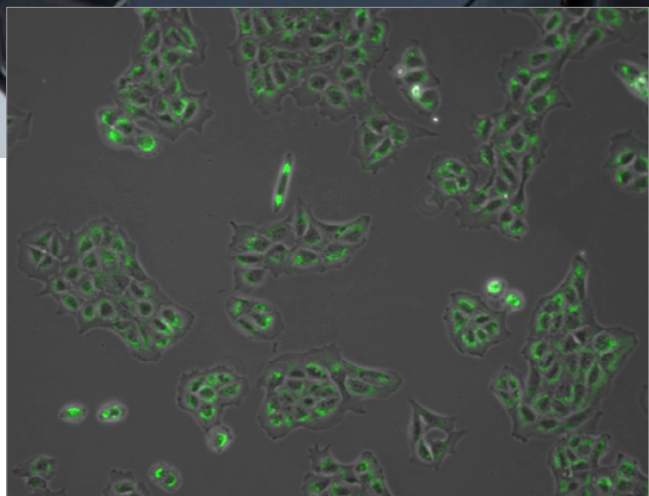
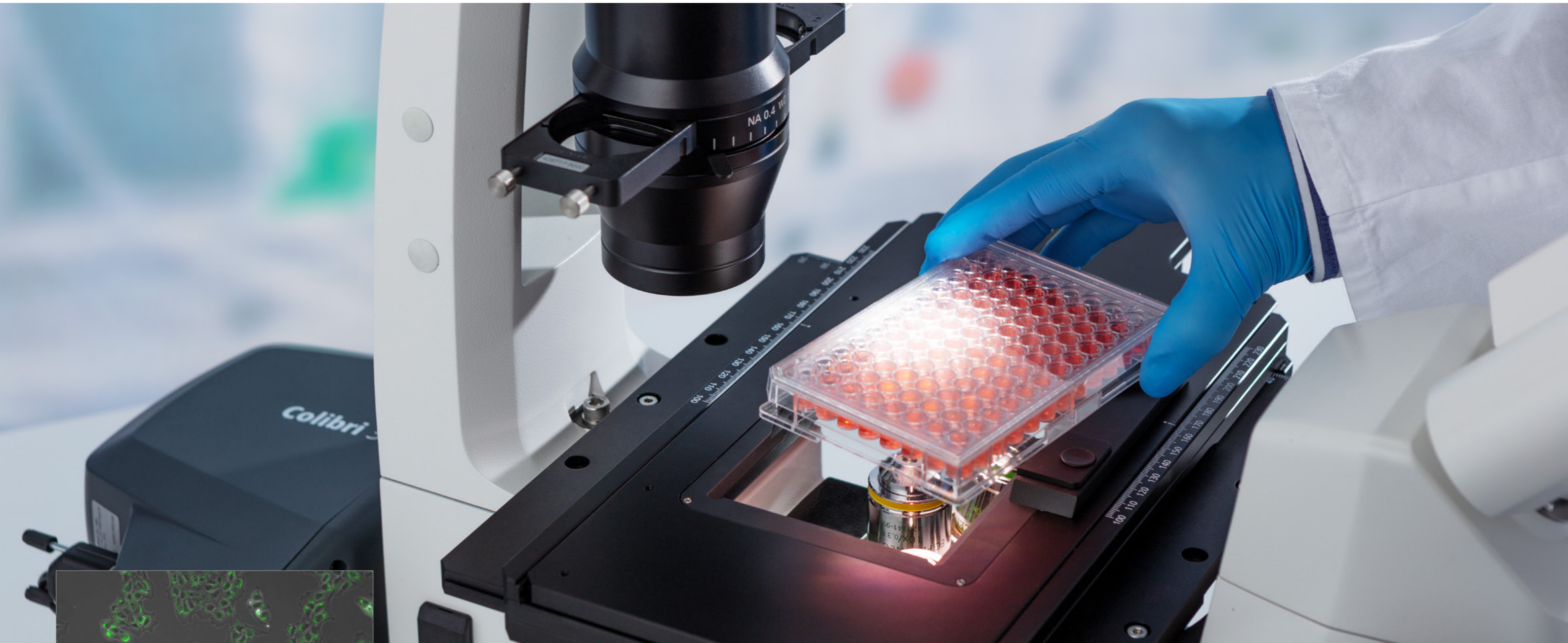
Here you can find the microscope system that best matches your application.

ZEISS System	Primostar 1	Primostar 3
Stand	Upright	Upright
Optical system	Infinite TL180*	Infinite TL180*
Minimum viewing height in mm	375 to 425 mm	370 mm to 410 mm
Ergotube	–	–
Eyepiece suitable for wearers of glasses	●	●
Field of view in mm	20	20/22
Integrated carrying handle	●	●
Integrated solution to accommodate cable when stored	●	●
Power supply	External, on the stand	External, on the stand
Rechargeable battery pack for mobile use	–	–
Intensity indicator for illumination	●	●
Contrasting Techniques		
Transmitted light, brightfield	●	●
Darkfield	–	●
Phase contrast	–	●
Differential interference contrast	–	–
Fluorescence	–	●
Documentation		
Camera tube	–	●
Smart Microscopy		
Snap Button		
Integrated camera	–	●
Illumination		
Full Köhler	–	●
Integrated LED fluorescence	1 LED	1 LED
External FL excitation	–	–
Maximum power consumption in W, halogen transmitted light illumination	–	30
LED transmitted light illumination	–	●
Plug-in mirror	Yes, for fixed Köhler	Yes, for fixed Köhler
<ul style="list-style-type: none"> ● Available ○ Optional – Not available 		

Axiolab 5	Axioscope 5	Axio Imager 2
Upright	Upright	Upright
Infinite IC ² S	Infinite IC ² S	Infinite IC ² S
472	485	475 +
●	●	●
●	●	●
23	23	23/25
●	–	–
●	–	–
Integrated	Integrated/external	Integrated/external
–	–	–
–	–	–
●	●	●
●	●	●
●	●	●
–	●	●
●	●	●
●	●	●
●	●	●
–	–	–
●	●	●
3 LEDs	4 LEDs	–
–	4/6 channel	6/10 channel
35 (optional)	50/100	100
10 W	10 W	●
–	–	–

Inverted Microscopes

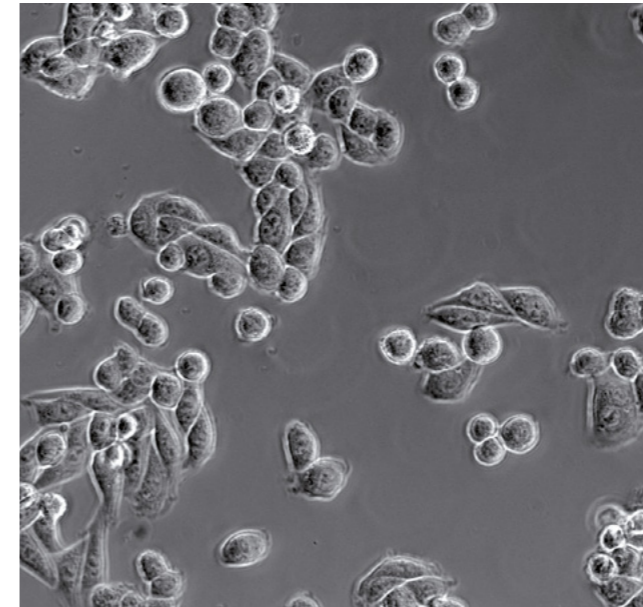
Living cells in focus.



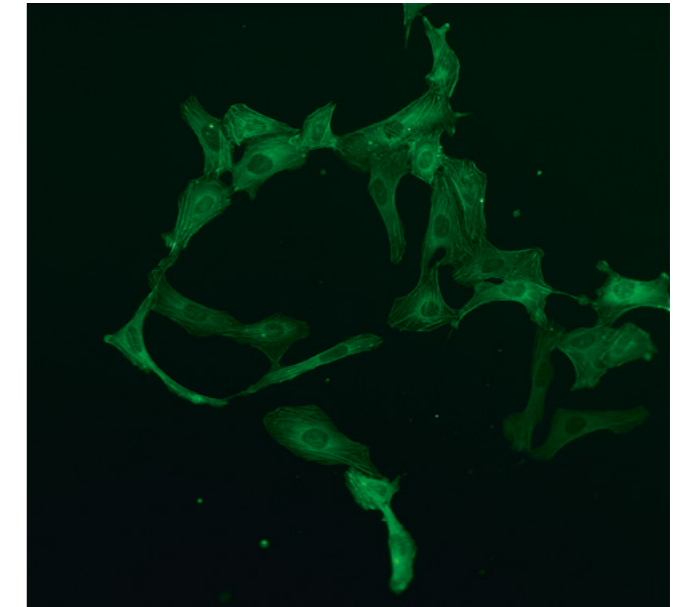
With inverted microscopes, you can use the large sample space between the stage and the illumination for your cells in petri dishes, well plates, or culture flasks. You will have enough space for your roller bottles and for micromanipulation. And all that together with contrasting techniques such as brightfield, phase contrast and fluorescence, that you need in your laboratory. Your ZEISS microscope is compact and focuses on the essentials.

ZEISS Primovert

Examine and assess your living cells – quickly and easily.



HeLa cells, phase contrast,
objective: LD Plan-ACHROMAT 20x/0.3 Ph2



U2OS cells expressing GFP, fluorescence contrast,
objective: Plan-ACHROMAT, 20x/0.4

Configured to Your Requirements

Microscopes

Primovert
Primovert photo
Primovert HDcam
Primovert iLED

Contrasting Techniques

Brightfield, phase contrast, fluorescence

Illumination

HAL 30, LED

Accessories

Stage insert (glass or metal), holding frame for petri dishes, object guides, LD condensers, phase contrast slides, Plan-ACHROMAT and LD Plan-ACHROMAT objective lenses

Now you can study the morphography of living cells and evaluate their development with this compact inverted microscope from ZEISS. Primovert is perfectly suited to your cell culture laboratory.

It enables fast, efficient investigations of both unstained cells in phase contrast and GFP-labeled cells in fluorescence contrast. It fits straight into your laminar flow cabinet to work directly in a sterile environment. And it brings you a welcome degree of flexibility, too, with its integrated camera and the Labscope imaging app for iPad: observe your cells from outside the sterile working space and evaluate them with colleagues.

Simpler. More Intelligent. More Integrated.

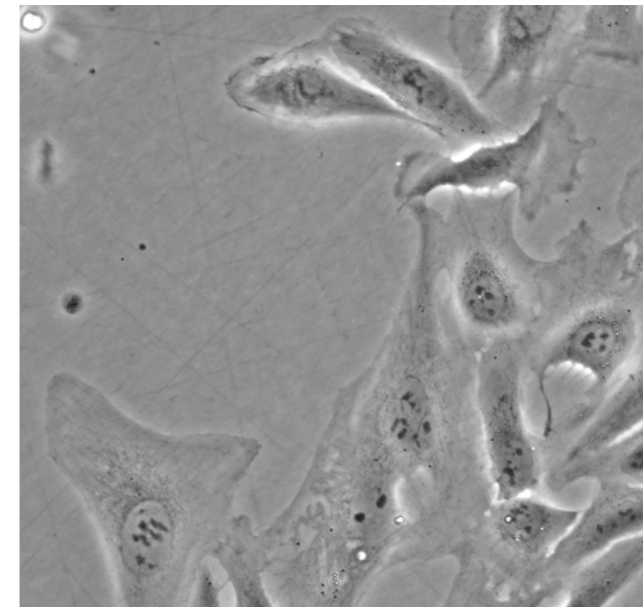
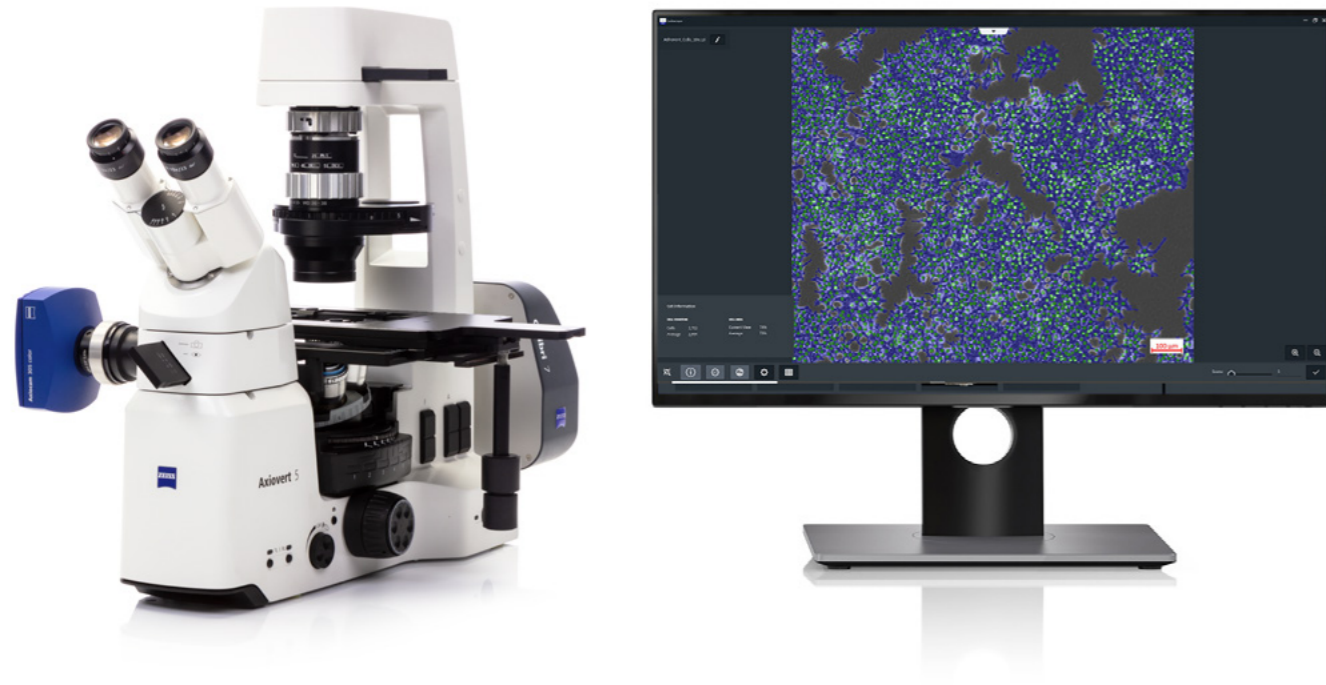
- Switch from phase contrast to fluorescence contrast to assess both undyed and GFP-labeled cells.
- The inverted microscope is compact and fits directly in your Laminar Flow Box – you work directly in the sterile environment.
- Your Primovert is immediately ready for use. You reactivate the microscope in stand-by mode directly at the stage. Primovert switches in walk-away mode automatically after 15 minutes off. This saves energy and increases the life of the light source.
- Primovert HDcam integrates a camera. Use your iPad and the free imaging app Labscope and discuss the image together in the team.
- Snap microscope images, annotate and create reports, and share them easily wirelessly with other.

Created for Your Applications

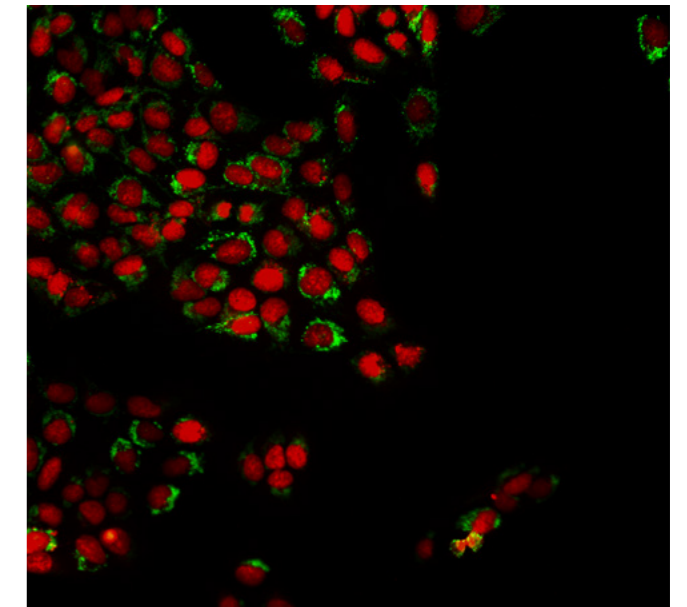
- With phase contrast, you get high-contrast images of unstained cells. You can analyze the growth, morphology, and condition of living cells at a glance.
- Research the structure of plant cells and tissues, reproduction, growth, metabolic processes, and pathogens.
- You can do sterility tests.
- Examine cells before preparing protein, DNA, or RNA samples.
- Differentiate between types of cells and characterize cell lines.

ZEISS Axiovert 5

Your smart microscope for cell culture and research.



U2OS cells in transmitted light, phase contrast.
Objective: LD A-Plan 40x/0.55 Ph 1



U2OS cells in multichannel fluorescence, 20x, Nucleus – NucRed,
Mitochondria – MitoTracker green

Configured to Your Requirements

Microscopes

- Axiovert 5 TL (transmitted light)
- Axiovert 5 TL SCB (transmitted light, Smart Control Box)
- Axiovert 5 TL FL SCB (reflected fluorescent light, Smart Control Box)

Contrasting Techniques

Brightfield, phase contrast, PlasDIC, iHMC, DIC, fluorescence

Illumination

- Transmitted light: White LED 10 W
- Reflected light: Colibri 3, HXP 120, Colibri 5/7, Xylis and more

Accessories

- Light shield, Mounting frame K thermo plate, iHMC module, polarizer slider TL 90° rotatable
- Filter sets, aqua stop, condensor and more

Axiovert 5 brings smart microscopy into your cell culture lab. All you need to do is focus on your samples and workflow. Then simply push Snap to get crisp images for documentation.

Use all standard contrasting techniques in transmitted light and combine them with multichannel fluorescence to investigate your cell or tissue cultures. And when space is tight, you can even use this smart microscope as a standalone and save your images on USB. No extra computer or software needed.

Simpler. More Intelligent. More Integrated.

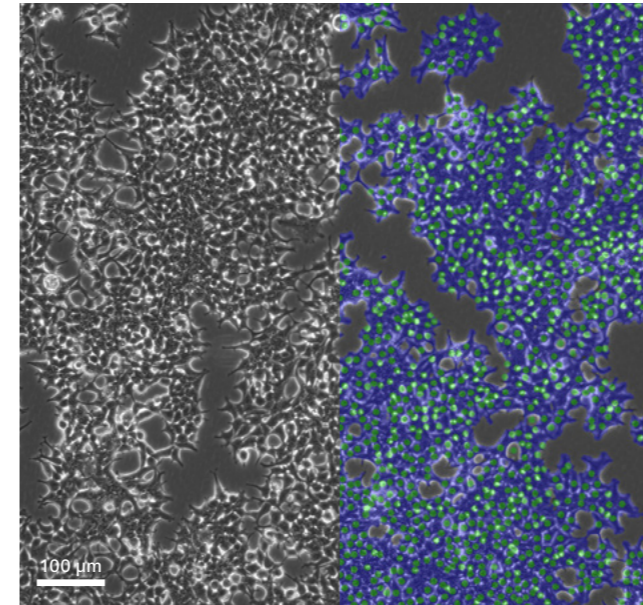
- Various contrasting techniques — DIC, iHMC and phase contrast as well as multichannel fluorescence — open up a huge diversity of applications.
- Without modifying the stand, you can switch freely between iHMC, PlasDIC and DIC as you investigate your samples.
- With Axiovert 5 your samples remain safe in gentle LED light. You profit from homogeneous illumination and freedom to align your sample.
- Axiovert 5 delivers excellent results with fast time to image. Simply focus your sample and press a single button to save a crisp image of your cell or tissue culture.
- For transmitted light and multichannel fluorescence images, this smart microscope automatically adjusts the settings and parameters for you.
- If lab space is limited, just get rid of the PC and all that additional software: use Axiovert 5 in standalone mode and control the microscope via the OSD menu.

Created for Your Applications

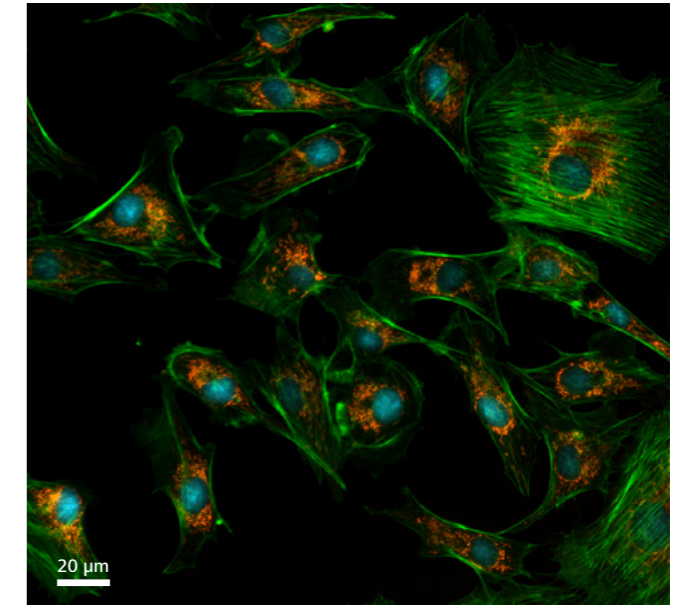
- Check the vitality of your cell cultures.
- Estimate the perfect timing for cell seeding.
- Check the efficiency of transfections.
- Perform ICSI, IMSI, and embryonic observations in an IVF clinic.

ZEISS Axiovert 5 digital

Your All-in-One Cell Imaging System.



Cell counting and cell confluency at a glance with ZEISS Labscope



BPAE cells in multichannel fluorescence, 40x

Configured to Your Requirements

Artificial Intelligence (AI) is already helping us with our daily lives, from automated driving and home assistants to securing smartphones with facial recognition. Axiovert 5 digital brings AI into your cell lab to ease your daily work. It will make your processes more efficient and your results more reproducible. Stay relaxed, even when there is a lot going on around you. Just push a single button and your results will appear in real time.

Microscopes

Axiovert 5 digital (mono)
Axiovert 5 digital (color)

Contrasting Techniques

Brightfield, phase contrast, fluorescence

Illumination

Transmitted light illumination with white LED 10 W
4 solid state fluorescence LEDs

Accessories

- Stage inserts
- Objectives, filter sets, FL-LEDs
- Aqua Stop II

Simpler. More Intelligent. More Integrated.

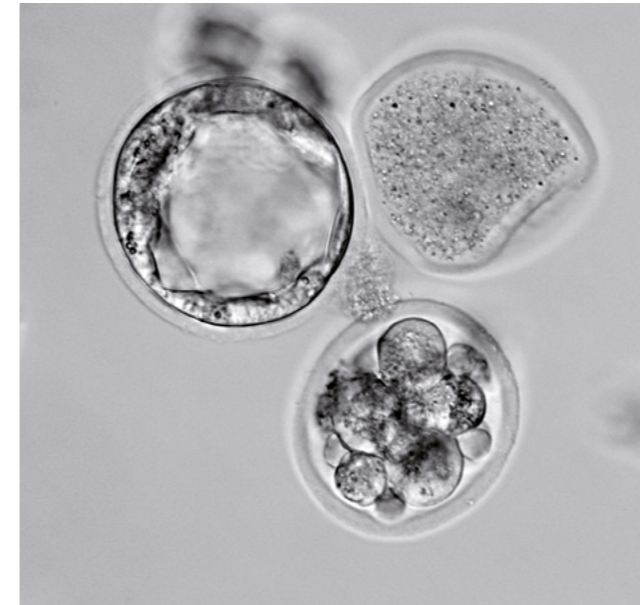
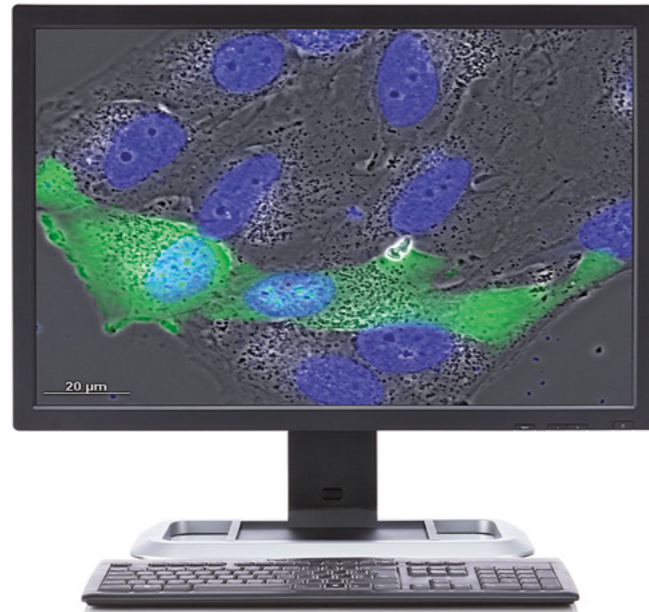
- Experience the full advantages of an all-in-one microscope system. Don't worry about settings or adjustments – they're already done. All you have to do is turn on your system and start working.
- Axiovert 5 digital uses artificial intelligence to optimally support daily workflows. Cell counting and cell confluency are automatically determined by readily available AI modules.
- This all-in-one imaging system comes with an intuitive operating concept. One click on the snap button is sufficient to trigger image and video acquisition as well as analysis.

Created for Your Applications

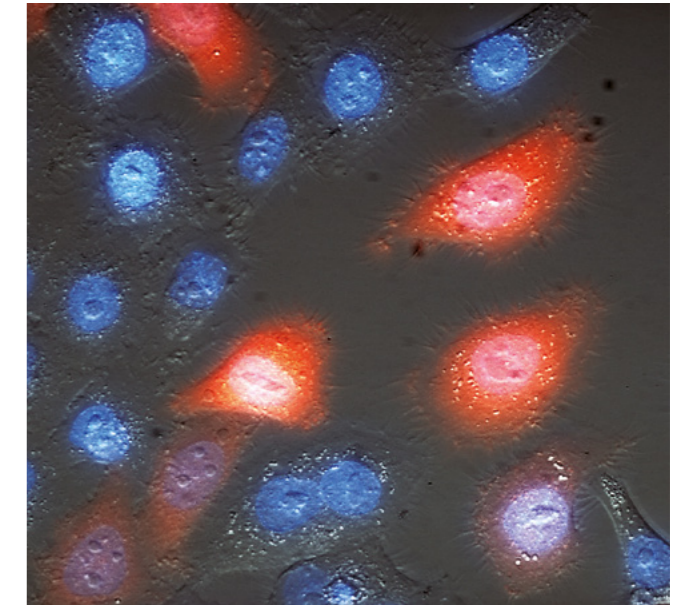
- Observe labeled living cells in your cell laboratory.
- Count cells to decide on cell proliferation and viability as well as the appropriate dilution values.
- Measure the cell confluency to decide on cell proliferation, viability, and the perfect timing to start transfections or when to passage your cells.
- Start today to improve the quality of your cell cultures and make your experiments more reproducible. Count cells automatically with AI.
- Document your fluorescent cells in publication-ready quality.

ZEISS Axio Observer

Observe. manipulate. and analyze.



Transgenic mouse embryos in various stages of development, PlasDIC, magnification: 40x, Sample: courtesy of Dr. Ropeter, Dragon-IVF, Dr. Michelmann, Gynecological Clinic Göttingen, and Ms. Buhtz, Göttingen University, Germany



HeLa cells, multi-color fluorescence in combination with DIC. Blue (HOECHST 33342): cell nucleus, red (DsRed): cytoplasm. Courtesy of H. Wolff, GSF Neuherberg, Germany

Configured to Your Requirements

You observe, analyze, and manipulate living cells. Then Axio Observer is your inverse microscope platform for maximum flexibility. Its open architecture can be cost-effectively extended – from the base stand through to high-speed and laser-scanning microscopy or microdissection dimensions. There are not even any restrictions in adding external components to the system.

Microscopes

Axio Observer 3
Axio Observer 5

Contrasting Techniques

Brightfield, phase contrast, PlasDIC, iHMC, DIC, fluorescence

Illumination

Transmitted light: halogen, LED
Reflected light: HBO 50, HBO 100, HXP 120 V, Colibri 5/7

Accessories

Binocular tubes, binocular camera tubes, binocular ergotubes, stages, manual and motor-driven stages, condensers, objective lenses, cameras, software, incubation components

Simpler. More Intelligent. More Integrated.

- The apochromatic fluorescence beam path ensures homogeneous intensity of fluorescence over the entire field of view. Colibri 5/7 light sources permit a fast LED change for fluorescent applications.
- Combine Axio Observer with manipulators, and together with PlasDIC or iHMC, you will have the perfect platform for IVF and for your work with stem cells.
- With the DIC contrasting technique, you can achieve the highest detail resolution and improved success rates – for example when assessing sperm.
- Axio Observer combines all of the IVF contrast methods in a single microscope.

Created for Your Applications

- Observe and mark cells using vital stains.
- You carry out series of experiments and need documentation and incubation.
- Compare images from different fluorescence channels and require uncompromisingly brilliant images.
- Carry out pronuclear injections working with transgenic animals.
- You are responsible for ICSI, IMSI, and embryonic observations in an IVF clinic.

Technical Specifications

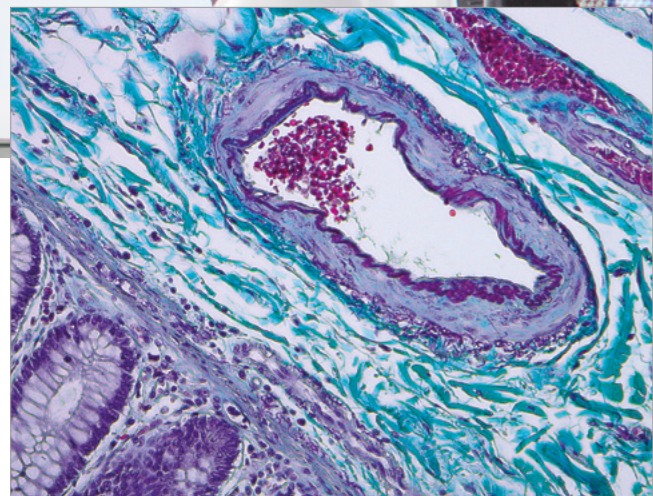
Here you can find the microscope system that best matches your application.

ZEISS System	Primovert	Axiovert 5
Stand	Inverse	Inverse
Optical system	Infinite TL180*	Infinite IC ² S
Minimum viewing height in mm	349 +	
Ergotube	●	●
Eyepiece suitable for wearers of glasses	●	●
Field of view in mm	20	23
Integrated carrying handle	●	●
Integrated solution to accommodate cable when stored	–	–
Power supply	External	External
Rechargeable battery pack for mobile use	–	–
Intensity indicator for illumination	●	–
Contrasting Techniques		
Transmitted light, brightfield	●	●
Darkfield	–	–
Phase contrast	●	●
Differential interference contrast	–	●
Fluorescence	●	●
Documentation		
Camera tube	●	●
Integrated camera	○	–
Illumination		
Full Köhler	–	–
Integrated LED fluorescence	1 LED	up to 4 LEDs with Colibri 3
Reflector turret positions	–	6
Maximum power consumption in W, halogen transmitted light illumination	30	–
LED transmitted light illumination	●	●
● Available ○ Optional – Not available	* Axiovert 5 and Axio Observer: additional iHMC, PlasDIC	

Axiovert 5 digital	Axio Observer
Inverse	Inverse
Infinite IC ² S	Infinite IC ² S
–	●
–	●
	23
●	–
–	–
External	Integrated
–	–
–	–
●	●
–	–
●	●
–	●
●	–
–	●
4 LEDs	–
6	6
–	100
●	○

Digital Documentation

Network your microscopes and document your results.

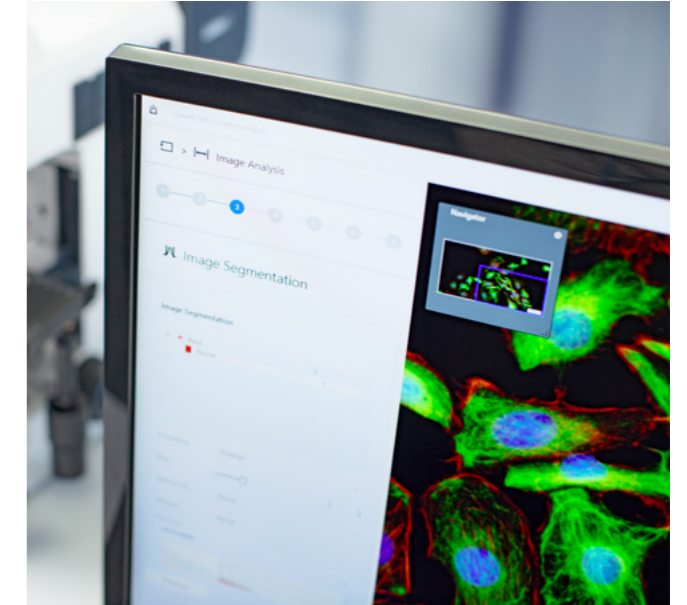
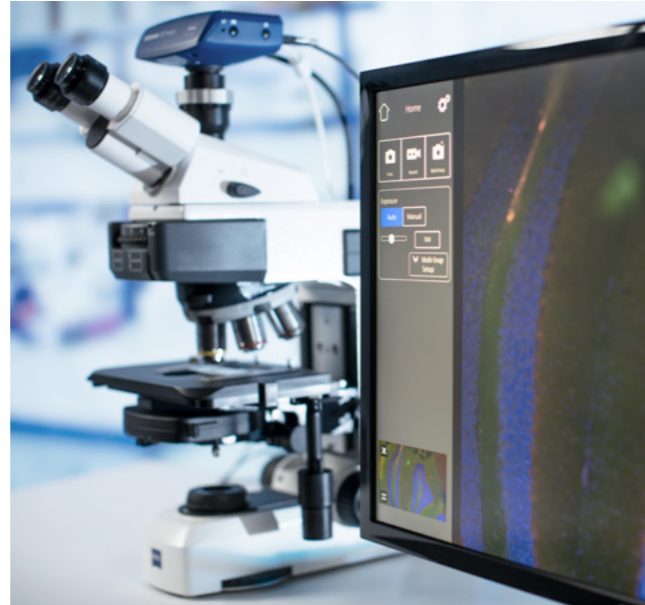


Document exactly what you see. Fast, easily to access and with brilliant image quality. With the digital microscope cameras from ZEISS, you have the perfect tool for image acquisition and documenting your work. To display and edit your images, choose the imaging app Labscope. Using Labscope, you can connect several microscopes and digitize your classroom and easily take a look into your students' work.

ZEISS Microscope Software for Your Routine Laboratory

Get it done. Easy.

Decide for microscope software from ZEISS and simply get your work done. From super simple for basic image acquisition only, easy-to-use for standard imaging, up to customizable workflow solutions – choose the microscope software that fits exactly to your task: save time, reduce training expenses, and get your results faster.



On-screen Display (OSD)

Your choice for basic image acquisition

Focus. Snap. Done.

Your smart microscope camera Axiocam 208 color or Axiocam 202 mono facilitates image acquisition with your manual microscope greatly. The automatic functions require only minimal adjustments and – you don't even need a computer.

OSD is your perfect choice, if you:

- Need image acquisition only
- Have limited lab space and budget
- Want an easy-to-use user interface which does not require any training
- Don't want to deal with IT topics such as operating system updates
- Want to save your data on a USB-stick

ZEISS Labscope

Your standard for routine imaging

High quality images. Fast results. Fun to work with. With ZEISS Labscope you decide for an easy-to-use imaging software that fulfills all needs in your laboratory – from image acquisition, handy built-in measurement functions up to easy data sharing. And, you're free to use it with your Windows PC but also with your tablet or mobile phone.

Labscope is your preferred choice if you:

- Want impressive ease of use without compromising functionality
- Need image acquisition, basic post-processing, annotation and measurement functions
- Work with manual microscopes and fluorescence
- Need access to multiple microscopes in a network
- Want a simple way to share and display images
- Occasionally need to scan whole slide images

ZEISS ZEN core

For customized repetitive workflows

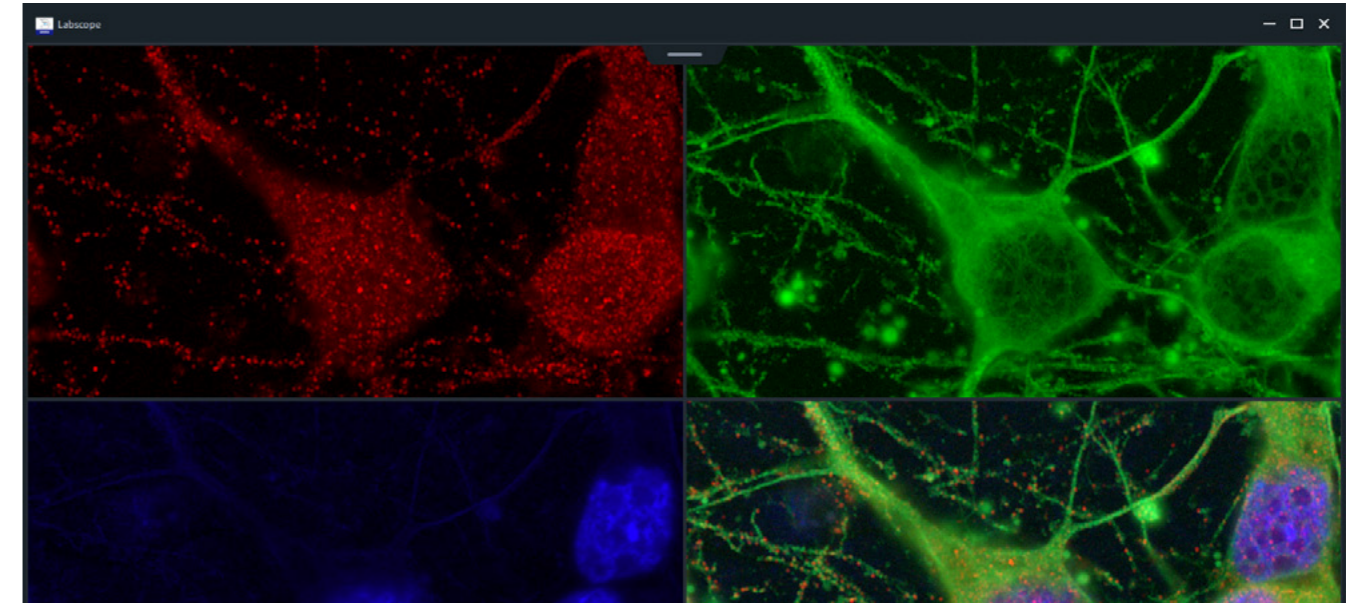
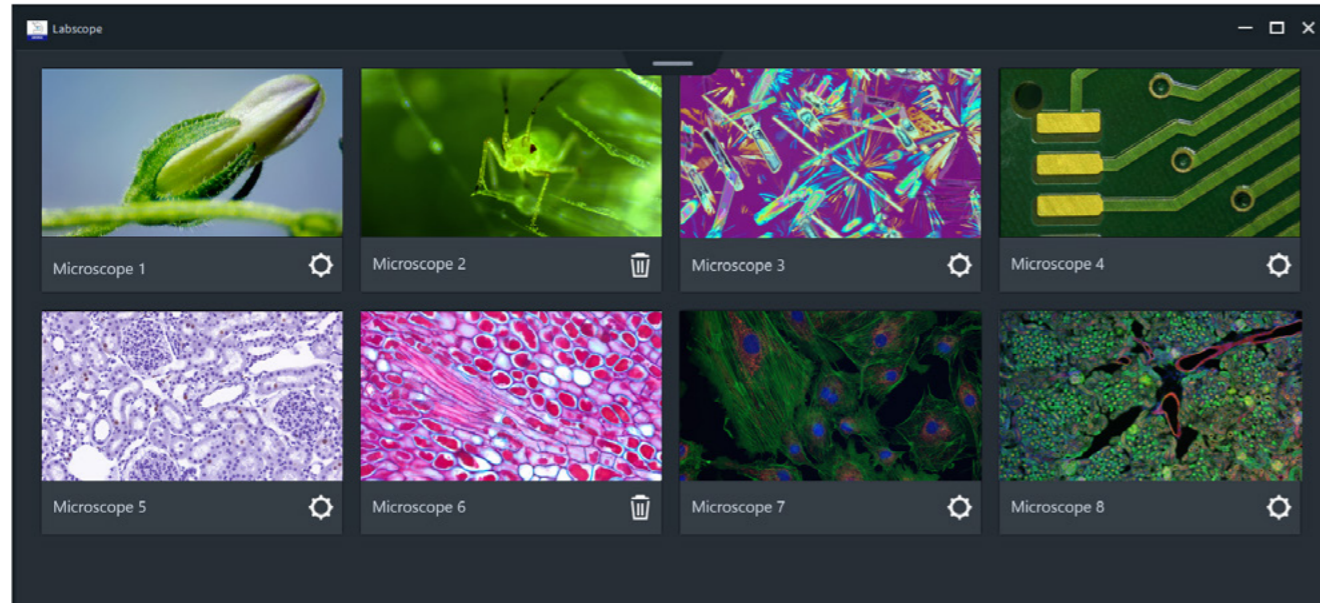
ZEN core is your imaging software to handle application-specific routine workflows that can be individually defined. You can create and combine workbenches to create dedicated jobs that assist you through a defined flow of consecutive tasks. This ensures data repeatability and ease of use.

Decide for ZEN core if you:

- Need to control a motorized ZEISS microscope for higher automation
- Want to setup and use individually defined imaging workflows
- Need a GxP compatible solution
- Need to ensure data repeatability in a multi-user environment
- Want to perform multi-modal imaging, e.g. light and electron microscope with the same sample

ZEISS Labscope

Your imaging app for digital classroom and routine laboratory work.



Configured to Your Requirements

Documenting images has never been easier: you have the power and functionality of PC-based software together with the ease of use of an app.

With Labscope you can convert your microscope into a wirelessly connected imaging system. Whether in the laboratory, at the university, or in school, with Labscope you can quickly and easily take pictures and videos of your microscopic samples.

You can add annotations, create reports, edit images, and save your data within your Windows network – or share any of these, at any time.

Microscopes

All microscopes with a camera interface
Primostar 3 HD
Primovert HDcam
Stemi 305 cam

Camera

Axiocam 208 color
Axiocam 202 mono

Software

Labscope for iPad and iPhone (free download in iTunes store)
Labscope for Android (free download in Google Playstore)
Labscope for Windows (free download in web)

Functionality

Documentation, image processing, camera control, storage on SD, iPad, PC, server (cloud), report function, social media, measurements/annotations, parallel display of several microscope cameras

Simpler. More Intelligent. More Integrated.

- It's your choice: HDMI, USB, and LAN interfaces and an SD card slot offer you numerous options.
- Use the HDMI interface to directly view on a screen without a PC.
- Simply save images and videos to an SD card at the touch of a button.
- Connect the camera with your Wi-Fi network and enjoy the benefits of the imaging app Labscope.
- You only need one tablet for all of the microscopes in the laboratory, and you are networked to all users.

Created for Your Applications

- Document results or dynamic processes for specific microscopes with images and videos directly on your iPad.
- You can make direct comparisons with other images.
- Take measurements, annotate the results, and save them on the file server integrated in the network.
- Load application images onto the tablet or phone for talks and presentations and can use the image processing tools.
- You can easily create an individual report.
- Manage and organize your digital classroom with the optional Labscope Teacher module.
- Acquire multichannel fluorescence images with the optional Multi Channel module.

* Labscope can run on Windows 7 (64-bit) and 10 (64-bit).

ZEISS Labscope

Your imaging app for digital classroom and routine laboratory work.



ZEISS Labscope imaging app

Teaching is the art of passing the knowledge of the few on to the many. For this, you need a good overview over all of those who are learning, a deep insight into the individuals, and the option of networking them all together.

This is exactly what Labscope supports in your digital classroom. You can move freely around the classroom and still see through all of the eyepieces.

Discuss working methods and details with individual students and all of the others can see what is going on. You can allow your students to work independently and to document their results. Check the reports immediately online, or later on your PC. You can put images and videos into the network and allow your

students to do mobile work on them with an iPad and record their results. It doesn't matter whether a small course is to be held quickly on a mobile basis or if a large classroom is to be permanently networked, the digital classroom from ZEISS adapts to your needs.

ZEISS ZEN core

Your microscope software for user-specific repetitive workflows in biomedical labs



You decide what your microscope software looks like. With ZEN core you can adapt the user interface exactly to your application.

- Configure your ZEN core only with necessary functions.
- Define and combine workbenches easily to create workflows, so called jobs.
- Jobs guide your operators through a defined flow of consecutive tasks ensuring data repeatability and ease of use.
- Combine Job Mode with user management functions to assign specific imaging tasks to certain users and user groups.
- Opt for the GxP or Multi Channel toolkit, when traceability or fluorescence imaging of biological samples is important to you







ZEISS Axiocam – Microscope Cameras

Accurate documentation is an important part of your daily analyses.

Brilliant images reveal the state of your samples.

Select the Axiocam microscope camera best suited to your application.

	CMOS	CCD		
Microscope Camera	Axiocam 105 color	Axiocam 202 mono	Axiocam 208 color	Axiocam 305 mono
				
Specification				
Effective pixels	5 megapixels	2 megapixels	8.3 megapixels	5.07 megapixels
Number of pixels	2592 × 1944	1920 × 1080	3840 × 2160	2464 × 2056
Pixel size	2.2 µm	5.86 µm	1.85 µm	3.45 µm
Sensor size	1/2.24"	1/1.2"	1/1.7"	2/3"
Sensor diagonal	7 mm	13.4 mm	9.33 mm	11.1 mm
Maximum frame rate at resolution	17 fps at 5 MP	30 fps at 1080p	30 fps at 4K/1080p	67 fps at 1920 × 1080
PC interface	USB 3.0	USB 3.0 Type C, Ethernet, HDMI	USB 3.0 Type C, Ethernet, HDMI	USB 3.0 SuperSpeed USB 2.0 optional
Stand-alone mode		■	■	
Special features				
Recommended for				
Documentation and convenient image processing	●●●●	●●	●●●●	●●●●
<ul style="list-style-type: none"> ●●●● Suitable ● Partly suitable 				

Axiocam 305 color	Axiocam 506 mono	Axiocam 506 color
		
5.07 megapixels	6 megapixels	6 megapixels
2464 × 2056	2752 × 2208	2752 × 2208
3.45 µm	4.54 µm	4.54 µm
2/3"	1"	1"
11.1 mm	16 mm	16 mm
67 fps at 1920 × 1080	19 fps at 2752 × 2208	19 fps at 2752 × 2208
USB 3.0 SuperSpeed USB 2.0 optional	USB 3.0	USB 3.0
●●●●	●●●●	●●●●
<ul style="list-style-type: none"> ●●●● Suitable ● Partly suitable 		

Multidiscussion from ZEISS

Share your images with other viewers.



Configured to Your Requirements

Microscopes

Axiolab 5: at least up to ten additional viewers (LED)
Axioscope 5: at least up to ten additional viewers (LED)
or up to 20 additional viewers (HAL 100)
Axio Imager.A2: up to 20 additional viewers (HAL 100)

Accessories

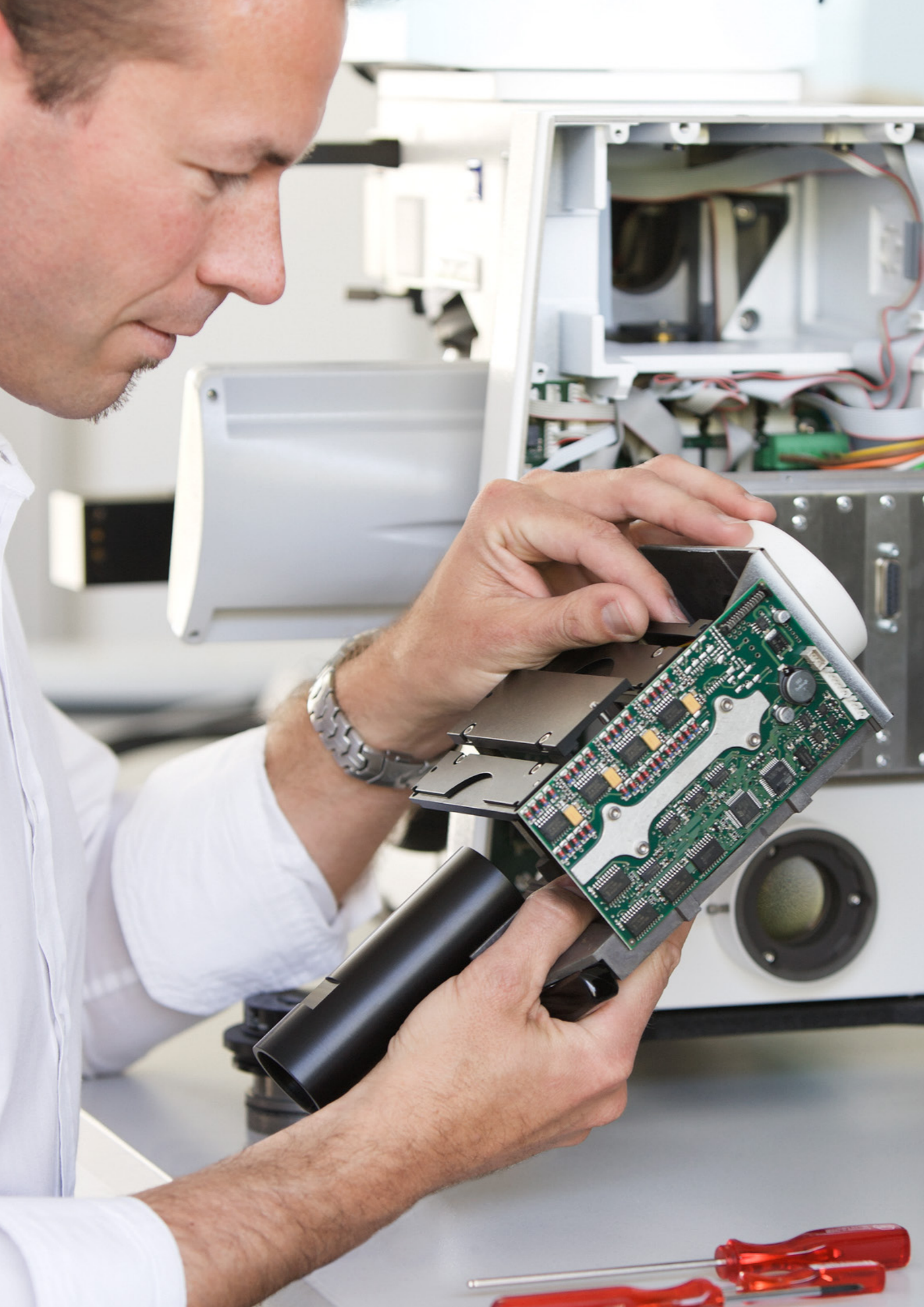
Central part, tube holder, tubes, eyepieces

You can use the classic multidiscussion system for training and consultation situations as well as in the medical world, for example when training students or when jointly assessing difficult specimens.

With the multidiscussion unit from ZEISS, depending on the microscope and illumination used, up to 20 people can see the same image in the same orientation as the main viewer. This avoids irritation resulting from rotated or mirrored images. The main viewer and the additional viewers all profit from the homogeneously illuminated field of view.

For specimens stained with different colors, you can smoothly adjust the intensity of the light pointer between white, green, and red. This helps with orientation.





Service and support for your ZEISS microscope system.

ZEISS moments are about passion. It is this passion with which we service and optimize your ZEISS microscope and keep it at the latest state of the art, so that your work can systematically lead to success.

Experience service that lives up to its name.

Your microscope system from ZEISS is one of your most important tools. For over 160 years, the ZEISS brand and our experience have stood for reliable equipment with a long life in the field of microscopy.

You can rely on us to ensure that you can always use your microscope's full performance. With repair services and spare and replacement parts, our skilled ZEISS service team makes sure that your microscope is always ready for use. Our experts keep on working even after you have chosen ZEISS, with a wide range of additional services to ensure that you can experience those special moments – those special moments that inspire your work.

Maintenance and optimization

Your ZEISS Protect service agreement provides all-around security for your microscope system. There are no unexpected operating costs, and the availability of your system is increased. With preventative maintenance as a fundamental part of the service agreements, you benefit from optimized system performance. We'll work with you to select the service package that best meets your needs, that corresponds to the equipment that you have, and that is tailored to the specific requirements of your applications.

Enhance your microscope system

Your ZEISS microscope is designed to be future-proof. Open interfaces allow you to extend your system. You can add your choice of accessories to keep up with the state of the art and thus extend your microscope's useful life.

We would be happy to help you to find which accessories are available for your microscope that ideally match your application.





Carl Zeiss Microscopy GmbH
Carl-Zeiss-Promenade 10
07745 Jena, Germany

Email: microscopy@zeiss.com
www.zeiss.com/micro/applications