



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 | Adjustable-intensity LED cubes (>50,000-hour lifetime) with integrated hard-coated filters. |
| Light cube capacity | 5-position chamber for 4 fluorescent LED cubes and brightfield imaging. |
| Light cubes | <p>Selection from 13 Invitrogen™ EVOS™ LED cubes, including:</p> <ul style="list-style-type: none"> • DAPI (357/447 nm) • GFP (482/524 nm) • RFP (542/593 nm) • Texas Red (585/628 nm) • Cy®5 (635/692 nm) <p>Motorized fluorescent LED cube interchange mechanism. Custom LED cubes available on request.</p> |
| 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. |
| Focus mechanism | Automated focus with sub-micron (0.15 µm) resolution and single-step accuracy. |
| 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 |
| LCD display | 23-inch high-resolution touchscreen color monitor, fully controllable via mouse; 1,920 x 1,080 resolution. |
| Mechanics | |
| Stage control | Motorized |
| x-axis and y-axis control | Motorized; travel range: 120 x 80 mm with sub-micrometer resolution. |
| z-axis control | Automated, motorized z-axis software control. |
| 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. |
| Automation | |
| | Automated scans with multiple options for automation routines. |
| Software and PC | |
| Integrated onboard operating software | Autofocus Cell counting Confluence measurements Transfection efficiency measurements 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 embedded hard drive, an external USB device, or a local network. |
| Computer | External Dell™ 3650 PC with an eleventh generation Intel™ Core™ i7-11700 processor; NVIDIA™ Quadro™ RTX™ 4000 graphics card compatible with Windows™ 10 and designed to operate with the touchscreen monitor and microscope. |
| System | |
| Storage | 32 GB DDR4 RAM; 512 GB NVMe PCIe SSD. |
| 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 (included). |
| 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 | 26 lb (11.8 kg) |

Learn more at thermofisher.com/EVOSM7000

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