Cell analysis

Technical specifications for the EVOS S1000 Spatial Imaging System

The Invitrogen™ EVOS™ S1000 Spatial Imaging System is a widefield spectral imaging system that combines multiplex spectral fluorescence, transmitted brightfield, and color brightfield detection. Coupled with EVOS™ Spatial software, it provides seamless image processing, single-round spectral unmixing of up to 8-plex (+ nuclei detection), and powerful image visualization in a truly user-friendly platform.

Optics	
Imaging modes	Fluorescence, transmitted brightfield, and color brightfield
Optical system	Infinity-corrected optical system; M27-threaded objectives with 45 mm parfocal distance
Illumination	Custom LED engine with the following excitation spectra: • 375 nm • 405 nm • 440 nm • 500 nm • 530 nm • 570 nm • 630 nm • 730 nm • Transmitted with optional phase contrast • RGB transmitted for color imaging
Contrast methods	Epifluorescence and transmitted light (for brightfield and phase contrast applications)
Objective capacity	5-position automated
Objectives	Included Zeiss™ objectives: • 2.5x 0.08 Plan Neofluar • 10x 0.45 Plan Apochromat • 20x 0.8 Plan Apochromat Optional Zeiss objectives: • 5x 0.16 Plan Apochromat • 5x 0.16 Phase Plan Neofluar • 10x 0.45 Phase Plan Apochromat • 40x 0.95 Plan Apochromat Correction Collar

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Optics (continued)	
Condenser	4-position turret with a clear aperture and 1-phase annulus
Focus mechanism	Custom IR laser focus and software autofocus
Camera	High-sensitivity sCMOS camera (2,048 × 2,048 pixel resolution, 4.2 Megapixels) with 6.5-µm pixel size
Captured images	16-bit monochrome: TIFF, OME-TIFF; pyramidal structure available
LCD display	32-inch 4K HDR LCD display (3,840 × 2,160 pixel resolution)
Mechanics	
Stage control	Motorized
Z-axis control	Automated, motorized z-axis software control
Vessels	
Custom EVOS™ Spatial Slide Holder	4-position precision slide holder
Automation	
Slide overview scan	Automated, 2.5x magnification scan of entire slides; either transmission light microscopy (high-speed) or DAPI (high-contrast) stain can be used.
Field of view (FOV)	Automated, variable magnification scans of FOV with multiple options for automation routines: • FOV size with 10x objective: 1.33 x 1.33 mm^2 • FOV size with 20x objective: 0.66 x 0.66 mm^2
Region of interest (ROI)	Automated, variable magnification scans of ROI with multiple options for automation routines
Software and PC	
Integrated onboard operating software	• Overview/Periscope mode for easy tissue navigation • Robust autofocus with routine laser and software autofocus • Whole slide stitching and imaging • Spectral unmixing
Image saving	Images can be saved on the internal hard drive, an external USB device, or with customer IT-approved cloud solutions and local networking.
Computer	External Dell™ XE4 PC 12th generation Intel™ Core™ i9-12900 processor 128 GB DDR4 RAM NVIDIA™ Quadro RTX™ A4000 graphics card
Storage	2x 8 TB SSDs for data and 512 GB SSD for OS, support for USB memory stick, network drive and cloud storage
System	
PC output ports	Available to user: 2 USB-A 2.0 ports, 4 USB-A 3.1 Gen 1 ports, 1 USB-C 3.1 Gen 2 port
Networking capability	Connection through Microsoft™ Windows™ platform/SMB network wirelessly using the supplied Wi-Fi adaptor
Power supply	AC adapter with country-specific power cords
Physical characteristics	
Operating conditions	• Temperature: 66–77°F (19–25°C) • Humidity: <80% humidity (noncondensing)
Dimensions (W x D x H)	22 x 23 x 23 in. (56 x 58 x 58 cm)
Weight	118 lb (54 kg)

Learn more at **thermofisher.com/evoss1000**

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