



Product Information
Version 1.0

ZEISS Axioscope 5

Your Smart Microscope for Biomedical Routine and Research



Your Smart Microscope for Biomedical Routine and Research

- › **In Brief**

- › The Advantages

- › The Applications

- › The System

- › Technology and Details

- › Service

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 takes 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.



Click here to explore all features
in an interactive infographic.

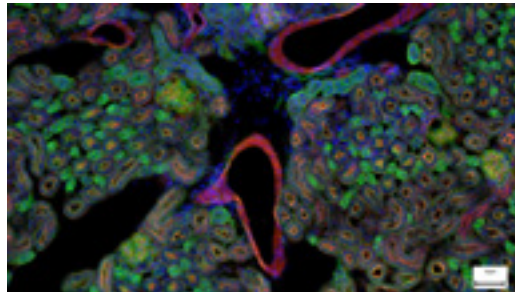


Simpler. More Intelligent. More Integrated.

- › In Brief
- › **The Advantages**
- › The Applications
- › The System
- › Technology and Details
- › Service

Capture Four Fluorescence Channels with Just One Click

Acquiring fluorescent images has never been so easy. Combine Axioscope 5 with the high performance LED light source Colibri 3 and the sensitive, standalone microscope camera Axiocam 202 mono to have the perfect setup for easy multi-channel fluorescence documentation. Switch effortlessly between the channels for UV, blue, green and red excitation. Just select the relevant channels and press Snap. The system then takes over and automatically adjusts the exposure time, acquires the image, switches the channel and starts again. That's it: you get your overlaid multichannel fluorescence image including scale bar – even without a PC.



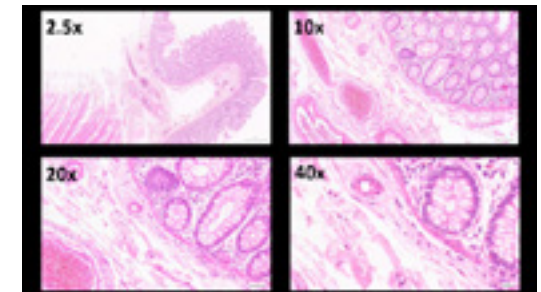
Smart Microscopy Makes Your Digital Documentation Faster

Axioscope 5 makes documenting your specimens very efficient. The color impression shows up in the camera image exactly the same as it appears through the eyepieces. The smart Axioscope 5 system makes automatic adjustments for brightness and white balance to keep digital documentation easy. All you have to do is focus on your sample, press the ergonomic Snap button on the microscope, and that's it. Acquiring high quality images with high color fidelity has never been easier – and faster.



Benefit from Smart LED Illumination

Axioscope 5 uses its transmitted white light LED to provide powerful illumination with high color fidelity. You will clearly see the subtle differences in your sample. And experience all the advantages of LED illumination such as stable color temperature, low energy consumption and long lifetime. Axioscope 5 comes with a light intensity manager that produces uniform brightness at all magnifications. Adjusting lamp brightness when you change magnification is a thing of the past. That saves you time and reduces eye fatigue, too.



Expand Your Possibilities

- › In Brief
- › **The Advantages**
- › The Applications
- › The System
- › Technology and Details
- › Service

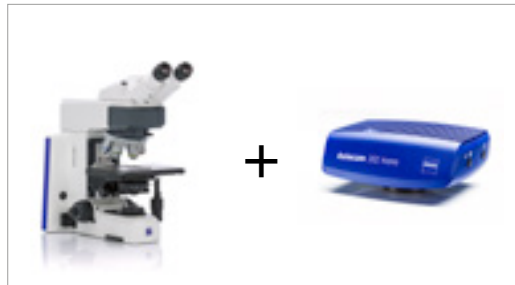
This is Smart Microscopy – Digital Documentation Made Easy

Used in combination with the microscope cameras Axiocam 202 mono or Axiocam 208 color, you have the full advantage of a smart standalone microscope solution.

Camera settings such as white balance, contrast and exposure time are done automatically. Without needing additional imaging software or even a computer, you can:

- Snap images and record videos directly from your stand
- Use mouse (and optionally keyboard) to control your camera via OSD (on screen display)
- Save settings
- Store images with all metadata of the microscope and camera as well as scaling information
- Predefine the name or rename your image

Stand-alone for Basic Routine Imaging



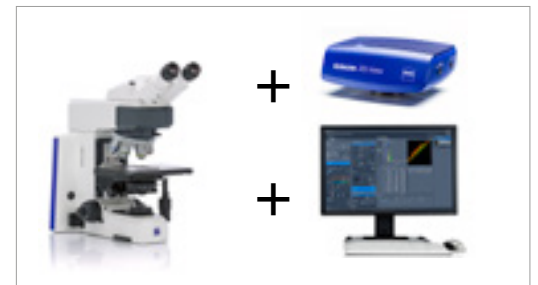
ZEISS Axioscope 5 operates independently of a computer system.

ZEISS Labscope for Advanced Routine Imaging



Operating ZEISS Axioscope 5 with ZEISS Labscope imaging software is ideal for connected microscopy and standard multichannel fluorescence imaging.

ZEISS ZEN for Research Applications



Use ZEN imaging software to perform advanced imaging tasks with ZEISS Axioscope 5.

Expand Your Possibilities

- › In Brief
- › **The Advantages**
- › The Applications
- › The System
- › Technology and Details
- › Service

Boost your Efficiency – with Smart Microscopy

Efficiency and quality are key in your lab, but it can take a lot of time to acquire detail-rich, true-color images. You know the drill: place the sample, focus your region of interest, switch to the computer, adjust settings such as white balance, exposure time and gain, then acquire an image, insert a scale bar, switch back to the microscope ... and so on. That's what a typical documentation workflow

looks like. Now, with the Axioscope 5 system, you can stay focused on your sample at all times, thanks to smart microscopy. Digital documentation is inherent in the system design. Just press the ergonomic Snap button on the microscope and you're done. The procedure integrates perfectly with your established microscopy workflow and boosts your efficiency tremendously.

Routine imaging workflow



Smart functionality for digital documentation in brightfield and fluorescence for routine applications.

Efficiency gain:

Eyes and hands stay on the microscope.



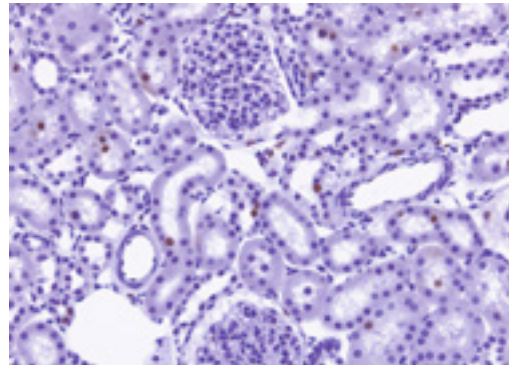
Expand Your Possibilities

- › In Brief
- › **The Advantages**
- › The Applications
- › The System
- › Technology and Details
- › Service

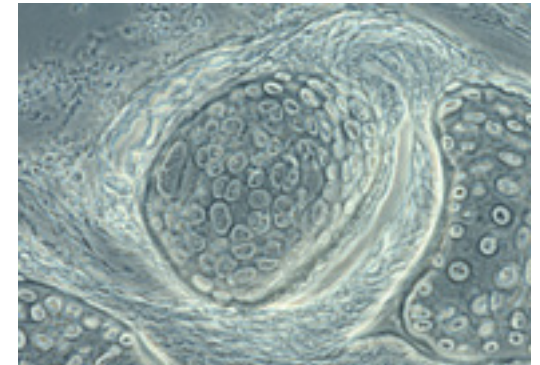
Whether unstained cells, histologically stained sections, or other samples: transmitted light techniques continue to be the standard for many examinations.

With Axioscope 5 you can use a sheer variety of contrasting techniques for your applications: the classical methods of brightfield, darkfield, phase contrast, but also Differential Interference Contrast (DIC) and polarization contrast.

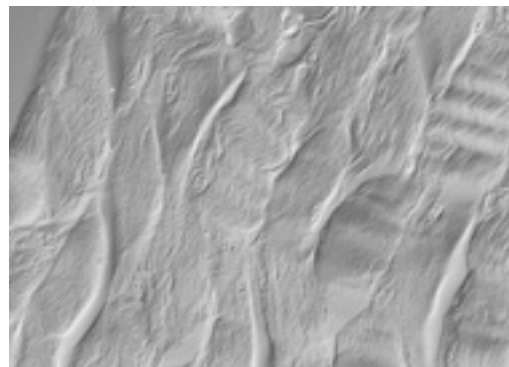
Axioscope 5 can also be equipped with PlasDIC, the cost effective interference contrasting technique.



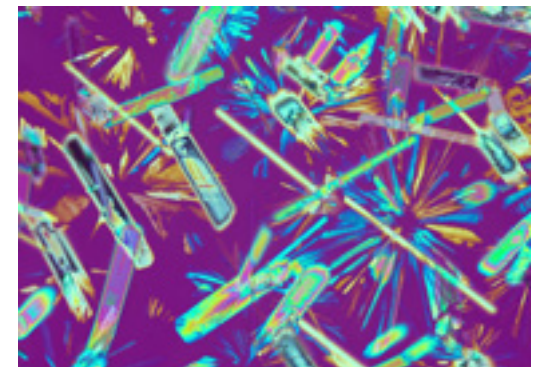
Rat kidney, acquired in transmitted light brightfield, objective: Plan-Apochromat 20x/0.8



Trout cartilage acquired in phase contrast, objective: Plan-Apochromat 63x/1.4



Rabbit muscle, acquired in DIC contrast, objective: Plan-Apochromat 63x/1.4



Crystal, acquired in polarization contrast, objective: Plan-Neofluar 20x

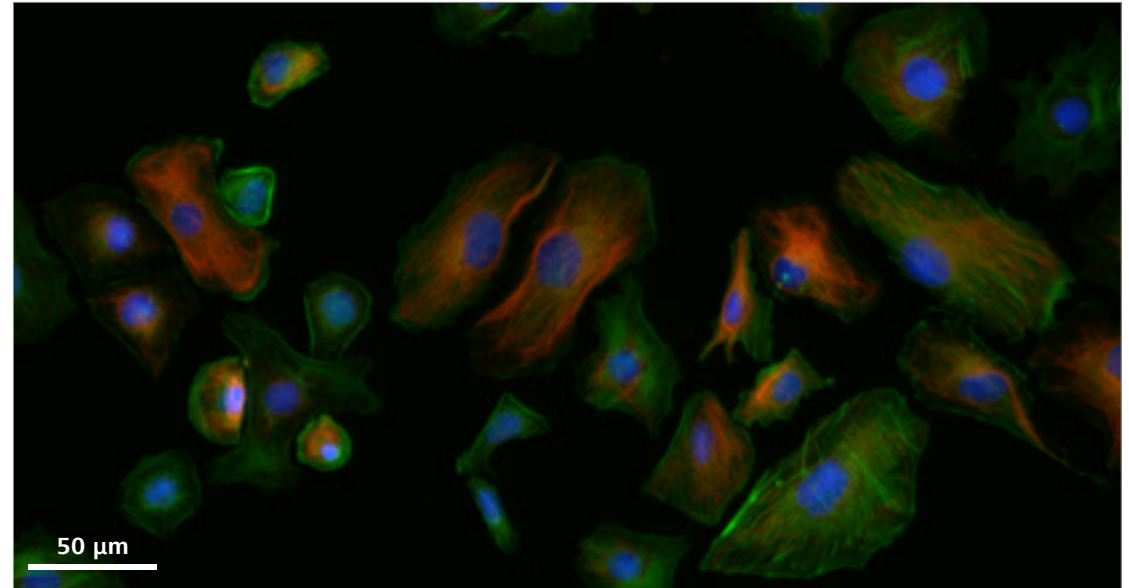
Expand Your Possibilities

- › In Brief
- › **The Advantages**
- › The Applications
- › The System
- › Technology and Details
- › Service

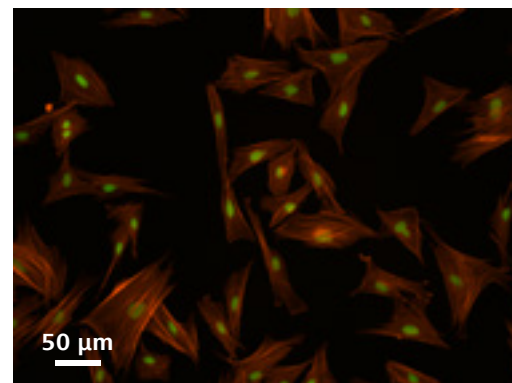
ZEISS Colibri 3 LED Illumination

Complement your Axioscope 5 with the optional fluorescence LED illumination Colibri 3, and acquire brilliant fluorescence images with ease. Colibri 3 delivers the right wavelength and intensity to excite fluorescent dyes and proteins in a gentle way.

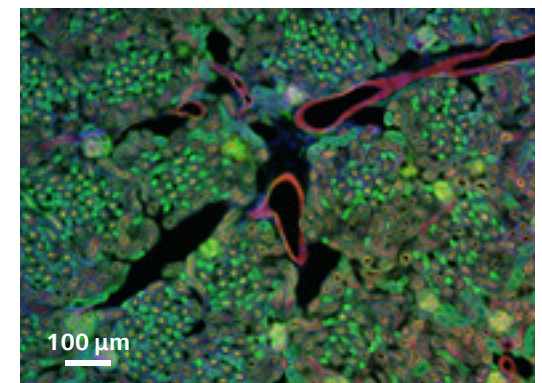
- Save time and money thanks to the long LED lifetime and adjustment-free operation.
- Choose up to four configurable wavelengths to fit your needs. Upgrade anytime you need to.
- Individually control and switch between channels for UV, blue, green and red excitation – or use selected wavelengths simultaneously.
- With direct visual status feedback, you are always sure which FL-LED is in use.
- The integrated design saves space and makes for easy and ergonomic operation.



Mink Uterus Endometrium Epithelial Cells, vimentin – red, F-actin – green, nucleus – blue; acquired with ZEISS Axioscope 5, Colibri 3 and Axiocam 202 mono in stand-alone mode, objective: Plan-Apochromat 40x/0.95



*Indian muntjac, fibroblasts, F-actin – red, nucleus – green
objective: Plan-Apochromat 20x/0.8*

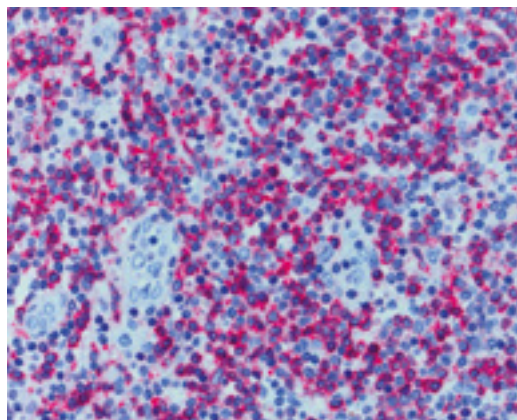


Mouse kidney in fluorescence, cryosection, AF 488 – WGA, AF 568 Phalloidin, DAPI, objective: Plan-Apochromat 20x/0.8

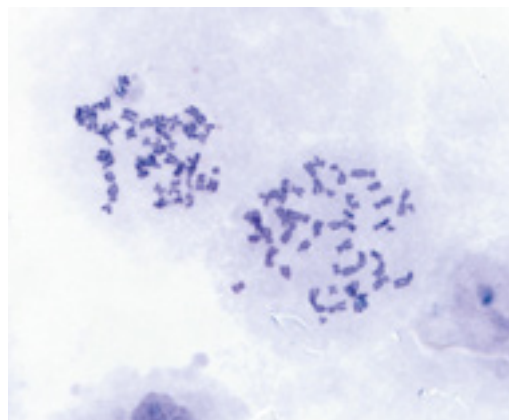
Tailored Precisely to Your Applications

- › In Brief
- › The Advantages
- › **The Applications**
- › The System
- › Technology and Details
- › Service

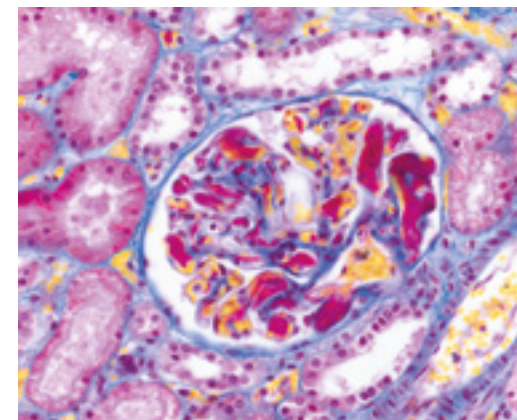
Field of Application	Biomedical Research	Human & Veterinary Medicine	Microbiology	Plant Sciences & Botany	Forensics
General task	Neuroscience, developmental biology, molecular biology, genetics, cell biology	Anatomy, pathology, cytology, hematology, cytogenetics, zoology	Bacteriology, mycology, parasitology, virology	Plant anatomy, plant disease, plant development, molecular genetics, epigenetics	Pathology, trace evidence, DNA laboratory
Tests performed	Documentation, answer research questions	Find medical evidence, answer research questions	Find medical evidence	Find quality-related evidence, answer research questions	Find jurisdictional evidence
Typical samples	Tissue, cells, organisms, body fluids	Histological tissue, body fluids like urine, blood, sputum	Bacteria, virus, fungi, parasites	Plant cells, algae, sections, bacteria, fungi, genetically modified crops	Tissue sections, fibers, hair, paint, vaginal swaps, sperm
Common stainings/ preparations	Native, immuno-fluorescence, H&E, FISH	H&E, IHC, Papanicolaou, Giemsa, FISH	Gram stain, acidic-fast stain, methylene blue, Ziehl-Neelsen, immunofluorescence	Safranin & Alcian Blue, Safranin & Fast Green; Etzold	H&E, IHC, immuno-fluorescence such as Sperm Hy-Liter
Typical contrasting techniques	Brightfield, phase contrast, DIC, fluorescence	Brightfield, phase contrast, fluorescence, simple polarization	Brightfield, darkfield, phase contrast, DIC, fluorescence	Brightfield, phase contrast, polarization, DIC, fluorescence	Brightfield, phase contrast, polarization, fluorescence



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



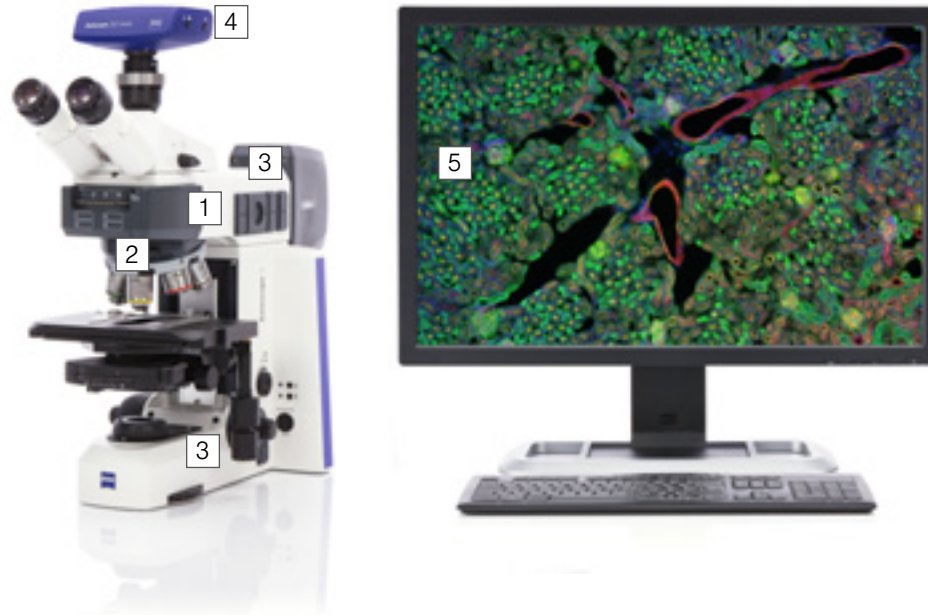
*Chromosome specimen, Giemsa stain,
objective: Plan-Apochromat 63x / 1.4*



*Renal tissue, Trichrome stain,
objective: Plan-Apochromat 40x / 0.95*

Your Flexible Choice of Components

- › In Brief
- › The Advantages
- › The Applications
- › **The System**
- › Technology and Details
- › Service



1 Microscope

- ZEISS AxioScope 5, transmitted light, LED
- ZEISS AxioScope 5, transmitted light, Hal 50
- ZEISS AxioScope 5, fluorescence

2 Recommended Objectives

- Plan-Apochromat
- Plan-Neofluar
- N-Achroplan

3 Illumination

Transmitted light:

- LED 10W, Hal 50, Hal 100

Reflected light, fluorescence:

- Colibri 3, HXP 120, and other

4 Recommended Microscope Cameras

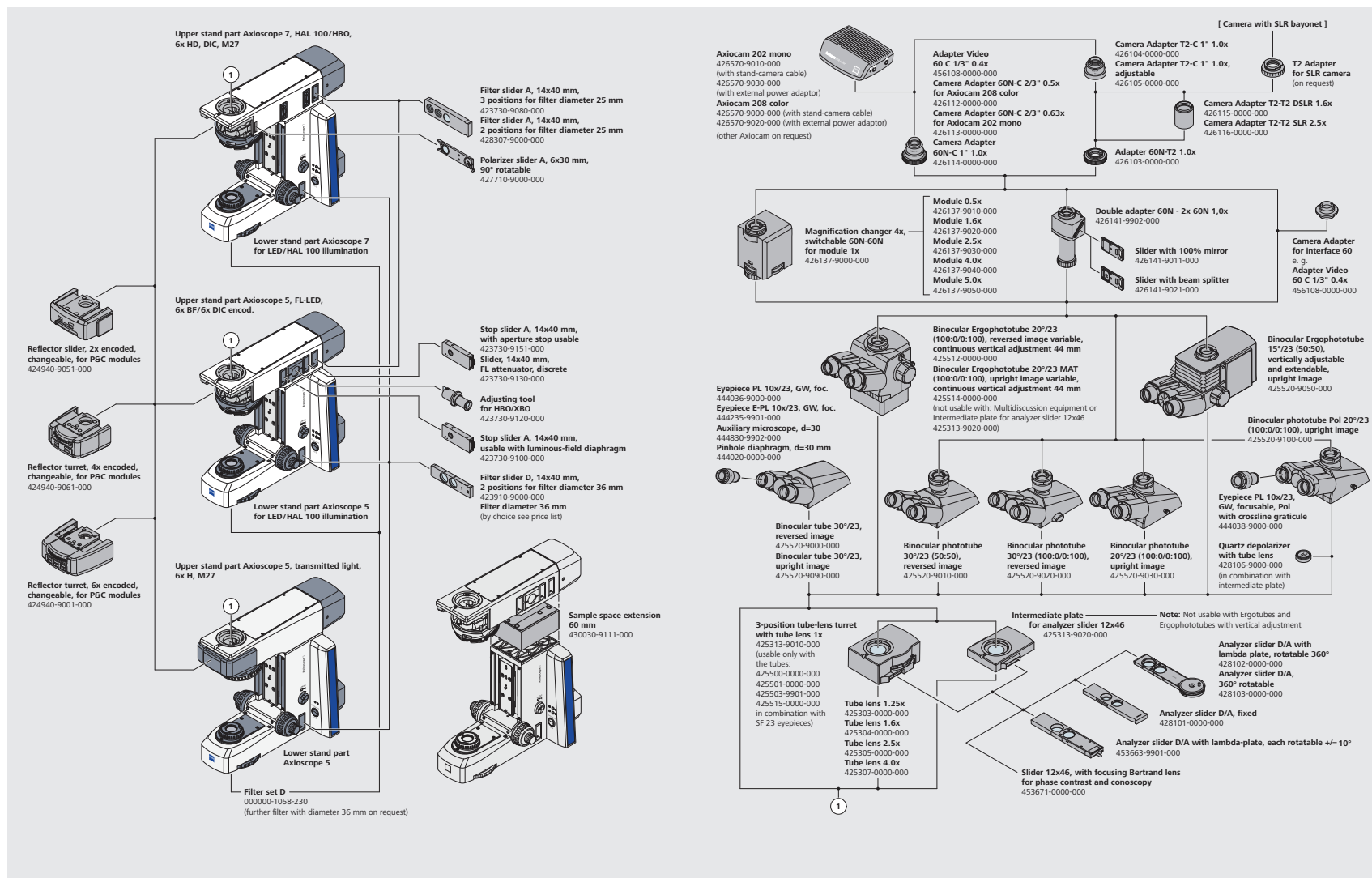
- ZEISS AxioCam 202 mono
- ZEISS AxioCam 208 color

5 Software

- Stand-alone
- Labscope imaging app
- ZEN imaging software

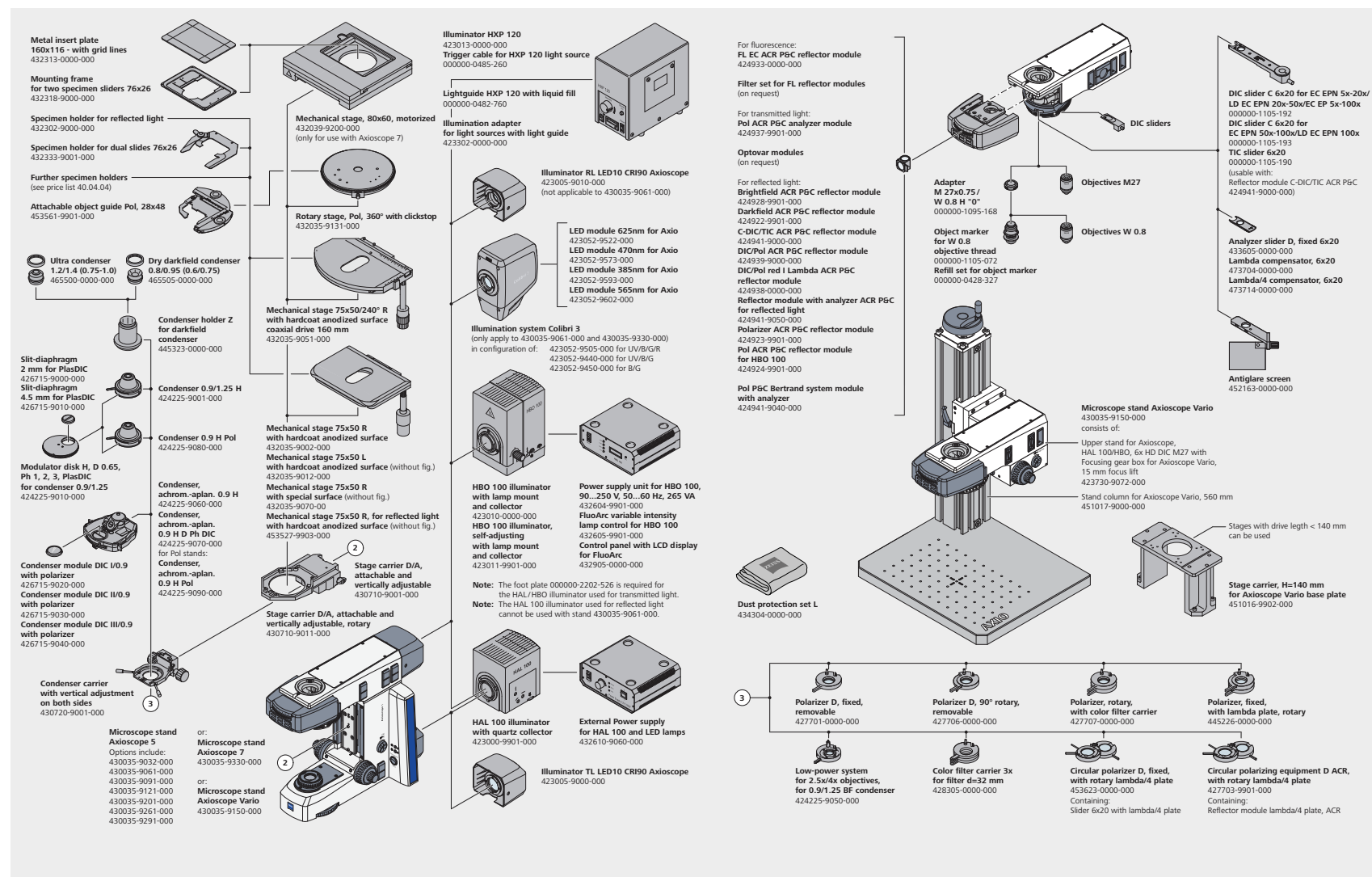
System Overview

- › In Brief
- › The Advantages
- › The Applications
- › The System
- › Technology and Details
- › Service



System Overview

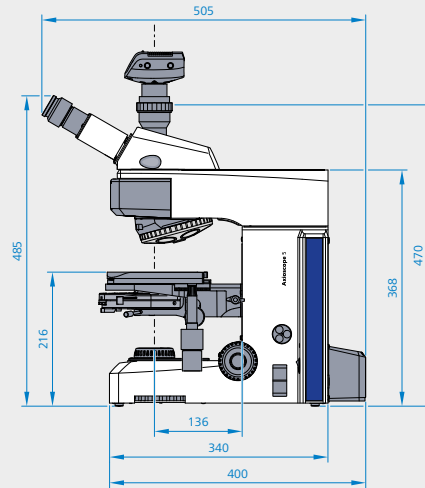
- In Brief
- The Advantages
- The Applications
- The System
- Technology and Details
- Service



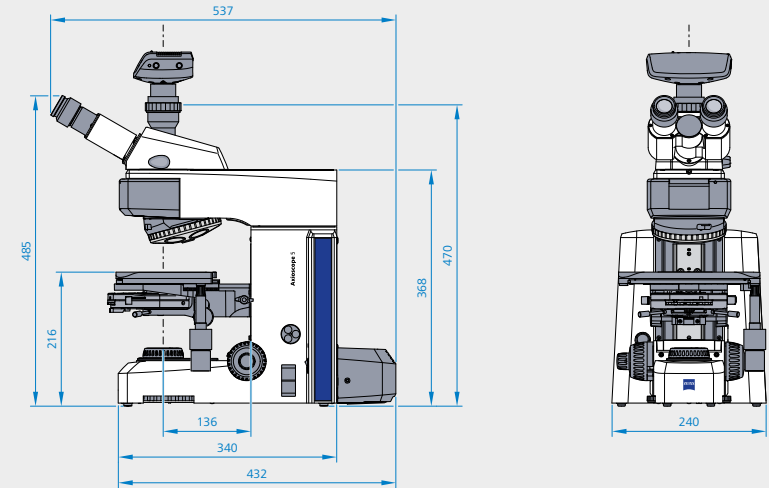
Technical Specifications

- › In Brief
- › The Advantages
- › The Applications
- › The System
- › **Technology and Details**
- › Service

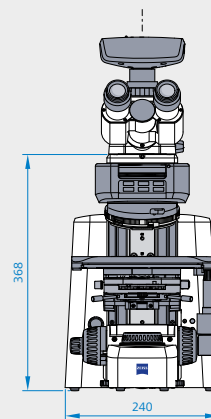
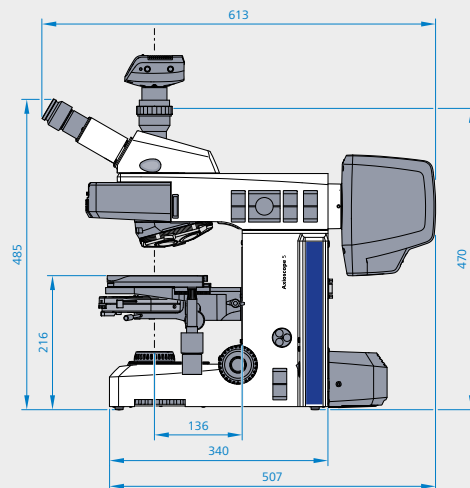
ZEISS Axioscope 5 Transmitted Light, HAL 50



ZEISS Axioscope 5 Transmitted Light, LED/HAL 100



ZEISS Axioscope 5 Transmitted Light and Fluorescence



Technical Specifications

- › In Brief
- › The Advantages
- › The Applications
- › The System
- › **Technology and Details**
- › Service

	ZEISS Axioscope 5	Transmitted Light, HAL 50	Transmitted Light, LED/HAL 100	Transmitted Light and Fluorescence
Transmitted light illumination	Material Number	430035-9032-000	430035-9201-000	430035-9061-000
	TL light source	Hal 50W	LED 10W Optional Hal 100W	LED 10W Optional Hal 100W
	6-position TL filter wheel	●	●	●
Fluorescence/ reflected light illumination	FL/RL light source	NA	NA	Colibri 3 Optional HBO 100 and HXP 120 for FL or LED 10W/Hal 100W for non- fluorescence reflected light
	Status indicator of active FL-LED	NA	NA	● (for Colibri 3)
	Independent intensity control on stand of each FL-LED	NA	NA	● (for Colibri 3)
	FL-LED intensity memory function	NA	NA	● (for Colibri 3)
	Automatic mechanical shutter in TL for fluorescence imaging	NA	NA	●
	Reflector turret (or slider)	NA	NA	2, 4 or 6-position, encoded
	Mount for RL luminous-field diaphragm slider	NA	NA	●
	Mount for RL aperture stop slider or FL attenuator	NA	NA	●
	Mount for RL adjusting aid for HBO/XBO	NA	NA	●
	Mount for RL filter slider R, 14x40 mm d=36 mm	NA	NA	●

Technical Specifications

- › In Brief
- › The Advantages
- › The Applications
- › The System
- › **Technology and Details**
- › Service

	ZEISS Axioscope 5	Transmitted Light, HAL 50	Transmitted Light, LED/HAL 100	Transmitted Light and Fluorescence
Observation and documentation	Eco Mode	●	●	●
	Light Intensity Manager	●	●	●
	Snap button (to take images and vidoes) on stand	●	●	●
	RL/TL switch buttons	NA	NA	●
	Contrasting methods	BF, DF, Ph, simple TL Pol	BF, DF, Ph, simple TL Pol	BF, DF, Ph, PlasDIC, DIC, FL, TL/RL Pol
	Field of view	23 mm	23 mm	23 mm
	Optical system	Infinite, IC ² S	Infinite, IC ² S	Infinite, IC ² S
	Camera tube	●	●	●
	Full Köhler	●	●	●
Stand	Nosepiece	6X H, encoded, M27	6X H, encoded, M27	6X H DIC, encoded, M27
	Stage	Mechanical stage 75×50 (rackless with hardcoat anodized surface, right drive, extendable and with torque setting)	Mechanical stage 75×50 (rackless with hardcoat anodized surface, right drive, extendable and with torque setting)	Mechanical stage 75×50 (rackless with hardcoat anodized surface, right drive, extendable and with torque setting)
	Z Focus range	24 mm	24 mm	24 mm
	Focus	Coarse and fine focusing knobs on both left and right side; focus stopp adjustment	Coarse and fine focusing knobs on both left and right side; focus stopp adjustment	Coarse and fine focusing knobs on both left and right side; focus stopp adjustment
	Specimen Holder	Dual slide holder for one-hand operation, spring lever left Optional: holder for single slide	Dual slide holder for one-hand operation, spring lever left Optional: holder for single slide	Dual slide holder for one-hand operation, spring lever left Optional: holder for single slide
	Ergotube	●	●	●
	Eyepiece, diopter adjustment	Up to ± 5 diopter	Up to ± 5 diopter	Up to ± 5 diopter
	Power Unit	Integrated	Integrated	Integrated

Count on Service in the True Sense of the Word

- › In Brief
- › The Advantages
- › The Applications
- › The System
- › Technology and Details
- › **Service**

Because the ZEISS microscope system is one of your most important tools, we make sure it is always ready to perform. What's more, we'll see to it that you are employing all the options that get the best from your microscope. You can choose from a range of service products, each delivered by highly qualified ZEISS specialists who will support you long beyond the purchase of your system. Our aim is to enable you to experience those special moments that inspire your work.

Repair. Maintain. Optimize.

Attain maximum uptime with your microscope. A ZEISS Protect Service Agreement lets you budget for operating costs, all the while reducing costly downtime and achieving the best results through the improved performance of your system. Choose from service agreements designed to give you a range of options and control levels. We'll work with you to select the service program that addresses your system needs and usage requirements, in line with your organization's standard practices.

Our service on-demand also brings you distinct advantages. ZEISS service staff will analyze issues at hand and resolve them – whether using remote maintenance software or working on site.

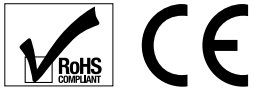
Enhance Your Microscope System.

Your ZEISS microscope system is designed for a variety of updates: open interfaces allow you to maintain a high technological level at all times. As a result you'll work more efficiently now, while extending the productive lifetime of your microscope as new update possibilities come on stream.



Profit from the optimized performance of your microscope system with services from ZEISS – now and for years to come.

>> www.zeiss.com/microservice



Carl Zeiss Microscopy GmbH
07745 Jena, Germany
microscopy@zeiss.com
www.zeiss.com/axioscope



Instruments
info@ctk-instruments.com
www.ctk-instruments.com
866-464-1005



Not all products are available in every country. Use of products for medical diagnostic, therapeutic or treatment purposes may be limited by local regulations.
Contact your local ZEISS representative for more information.

EN_41_011_205 | CZ 05-2019 | Design, scope of delivery, and technical progress subject to change without notice. | © Carl Zeiss Microscopy GmbH