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visao®

Change your view of microscopy

Multimode transmission optical microscopy

Simple • Powerfull • Scalable

Just Click!

visao is distributed by

https://lighting.ardop.com/

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ARDOP LIGHTING

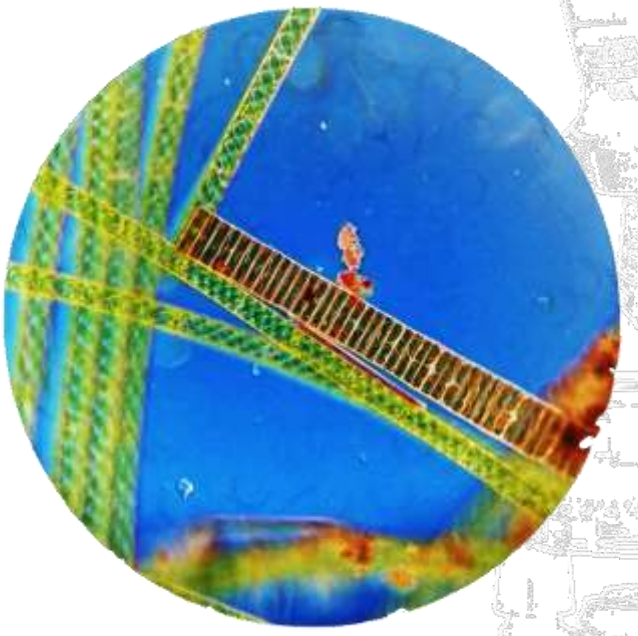
Transmission structured illumination microscope

Optical microscopy is an essential tool found in many R&D and process control laboratories, but it has many limitations:

- settings that are always complex and time-consuming,
- heavy reliance on user expertise,
- difficulties in observing transparent or low-contrast objects,
- slow and poorly reproducible changes in methods.

Result: wasted time, variability in results, limited analysis.

visao®: the solution



Courtesy of Martin Gerhardt

visao® is a transmission optical microscope featuring programmable structured illumination **µLight**.

It provides access to numerous advanced imaging methods **without complex adjustments or hardware modifications to the microscope.**

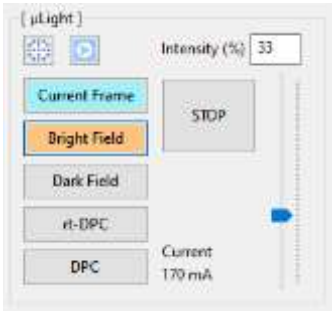
Multimodal microscopy accessible to all users, every day.

Multimodal microscopy, with a single click.

Thanks to the µLight Vision software, switching from one observation method to another is done:

- with a simple click of the mouse
- without mechanical or optical intervention
- without loss of focus

The observation conditions are automatically stored for each method.

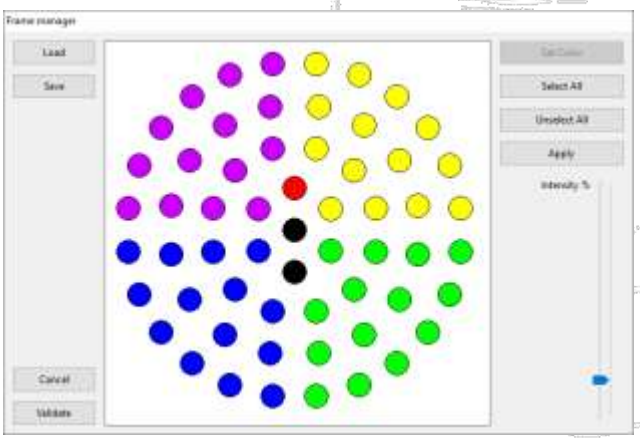


The µLight structured illumination

The **µLight** technology is based on the programmable structuring of lighting in terms of shape, color, and intensity.
In particular, it allows:

- reveal invisible structures on a classic light background
- combine several observation modes to obtain additional information
- easily explore new lighting conditions

Each pattern can be saved and recalled instantly.



µLight Vision: pattern adjustment interface

µLight module

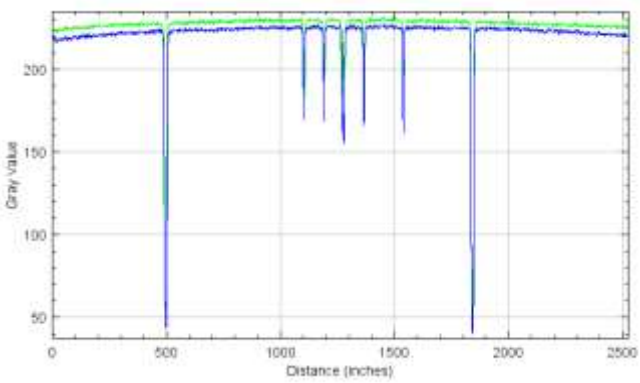
Bright Field: simplicity and reproducibility

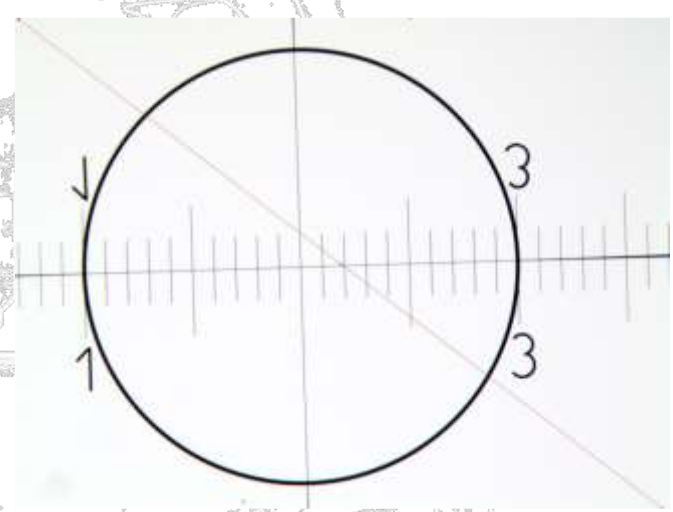
The bright field technique remains the standard method for many applications.

Daphnia (M. Gerhardt)

With **visao®**:

- No Köhler adjustment required
- Uniform illumination regardless of position
- Reproducible results, regardless of user





Object micrometer viewed through 4X objective with 0.5X magnification reducer - Object field covered: 6.6 x 4.9 mm²

The two profiles correspond to two distinct adjustment heights (green closest to the object, blue furthest away).

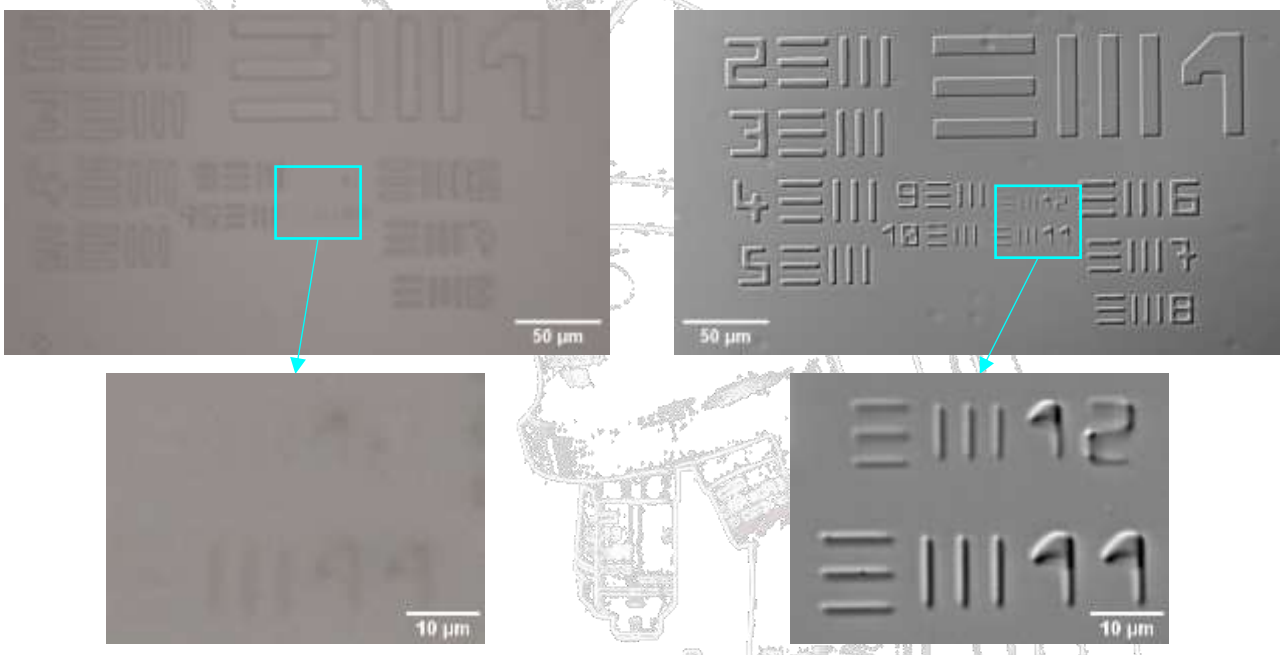
Uniformity is excellent and does not depend on position adjustment.

Time savings, increased reliability, ease of use

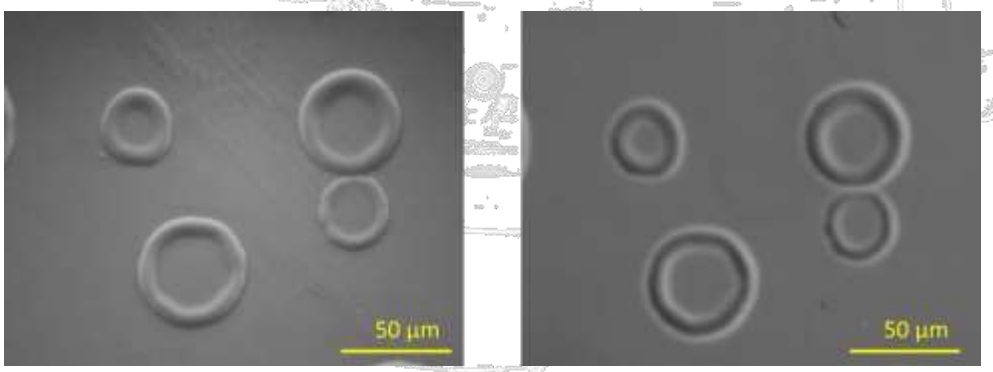
Observe transparent objects without constraints

Many objects (cells, bacteria, optical microstructures, microplastics, etc.) have low contrast. **visao**® offers several phase contrast methods **without dedicated accessories**:

- oblique illumination (relief contrast)
- differential phase contrast (DPC)
- real-time DPC (rt-DPC)
- single-image multidirectional DPC (simd-DPC)
- anomalous phase contrast (CPA, patent FR1770787)



Engraving patterns in glass – Pattern thickness 100 nm. Left: bright fied. Right: DPC. Top: full-field images; bottom: details.



Microdroplets of aerosols on a cover slip (20X objective). Left: observation using CPA. Right: observation using Zernicke phase contrast.

Instantaneous method change, without adjustment

Multimodality: more information, faster

Multimodality allows the same object to be observed using several methods in order to extract additional information.

With **visao®**:

- Complete automation of method changes
- More reliable and reproducible analyses
- Better understanding of the structures observed

Image of a fabric fiber. Left: bright field. Right: oblique illumination.

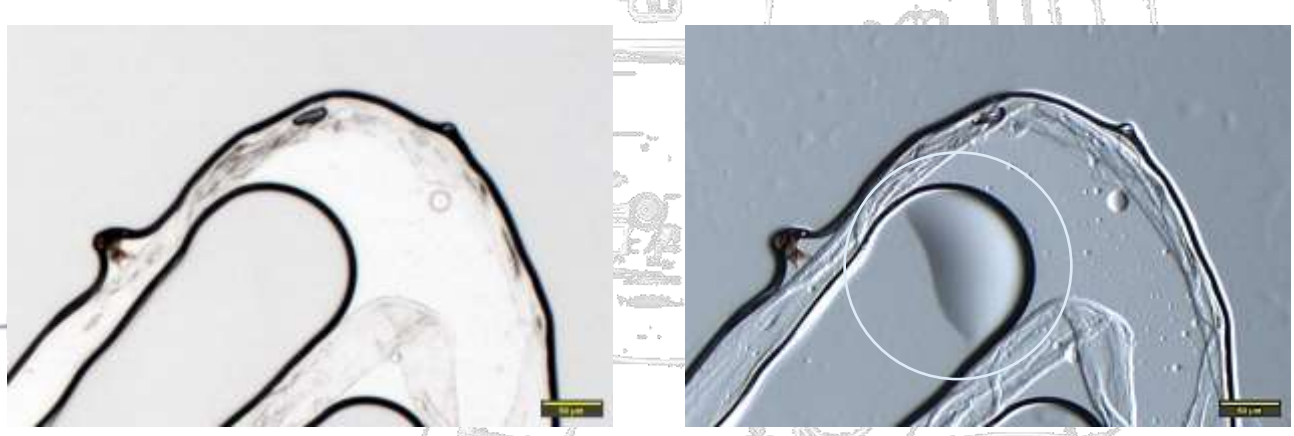


Image of a cloth fiber encapsulated in varnish. Detail highlighted by the red ROI.

Bright Field, DPC, oblique illumination… combined simply.

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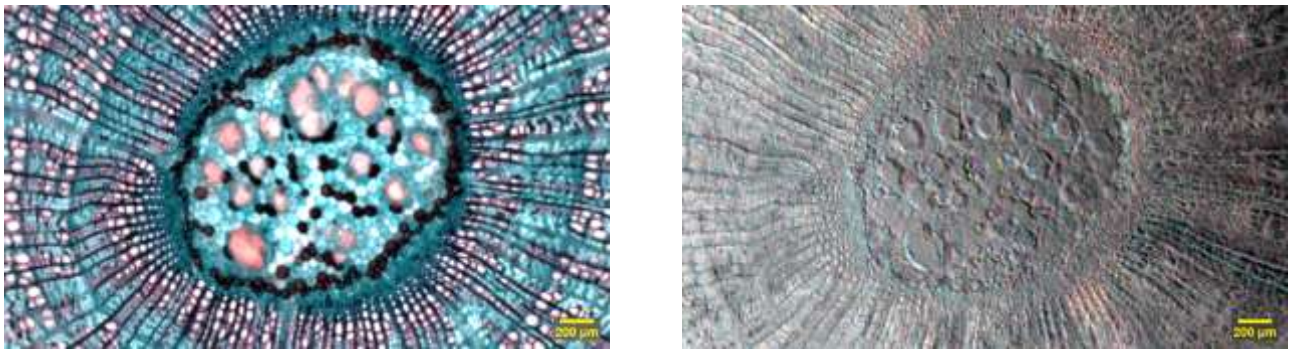
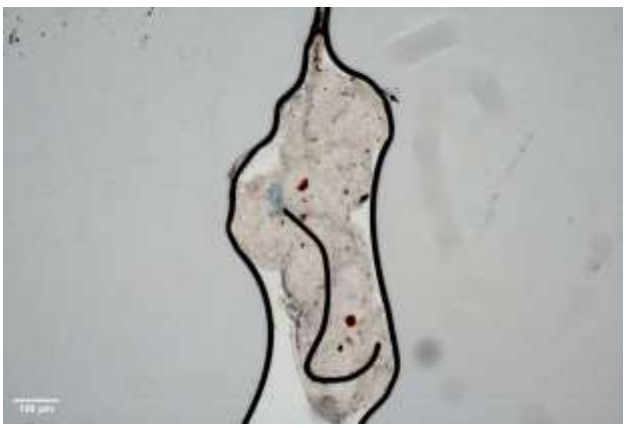
Sample images

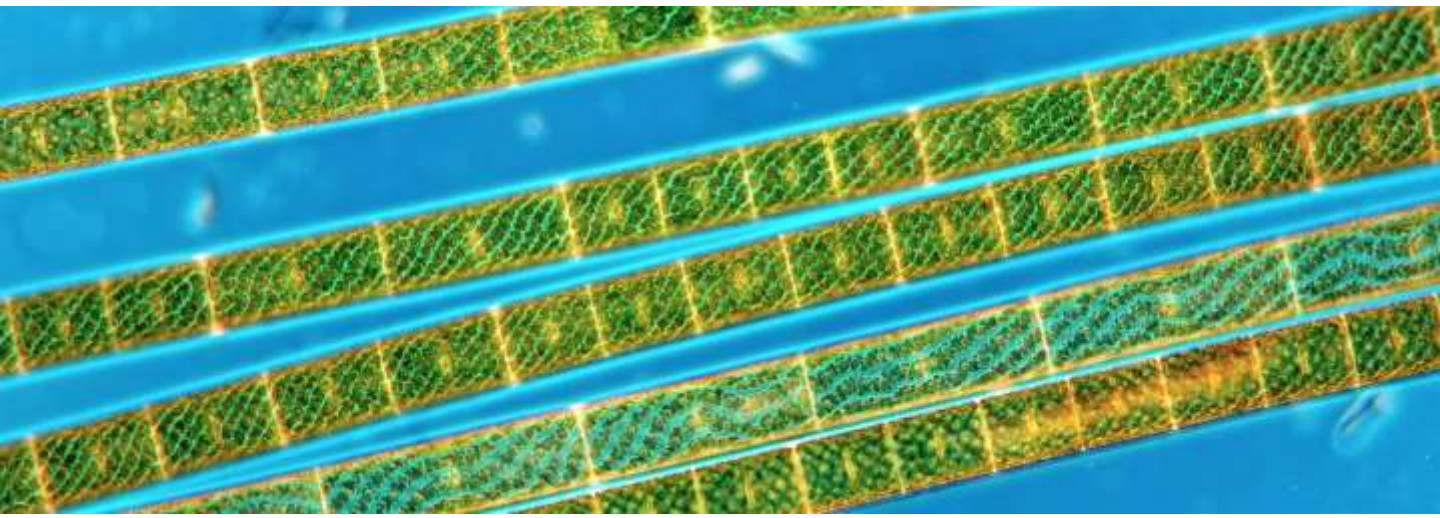


Cross-section of a lime tree stem. Left: bright field. Right: DPC RGB.



Bright field illumination

Oblic illumination



Spyrogira observed under color-coded oblique illumination - Courtesy of Martin Gerhardt.

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Software designed for users

µLight Vision was developed to offer an optimal balance between simplicity and power.

Main functions:

- method selection via customizable button
- zoom and real-time settings
- automatic parameter saving
- incremental image recording
- incremental / time lapse mode

Maximum comfort for routine observations and exploration.

visao is...

visao® is built around **µLight** structured illumination source technology.

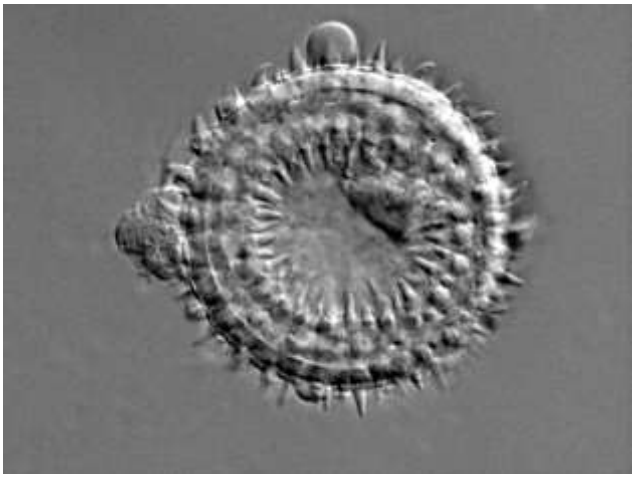
Combined with **µLight Vision** software and installed on a high-quality microscope, it greatly simplifies the observation and analysis of microscopic objects.

The equipment was selected after rigorous experimental measurements (Transfer Modulation Function according to ISO 15529:2010, camera and lens tests, etc.).

visao® is currently the only turnkey microscope for structured illumination.

visao® is also...

- software designed for users by users,
- striving for the right balance between ease of use, power, and scalability.



Pollen grain observed in DPC (JP Fayol)

- No critical microscope adjustments
- Automated imaging methods
- Reproducible results between operators
- Intuitive and scalable software
- Easy calculation of object pixel size

A solution suitable for both R&D and industrial environments.

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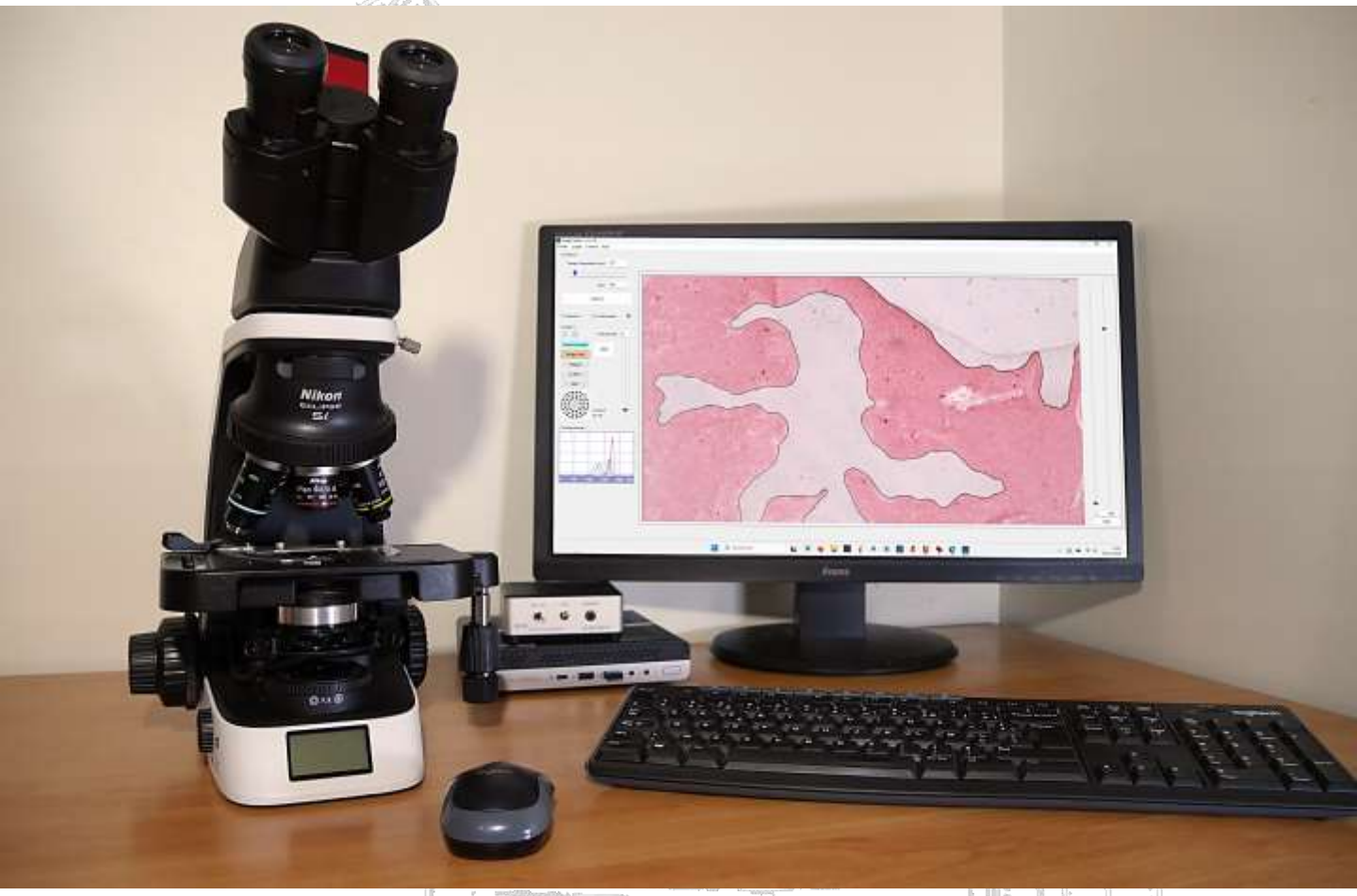
Turnkey imaging station



Presentation example (non-contractual).

visao® is available as a complete station:

- ❖ microscope equipped with **visao®**
- ❖ compact PC and monitor (new or refurbished)
- ❖ system installed, configured, and tested

Advantages:

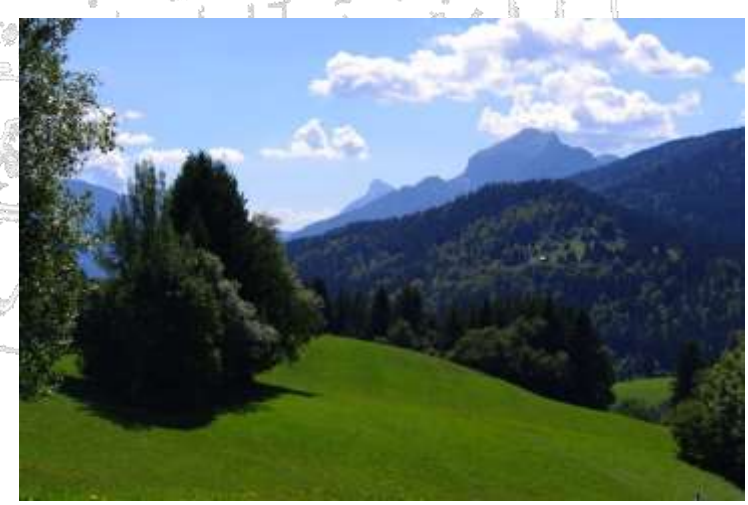
- immediate commissioning
- space saving
- cost-effective and sustainable solution

Technical specifications of visao

Microscope	
Models	Nikon Eclipse Si
	Other models: please contact us.
Objectifs	Plan Achromat 4 X/ 0.10, 10 X / 0.25, 40 X / 0.65, 100 X / 1.25 Huile.
	Other models: please contact us.
Caméras	
redCam IMX 464	4,2 MPix, 2712 x 1538 pixels, 7,9 x 4,5 mm, USB3,
redCam IMX 178	6,3 MPix, 3096 x 2078 pixels, 7,4 x 5,0 mm, USB3
redCam IMX 585	8,3 MPix, 3856 x 2180 pixels, 11,2 x 6,3 mm, USB3
redCam IMX 533	9,0 MPix, 3008 x 3008 pixels, 11,31 x 11, 31 mm, USB3
redCam IMX 585 cooled	8,3 MPix, 3856 x 2180 pixels, 11,2 x 6,3 mm, USB3
redCam IMX 533 cooled	9,0 MPix, 3008 x 3008 pixels, 11,31 x 11, 31 mm, USB3
Other models	Other models: please contact us.
µLight	Gen II, 59 pixels RGB
Light module	Compact 59 pixels RGB,
Controller	Gen II
USB cable	Controller to PC, camera to PC.
Power supply	Input: 110 / 240 VAC, 0,58 A max. Output 5 V, 4 A.
Software	
Standard configuration	µLight Vision
Plugins	Contact us for available plugins
Accessories	(optional)
Ergonomic	Eye Level Riser
Workstation (1)	Pre-installed and tested PC, refurbished or new
	Refurbished or new screen.
	Wireless keyboard and mouse

(1) For IT equipment, we favor carefully selected refurbished products.

Each device is checked and all software and drivers are installed before shipping.



Performance and qualities

visao® is constructed from rigorously selected and tested components:

- leading brand microscopes
- USB3 digital cameras based on Sony IMX sensors
- optical performance measurements according to ISO 15529:2010

High image quality, without compromise.

About Leida Technologies

Founded in 2019, **leida Technologies** designs and manufactures innovative microscopy solutions in France - Europe.

A pioneer in structured illumination for transmission, the company develops **µLight** technology in-house.

Commitments:

- repairable and sustainable products
- local manufacturing
- environmentally responsible approach

Conclusion

visao® makes advanced optical microscopy possible:

- simpler
- faster
- more informative

A unique solution for exploring, analyzing, and understanding microscopic objects, without complexity.

Just Click!

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