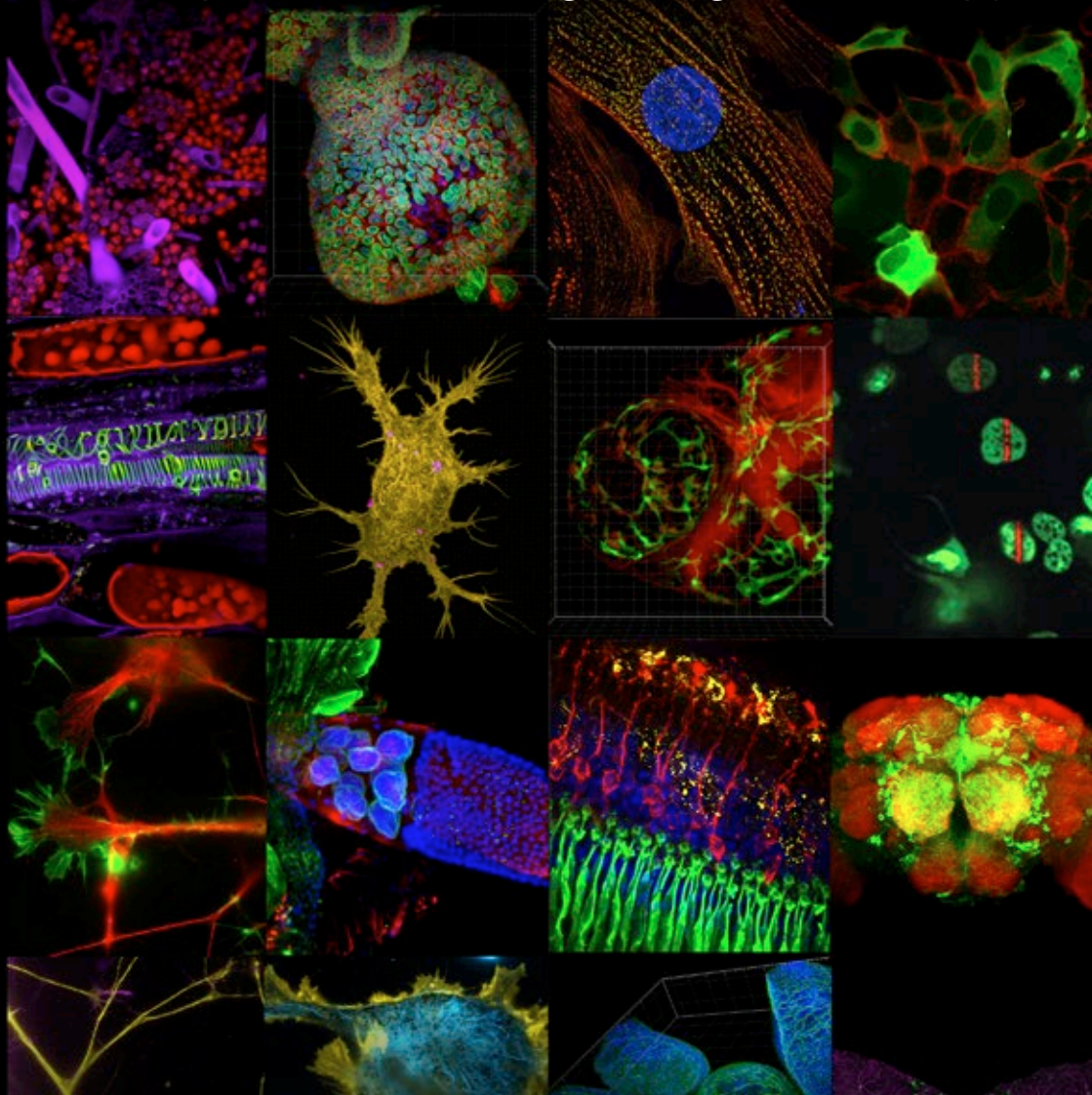


See More. See It Now.

A deeper understanding through microscopy



ANDOR
an Oxford Instruments company

OXFORD
INSTRUMENTS

Dragonfly - Confocal Imaging Platform

It's more than confocal...

Andor's pioneering new **Dragonfly** confocal imaging platform offers multiple high-contrast fluorescence imaging techniques in a **single device**.

Instant confocal



Live confocal image (no line-by-line scanning)

- Up to 20x faster imaging for greater productivity
- Minimal phototoxicity and photobleaching
- Ideal for live and fixed sample imaging
- High speeds for imaging fast dynamic events

Widefield imaging with accelerated deconvolution



Image samples not suited to other modalities

- The most effective technique for thin specimens
- Achieve sharp images with ClearView deconvolution
- Fewer moving parts for faster wavelength switching

Simultaneous dual color TIRF



High contrast imaging at the membrane

- Match penetration depth of two labelled targets
- Control penetration depth, critical angle, work in HiLo
- Perfect for intra or extracellular imaging

Additional Features

Borealis Perfect Illumination Delivery™

Pinhole matching for low and high magnifications

Zoom illumination

3 selectable camera magnifications

Dedicated software control

Efficient user interface

Real-time 3D rendering

GPU accelerated deconvolution

Key Benefits

Extended imaging range into NIR

Broader choice of fluorophores

Deeper imaging

Best in class image quality

Outstanding field uniformity

Higher contrast images

Handles small and large samples

Ease of use and high productivity

Immediate experimental evaluation

Key Applications

Live and fixed cell imaging

Developmental biology

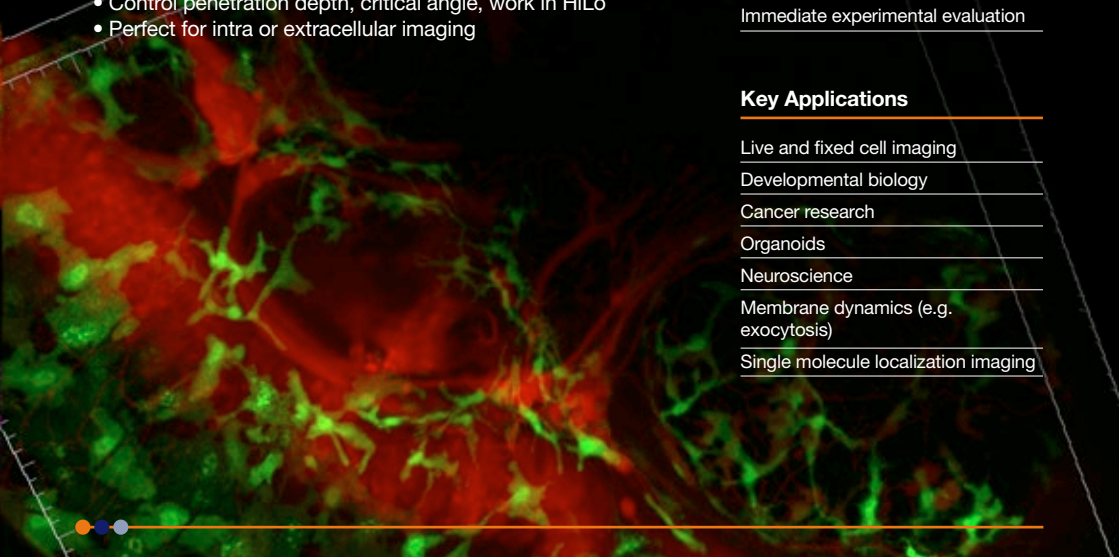
Cancer research

Organoids

Neuroscience

Membrane dynamics (e.g. exocytosis)

Single molecule localization imaging



NEW

Fusion Software – Acquire, Visualize, Analyze

Fusion is a brand new solution designed to meet the requirements of today's expectations for ease of use and immediate visual feedback with data review, whilst fulfilling tomorrow's aspirations for handling multi-modal imaging.

Fusion simplifies the control of the Dragonfly system, with its multiple imaging modes, to fluorophore and imaging mode selection in just a couple of mouse clicks. Once the sample is on the microscope you can control all hardware, including the x,y stage with its unique software joystick. Real-time 3D visualization provides a powerful insight to your experiment, and GPU accelerated deconvolution delivers enhanced clarity when required.

Saving files in Imaris format, Fusion permits easy transfer of the data into Imaris software for detailed multi-dimensional downstream analysis including solid surface rendering, measurement packages for cell biology, cell lineage, neuroscience and much more.



Dragonfly - A multi-modal approach

- As an **individual** researcher you have the imaging tools to investigate from the whole organism down to a subcellular level, using multiple approaches to address a wide range of questions.
- If you run a **core facility**, you have a cost effective way to support multiple imaging techniques.



Find out more at
andor.com/dragonfly



Revolution DSD2

The personal confocal imaging unit

Andor's Revolution DSD2 is an innovative hybrid of spinning disk technology and structured illumination. This unique approach is laser-free and delivers a budget friendly confocal solution to your laboratory, offering less dependency on laser based solutions that are often restricted to core facilities.

A simple device, which can even be added to an existing fluorescence microscope in your lab, the Revolution DSD2 will benefit your research by delivering confocal images as a routine technique in your work.

Whilst laser-free, the Revolution DSD2 can still achieve the optical sectioning and image quality you expect of a complex laser scanning confocal system, but with low maintenance costs. Furthermore, it does not need an expert to run it!

Key Applications

Immunofluorescence
(3D structure and visualization)

Development e.g. C. elegans,
Drosophila and Zebrafish

Embryology

Stem Cell and 3D cultures

Neuroscience

Cell and System Dynamics

Find out more at
andor.com/dsd2



Features

Real-time control and viewing

Full spectrum, laser-free (380-650 nm)

Excellent confocality

High dynamic range

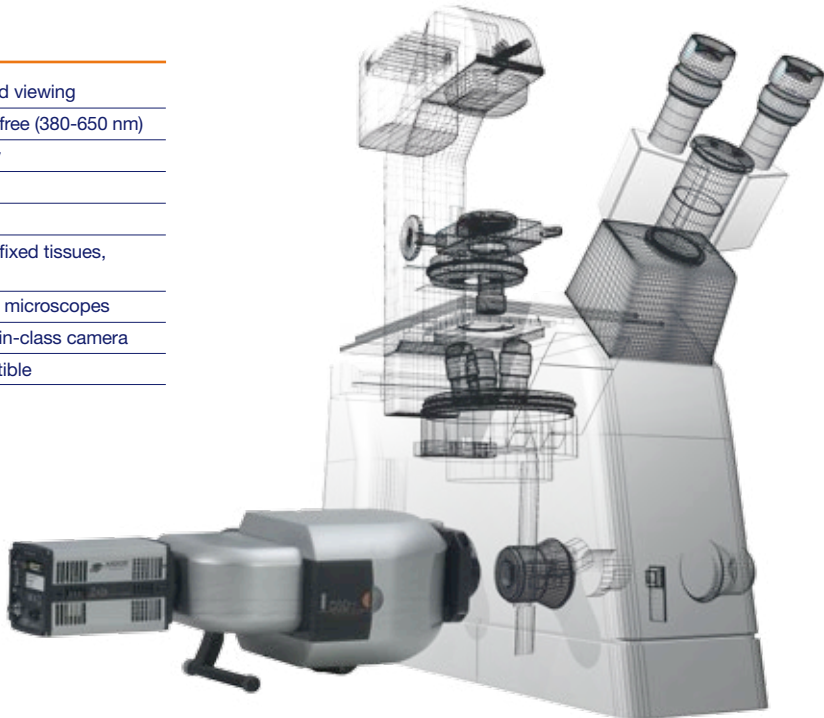
Cost effective

Suitable for live and fixed tissues,
cells and embryos

Integrates with most microscopes

Zyla sCMOS – best-in-class camera

Macroscope compatible



Photostimulation Portfolio - Mosaic

Simultaneous multi-region light targeting

The Mosaic active illumination system utilizes digital mirror device (DMD) technology to control the illumination field of a fluorescence microscope. Using a choice of illumination sources, Mosaic achieves real time and near diffraction limited resolution.

Unlike traditional galvoscanning systems, where pixels are addressed sequentially, Mosaic can simultaneously and precisely excite multiple regions of interest with complex geometries and allow simultaneous imaging.

Operating from 365-800 nm, Mosaic is unique yet flexible. Mosaic SDK offers access to software independent high speed pattern sequencing, ideal for applications such as optogenetics that mimic high speed cell signaling. Greyscaling is also available for detailed pattern illumination such as required in photolithography.

Features

Unlimited flexibility in shape and complexity of illumination mask

No scanning - simultaneous illumination of multiple regions of interest

Create complex pattern sequences with software independent recall

High speed pattern recall (up to 5,000 fps)

Multiple light sources available

Find out more at
andor.com/ps



Key Applications

Optophysiology/optogenetics

FRAP and PA

Studies of cell dynamics

Uncaging - signaling

Selective region imaging



Photostimulation Portfolio - MicroPoint

Laser illumination and ablation

MicroPoint provides a flexible and field-proven tool for photo-stimulation. Supplied with a patented compact, pulsed nitrogen pumped tunable dye laser, it is capable of ablation, bleaching and uncaging over a wavelength range of 365 to 656 nm.

More than 20 wavelengths can be utilized with available dye resonator cells, and simultaneous imaging and photo-stimulation of the specimen can be achieved. MicroPoint is supplied with a UV-Vis imaging quality Epi illumination adapter for both current and previous generation microscopes from Leica, Nikon, Olympus and Zeiss.

There are two MicroPoint versions available:

- Manual – simply centre in target and shoot a single diffraction limited spot. No software required
- Motorized – software controlled x,y galvo mirrors steer the beam for region specified targeted light.

Features

Simultaneous laser delivery and image acquisition

Ablation, uncaging, activation and bleaching

365 - 656 nm - adapt to specific targets

Incremental control of pulse energy

Key Applications

Ablation - Damage and repair

FRAP and PA - cell dynamics

Uncaging - signaling

DNA damage - cancer research

Semi-conductor marking

Circuit isolation

Find out more at
andor.com/ps



Photostimulation Portfolio - FRAPPA

Photo-bleach and activate

Andor's FRAPPA uses a dual galvanometer scan head to provide a computer-steered laser beam delivery system. By utilizing the ILE's range of lasers the FRAPPA provides unrivalled Fluorescence Recovery After Photo-bleach (FRAP) and Photo Activation (PA) flexibility.

In sharing the same lasers with imaging, you can bleach more efficiently close to the peak absorbance of the target fluorophore, and save money.

The FRAPPA provides diffraction limited performance and can be configured in-line with a spinning disk confocal or on other ports if so required. With high-speed galvo-driven mirrors, FRAPPA is capable of scan rates much faster than that of MicroPoint for photobleaching and photoactivation studies.

Key Applications

- Photo-bleaching
- Photoactivation
- Vesicle tracking
- Cell compartmentalization
- DNA damage
- Uncaging - signaling

Find out more at
andor.com/ps



Features

All laser lines available for FRAP and PA actions

<10 ms switch over from Imaging to FRAP

Arbitrary multi-region scanning of points, rectangles and polygons

Integration with flexible protocols for 3D

FRAPPA localization and analysis



Customer Support

Andor products are regularly used in critical applications and we can provide a variety of customer support services to maximize the return on your investment and ensure that your product continues to operate at its optimum performance.

Andor has customer support teams located across North America, Asia and Europe, allowing us to provide local technical assistance and advice. Requests for support can be made at any time by contacting our technical support team at andor.com/support.

Andor offers a variety of support under the following format:

- On-site product specialists can assist you with the installation and commissioning of your chosen product
- Training services can be provided on-site or remotely via the Internet
- A testing service to confirm the integrity and optimize the performance of existing equipment in the field is also available on request.

A range of extended warranty packages are available for Andor products giving you the flexibility to choose one appropriate for your needs. These warranties allow you to obtain additional levels of service and include both on-site and remote support options, and may be purchased on a multi-year basis allowing users to fix their support costs over the operating life cycle of the products.

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