SPECIFICATION SHEET

EVOS M7000 Cell Imaging System

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Description

The Invitrogen™ EVOS™ M7000 Cell Imaging System is an automated digital inverted microscope for 4-color fluorescent, transmitted-light, and colorimetric applications.

Manufacturing disclosure

Thermo Fisher Scientific is the sole manufacturer of the EVOS M7000 Cell Imaging System. The system is sold and serviced only by Thermo Fisher Scientific and authorized distributors.

Differentiating 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
- Optional Invitrogen™ Celleste™ Image Analysis Software for automated analysis of 2-dimensional and 3-dimensional samples
- Compatibility with the Invitrogen™ EVOS™ 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)

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System highlights

Attribute	Detail
Optics	Infinity-corrected optical system; Royal Microscopical Society (RMS) threaded objectives with a 45 mm parfocal distance
Imaging mode	Fluorescence, brightfield, color brightfield, and phase contrast
Illumination	Five-position chamber for 4 fluorescence light cubes plus brightfield imaging; light cubes with integrated hard-coated filter set and LED light source with >50,000-hour life; broad selection of standard and specialty light cubes
Imaging methods	Single color, multicolor, area scan with montage or tile stitch, time lapse, Z-stacking, movie capture
Objective capacity	5-position turret
Objectives (not included)	Wide selection of high-quality long working distance (LWD) and coverslip-corrected objectives
Condenser	60 mm LWD condenser; 4-position turret with a clear aperture and 3 phase annuli
Stage	Motorized X/Y scanning stage; 120 mm x 80 mm travel range with submicron resolution; drop-in inserts to receive vessel holders and lockdown holders to fix sample in place during long scans
Focus mechanism	Automated focus mechanism with submicron resolution
LCD display	23 in. high-resolution touchscreen color monitor (also fully controllable via mouse); 1,920 x 1,080 resolution
Cameras	High-sensitivity 3.2 MP (2,048 x 1,536) monochrome CMOS sensor with 3.45 µm pixel resolution; high-sensitivity 3.2 MP (2,048 x 1,536) color CMOS sensor with 3.45 µm pixel resolution
Computer	External Dell™ PC with an Intel™ Core™ i7-8700 processor, 32 GB DDR4 RAM, 512 GB PCIe solid-state drive, NVIDIA™ Quadro™ P1000 graphics card with NVIDIA Pascal GPU technology and 4 GB memory, and Windows™ 10 software, designed to operate with touchscreen monitor and microscope
Captured images	16-bit RAW monochrome: TIFF, PNG 8-bit TIFF, PNG, JPG Movies and time-lapse images: AVI, WMV
Output ports	Instrument: USB 3.1 Type B, 4-pin power port Computer: 1 x USB 3.1 Gen 2 Type C; 5 x USB 3.1 Gen 1 Type A; 4 x USB 2.0 Type A; 1 serial; 2 x DisplayPort 1.2; 1 RJ45; 2 PS/2; 1 UAJ; 1 line-out
Networking capability	Connection through Windows/SMB network via an Ethernet cable connection
Power supply	24 V AC adapter with country-specific power cords
Dimensions (L x W x H)	457 x 330 x 356 mm (18 x 14 x 13 in.)
Weight	16 kg (35 lb)