

REVOLUTION

Simplify Advanced Microscopy



Meet Revolution

The first and only fully automated hybrid microscope that easily transforms between upright and inverted configurations. We're putting advanced multi-dimensional microscopy at your fingertips with an intuitive, easy-to-use touch-based platform on our stunning 32-inch display.

Upright

Ideal for viewing and scanning slides.
Clean approach to oil immersion applications.
Useful for Water Dipping Applications.
Works with optional high resolution condenser.

Inverted

Designed for viewing and scanning live samples in fluidic chambers such as dishes and well plates.
Allows for easier manipulation of samples.
Ideal for Long Working Distance applications.

Transmitted Light

Stunning detail. Perfect Color.
Brightfield - Polarized Light - Phase Contrast.
5MP CMOS camera.
HD Video.

Fluorescence

Exceptional Performance.
No Darkroom required.
5MP monochrome sCMOS camera.
Overlay multiple wavelengths.

Stage Top Incubation

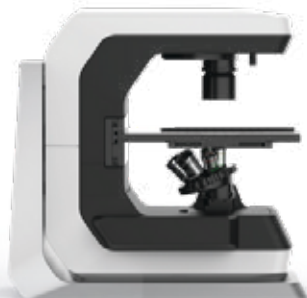
Maintains optimal conditions for viability.
Stable temp./CO2 levels throughout experiment.
Auto-focus finds and tracks best z-planes for focus (Critical for long-term experiments).

Multi-Dimensional Imaging

Automated time-lapse for live samples.
Stitch to form large FOV Hi-Res images.
Stack images at multiple focal planes.
Set mult. acquisition points to view and revisit.
Hyperscan for ultra high-speed image stitching.



Upright



Inverted

Finally, an Automated Microscope that your entire lab can use.

Microscopes are very powerful tools, essential for research and discovery. However, most advanced systems on the market today are overly complicated and highly application specific.

Revolution can accommodate a variety of core imaging techniques. Its unique, automated hybrid design provides you with more capability than any other widefield microscope.



Multi-Dimensional Imaging

Time-Lapse Imaging
Multi-Point Scanning
Mosaic Creation
Multi-Channel Acquisition
Z-Stack Capture



Automated Microscopy

XY Stage: Fast, quiet, linear shaft stage with 0.1µm encoders
Hyperscan high-speed image stitching
25mm Z-focus drive with 0.1µm resolution



Cameras

Brightfield

- 5MP CMOS Color camera
- 2448 x 2048 (Pixel Size 3.45µm)

Fluorescence

- 5MP sCMOS Monochrome camera
- 2448 x 2048 (Pixel Size 3.45µm)



Display

32" 4K Monitor
HP Mini Computer



Data Transfer

USB
Seamless integration with file sharing and cloud storage apps (Dropbox™ and Box)



Stand

UPRIGHT and INVERTED observation modes
Motorized, X, Y, Z and Fluorescent Turret
Intelligent Nosepiece informs software which objective is in use
Control by mouse or joystick
Repeatable camera and LED light settings



Optics

Optical components by Olympus®
1.25x – 100x (dry and immersion available)
Plan Achromat, Plan Fluorite, and Plan Apochromat options
Brightfield, Darkfield, Phase Contrast, and Fluorescence capabilities
Extra Long Working Distance (ELWD) condenser available
High Resolution (High N.A.) condenser available



Software

Automated workflow
Customizable image overlay tools
Well Plate Calibration
Channel Z-Offsets
Flexible Mosaic selection tool to define sample region of interest



Motorized Epi-Fluorescence Turret

Ultra-bright LEDs with 50,000-hour lifespan
Mercury-Free Illumination
Outstanding long-term stability with precise Illumination control
5 Imaging Channels
• 4 Epi-Fluorescence + 1 Transmitted Light



Incubation

Optional Accessory
Fanless: eliminating vibration for easy imaging
Easy access to samples with magnetic door
Clear visibility for sample management
Gas, temperature, and humidity control

www.svenbiolabs.cz



reddot winner 2022



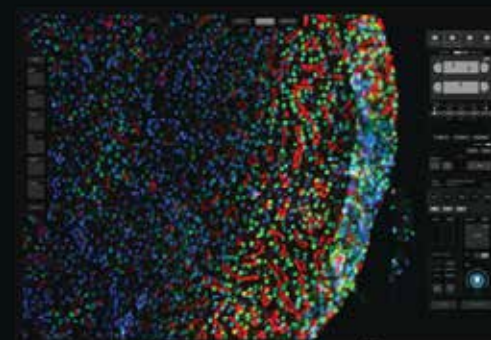
Superior Optical Performance.

OLYMPUS

High Performance
Objective Lenses



Sputter Coated
Optical Filters



To build your own Revolution or request a demo visit discover-echo.com/revolution