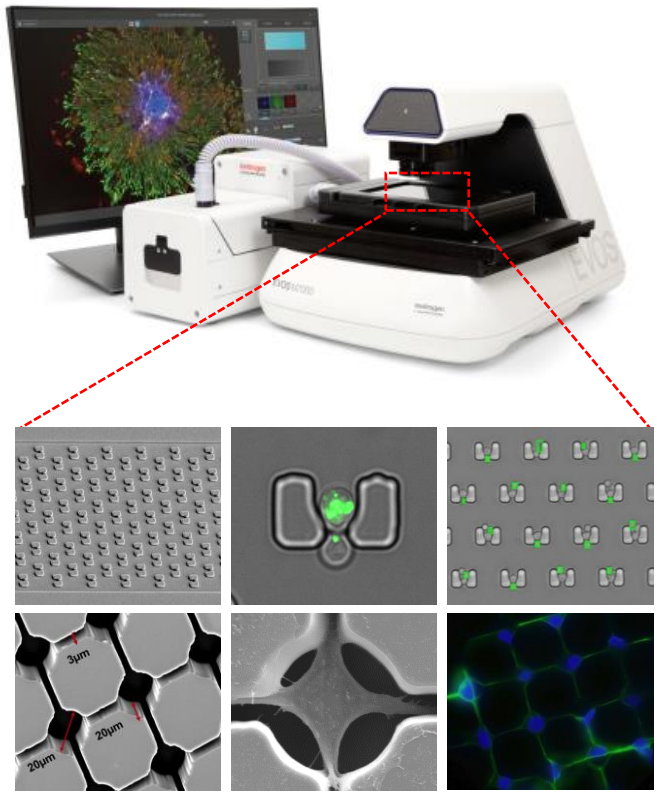
A1 Cell Imaging System

Powerful, Flexible, Intuitive, Fast, and Fully Automated System

The A1 Cell Imaging System is a fully automated, digital, inverted multi-channel fluorescence and transmitted light imaging system. The system is designed for a broad range of applications including, but not limited to, multi-channel fluorescence imaging, multiple-position vessel scanning, area scanning with montage or tile stitching, and time-lapse imaging.



Microfluidic Devices

iBiochips provides development and manufacturing of customized microfluidic devices based on your desired dimensions and functions.

Features

- New high-resolution CMOS cameras for improved resolution, sensitivity, and higher image quality (dual color and monochrome cameras)
- Enhanced scan speed and autofocus functions for improved throughput and data quality
- Fully automated and motorized X/Y scanning stage, refined autofocus, and multiple options for automation routines
- Simultaneous acquisition in 4 fluorescence channels and transmitted light
- Powerful PC with graphics processing unit (GPU) for fast processing of large data sets and demanding visualization applications
- Compatibility with the Onstage Incubator for precise control of temperature, humidity, and gases for normoxic or hypoxic conditions allows a wide range of biological studies under physiological conditions

Applications

- Neurobiology
- Immuno-oncology
- Live-cell imaging
- 3D cell imaging (e.g., organoids, spheroids)
- High-resolution tile scanning
- Immunohistochemistry (IHC)

Innovative Biochips LLC

202 Industrial Blvd, Suite 703, Sugar Land, TX 77478, USA | +1 832.538.1925 | info@ibiochips.com | www.ibiochips.com

A1 Cell Imaging System Specifications

Optics	• Infinity-corrected optical system; Royal Microscopical Society (RMS) threaded objectives with a 45 mm parfocal distance
Illumination	• LED light cubes (>50,000-hour life per light cube) with adjustable intensity
Fluorescence Channels	• Simultaneously accommodates 4 fluorescence cubes plus bright-field imaging
Contrast Methods	• Fluorescence and transmitted light (bright-field and phase-contrast)
Objective Capacity	• 5-position turret; front-mounted control
Objectives	• Wide selection of high-quality, long working distance (LWD), and coverslip-corrected objectives ranging from 1.25x to 100x
Condenser	• 60 mm LWD condenser, 4-position turret with a clear aperture and 3-phase annuli
Stage	• Motorized X/Y scanning stage; 120 x 80 mm travel range with submicron resolution; drop-in inserts to receive vessel holders and lockdown holders to fix sample during long scans
LCD Display	• 23” high-resolution touch-screen color monitor; 1,920 x 1,080 pixel resolution
Cameras	• High-sensitivity 3.2 MP (2,048 x 1,536) monochrome & color CMOS sensors with 3.45 µm pixel resolution
Captured Images	• 16-bit RAW monochrome: TIFF, PNG; 8-bit TIFF, PNG, JPG; Movies and time-lapse images: AVI, WMV
Dimensions (L x W x H)	• 46 x 33 x 36 cm (18 x 14 x 13 in.)
Weight	• 16 kg (35 lb)

Onstage Incubator

When combined with the Onstage Incubator, the A1 Cell Imaging System is ideal for long-term monitoring of cell cultures and time-lapse imaging at high resolution. The Onstage Incubator is an environmental chamber that allows for precise control of temperature, humidity, and three gases for time-lapse imaging of live cells under both physiological and nonphysiological conditions, making the system ideal for demanding hypoxia experiments.

Onstage Incubator Specifications

Compatible vessels	• Multiwell plates, 35, 60, and 100 mm petri dishes, T-25 flasks, chamber slides, and more
Temperature range	• Ambient to 40°C
CO_2 range	• 0 – 20%
O_2 range	• 0% to ambient
Humidity range	• >80% relative humidity at 37°C
Dimensions (H x D x W)	• 25 x 19 x 3.7 cm (environmental chamber), 37 x 16 x 20 cm (control unit)
Weight	• 1.5 kg (environmental chamber), 10 kg (control unit)