Digital microscopy

EVOS M7000 Imaging System

The Invitrogen™ EVOS™ M7000 Imaging System—technical specifications

The EVOS M7000 Imaging System is an automated digital inverted microscope for 4-color fluorescence, transmitted light, and color imaging.

Optics	
Imaging modes	Fluorescence, brightfield, color brightfield, and phase contrast
Imaging methods	Single-color, multicolor, area scan with montage or tile-stitch, time-lapse, Z-stacking, and movie capture
Optical system	Infinity-corrected optical system; RMS-threaded objectives with 45 mm parfocal distance
Illumination	5-position chamber for 4 fluorescent light cubes plus brightfield imaging; adjustable-intensity LED light cubes have >50,000-hour lifetimes
Light cubes	Selection from 13 Invitrogen™ EVOS™ LED cubes, including: • DAPI (357/447 nm) • GFP (482/524 nm) • RFP (542/593 nm) • Texas Red™ (585/628 nm) • Cy®5 (635/692 nm) Motorized fluorescent LED cube interchange mechanism. Custom LED cubes available on request.
Objective capacity	5-position automated turret
Objectives	Selection of more than 30 high-quality, long working distance (LWD) and coverslip-corrected (CC) objectives; magnification from 1.25x to 100x
Condenser	60 mm LWD condenser; 4-position turret with a clear aperture and 3 phase annuli
Cameras	High-sensitivity 3.2 MP monochrome CMOS camera (2,048 x 1,536 pixels) with 3.45 µm pixel resolution High-sensitivity 3.2 MP color CMOS camera (2,048 x 1,536 pixels) with 3.45 µm pixel resolution
Captured images	16-bit RAW monochrome: TIFF, PNG (12-bit dynamic range) 8-bit color: TIFF, PNG, JPG Movies and time-lapse: AVI, WMV
Display	27-inch high-resolution color monitor, fully controllable via mouse; 3,840 x 2,160 resolution
Mechanics	
x-axis and y-axis control	Automated; travel range: 120 x 80 mm with sub-micrometer resolution
z-axis control	Automated, motorized z-axis software focus control with sub-micron (0.15 µm) resolution and single-step accuracy
Inserts	Wide selection of drop-in inserts for vessel holders and lock-down holders to keep samples in place during long scans

Vessels	
Compatibility	Microscope and chamber slides Hemocytometers 6-, 12-, 24-, 48-, 96-, and 384-well microplates 35, 50, 60, and 100 mm petri dishes T-25, T-75, and T-175 flasks Custom vessel configurations available on request.
Software and PC	
Integrated onboard operating software	Autofocus Cell counting Confluence measurements Transfection efficiency measurements 2D deconvolution Field overlap adjustments Batch analysis Annotation tool Stage speed settings 10x Genomics™ slide support
Invitrogen™ Celleste™ Image Analysis Software (optional)	Functions for counting, segmenting, classifying, and analyzing complex images Preconfigured analysis templates for common applications and an icon-based, wizard-driven workflow Modules for 2D and 3D deconvolution, 3D rendering, 3D visualization, and 3D analysis
Image saving	Images can be saved on the internal hard drive, an external USB device, or a local network
Computer	External Dell™ XE4 PC with a 12th generation Intel™ Core™ i9-12900 processor NVIDIA™ Quadro™ RTX™ A4000 graphics card
System	
Storage	128 GB DDR4 RAM; 2 TB SSHD
Output ports	Instrument: USB 3.1 Type B port; 4-pin power port Computer: 1 USB 3.1 Gen 2 Type C port; 5 USB 3.1 Gen 1 Type A ports; 4 USB 2.0 Type A ports; 1 serial port; 2 display ports 1.2; 1 RJ45 port; 2 PS/2 ports; 1 UAJ port; 1 line out
Networking capability	Connect via the Microsoft™ SMB protocol with an Ethernet cable, or use the USB 3.0 WiFi dongle
Cloud connectivity	Connect to the Thermo Fisher™ Connect Platform for remote access to images and data via a network connection
Power supply	24 V AC adapter with country-specific power cords
Physical characteristics	
Dimensions (W x D x H)	18 x 14 x 13 in. (45.7 x 33.0 x 35.6 cm)
Weight	57 lb (26 kg)

Learn more at **thermofisher.com/EVOSM7000**